

ECHOSTAR

ANNUAL REPORT
2022

Year Ended December 31, 2022



CONNECTING THE WORLD



March 14, 2023

Dear EchoStar Corporation Shareholder,

EchoStar had a strong year in 2022 and achieved year over year growth in revenue, earnings per share, and operating free cash flow, despite the full year impact of a new competitive environment. We continue to optimize our assets and our capabilities to meet our customers' needs for Hughes, HughesNet® and EchoStar technologies and services. Looking ahead, we are preparing for the launch of our EchoStar XXIV/JUPITER 3 satellite, which will bring us much needed capacity to spark additional growth while we maximize our enterprise technology and services offerings and pursue new avenues of opportunity in the global direct-to-device market for which we are well positioned. Our balance sheet remained strong at year end with \$1.7 billion of cash and marketable securities.

Highlights of 2022 include:

- Hughes introduced HughesNet Fusion™ service plans, combining our geostationary satellite service with a fixed wireless service to meet consumer demand for low-latency satellite internet – a powerful antidote to new competition in our rural U.S. market.
- Hughes brought to market a new, electronically steered flat panel antenna for OneWeb Low Earth Orbit service, with notable sales to OneWeb and Gogo Business Aviation.
- EchoStar Mobile launched the first pan-European LoRa®-enabled network for Internet of Things (IoT) connectivity – a harbinger of direct-to-device initiatives underway across our ecosystem to leverage our S-band capabilities and assets.
- We negotiated a new agreement with Maxar, the company manufacturing our EchoStar XXIV/JUPITER 3 satellite, to compensate us for delays in production and ensure timely completion of the manufacturing process for a launch in the first half of 2023.

In March 2022, Hamid Akhavan joined EchoStar as Chief Executive Officer and President. In December, Pradman Kaul retired after nearly 50 years of service; subsequently, Paul Gaske assumed the role of Chief Operating Officer of EchoStar. Under Hamid's leadership, the executive team is steering the company in a clear direction to maximize revenues and opportunities while readying for the launch of EchoStar XXIV/JUPITER 3; preparing to monetize the satellite to the fullest and fastest extent; and making meaningful steps to position EchoStar as an ecosystem partner of choice in the global race for converged satellite and terrestrial direct-to-device technologies, networks and services.

2023 is already shaping up to be an exciting year for EchoStar and the entire satellite industry, as we continue innovating new ways to connect people, enterprises and things.

Thank you for your continued support.

Sincerely,

A handwritten signature in black ink, appearing to be "C. Ergen", written in a cursive style.

Charles W. Ergen
Chairman of the Board of Directors

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
WASHINGTON, D.C. 20549

FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE FISCAL YEAR ENDED DECEMBER 31, 2022.

OR

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

Commission File Number: 001-33807

ECHOSTAR

EchoStar Corporation

(Exact name of registrant as specified in its charter)

Nevada

(State or other jurisdiction of incorporation or organization)

26-1232727

(I.R.S. Employer Identification No.)

100 Inverness Terrace East, Englewood, Colorado

(Address of principal executive offices)

80112-5308

(Zip Code)

(303) 706-4000

(Registrant's telephone number, including area code)

Not Applicable

(Former name, former address and former fiscal year, if changed since last report)

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

Class A common stock \$0.001 par value

(Title of each class)

SATS

(Ticker symbol)

The NASDAQ Stock Market LLC

(Name of each exchange on which registered)

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

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

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

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

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

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

Large accelerated filer

Accelerated filer

Emerging growth company

Non-accelerated filer

Smaller reporting company

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

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

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. Yes No

As of June 30, 2022, the aggregate market value of Class A common stock held by non-affiliates of the registrant was \$646.8 million based upon the closing price of the Class A common stock as reported on the NASDAQ Global Select Market as of the close of business on that date.

As of February 6, 2023, the registrant's outstanding common stock consisted of 35,594,333 shares of Class A common stock and 47,687,039 shares of Class B common stock, each \$0.001 par value.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive Proxy Statement to be filed in connection with its 2023 Annual Meeting of Shareholders are incorporated by reference in Part III.

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DISCLOSURE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K (“Form 10-K”) contains “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, including but not limited to statements about our estimates, expectations, future developments, plans, objectives, strategies, financial condition, expected impact of regulatory developments and legal proceedings, opportunities in our industries and businesses and other trends and projections for the next fiscal quarter and beyond. All statements, other than statements of historical facts, may be forward-looking statements. Forward-looking statements may also be identified by words such as “anticipate,” “intend,” “plan,” “goal,” “seek,” “believe,” “estimate,” “expect,” “predict,” “project,” “continue,” “future,” “will,” “would,” “could,” “can,” “may” and similar terms. These forward-looking statements are based on information available to us as of the date of this Form 10-K and represent management’s current views and assumptions based on past experience and trends, current economic and industry conditions, expected future developments and other relevant factors. Forward-looking statements are not guarantees of future performance, events or results and involve potential known and unknown risks, uncertainties, including the impact of the coronavirus pandemic (COVID-19), and other factors, many of which may be beyond our control and may pose a risk to our operating and financial condition both the near- and long-term. Accordingly, actual performance, events or results could differ materially from those expressed or implied in the forward-looking statements due to a number of factors including, but not limited to:

- significant risks related to our ability to operate and control our satellites, operational and environmental risks related to our owned and leased satellites, and risks related to our satellites under construction;
- our ability and the ability of third parties with whom we engage to operate our business as a result of the COVID-19 pandemic, including regulatory and competitive considerations;
- our ability to implement and/or realize benefits of our investments and other strategic initiatives;
- legal proceedings relating to the BSS Transaction or other matters that could result in substantial costs and material adverse effects to our business;
- risks related to our foreign operations and other uncertainties associated with doing business internationally;
- risks related to our dependency upon third-party providers, including supply chain disruptions and inflation;
- risks related to cybersecurity incidents; and
- risks related to our human capital resources.

Other factors that could cause or contribute to such differences include, but are not limited to, those discussed in Part I, Item 1A. Risk Factors and Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations of this Form 10-K and those discussed in other documents we file with the Securities and Exchange Commission (“SEC”).

All cautionary statements made herein should be read as being applicable to all forward-looking statements wherever they appear. Investors should consider the risks and uncertainties described herein and should not place undue reliance on any forward-looking statements. We do not undertake, and specifically disclaim, any obligation to publicly release the results of any revisions that may be made to any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

Although we believe that the expectations reflected in any forward-looking statements are reasonable, we cannot guarantee future results, events, levels of activity, performance or achievements. We do not assume responsibility for the accuracy and completeness of any forward-looking statements. We assume no responsibility for updating forward-looking information contained or incorporated by reference herein or in any documents we file with the SEC, except as required by law.

Should one or more of the risks or uncertainties described herein or in any documents we file with the SEC occur, or should underlying assumptions prove incorrect, our actual results and plans could differ materially from those expressed in any forward-looking statements.

PART I

ITEM 1. BUSINESS

OVERVIEW

EchoStar Corporation (which, together with its subsidiaries, is referred to as “EchoStar,” the “Company,” “we,” “us” and “our”) is a holding company that was organized in October 2007 as a corporation under the laws of the State of Nevada. A substantial majority of the voting power of the shares of EchoStar is owned beneficially by Charles W. Ergen, our Chairman, and by certain entities established for the benefit of his family. Our Class A common stock is publicly traded on the NASDAQ Global Select Market (“NASDAQ”) under the symbol “SATS.” During 2022, Hamid Akhavan joined the Company as its Chief Executive Officer and President.

We are an industry leader in both networking technologies and services, innovating to deliver the global solutions that power a connected future for people, enterprises and things everywhere. We provide internet services to consumer customers, which include home and small to medium-sized businesses, and satellite and multi-transport technologies and managed network services to enterprise customers, telecommunications providers, aeronautical service providers and government entities, including the U.S. Department of Defense.

Our industry continues to evolve with the increasing worldwide demand for broadband internet access for information, entertainment and commerce. In addition to fiber and wireless systems, technologies such as geostationary high throughput satellites, low-earth orbit (“LEO”) networks, medium-earth orbit (“MEO”) systems and multi-transport networks using combinations of technologies are expected to continue to play significant roles in enabling global connectivity, networks and services. We intend to use our expertise, technologies, capital, investments, global presence, relationships and other capabilities to continue to provide broadband internet systems, equipment, networks and managed services for information, the internet-of-things, entertainment, education, remote-connectivity and commerce across industries and communities globally for consumer and enterprise customers. We are closely tracking the developments in next-generation satellite businesses, and we are seeking to utilize our services, technologies, licenses and expertise to find new commercial opportunities for our business.

All amounts presented in this Form 10-K are expressed in thousands of U.S. dollars, except share and per share amounts and unless otherwise noted.

BUSINESS SEGMENTS

We currently operate in two business segments: our Hughes segment and our EchoStar Satellite Services segment (“ESS segment”). These business segments are consistent with the way we make decisions regarding the allocation of resources, as well as how operating results are reviewed by our chief operating decision maker (“CODM”), who is the Company’s Chief Executive Officer.

Our operations also include various corporate functions (primarily Executive, Treasury, Strategic Development, Human Resources, Information Technology, Finance, Accounting, Real Estate and Legal) and other activities, such as costs incurred in certain satellite development programs and other business development activities, and gains or losses from certain of our investments, that have not been assigned to our business segments. These activities, costs and income, as well as eliminations of intersegment transactions, are accounted for in our Corporate and Other segment in our segment reporting.

HUGHES SEGMENT

Our Products and Services

Our Hughes segment provides broadband satellite technologies and broadband internet products and services to consumer customers. We provide broadband network technologies, managed services, equipment, hardware, satellite services and communications solutions to government and enterprise customers. We also design, provide and install gateway and terminal equipment to customers for other satellite systems. In addition, we design, develop, construct and provide telecommunication networks comprising satellite ground segment systems and terminals to mobile system operators and our enterprise customers.

Our Hughes segment incorporates advances in technology to reduce costs and to increase the functionality and reliability of our products and services. Through advanced and proprietary methodologies, technologies, software and techniques, we continue to improve the efficiency of our networks. We invest in technologies to enhance our system and network management capabilities, specifically our managed services for enterprises. We also continue to invest in next generation technologies that can be applied to our future products and services. In addition, we are also providing wireline and wireless capacity to utilize in markets that include residential, community WiFi, backhaul, and other enterprise broadband and multi-transport services.

Our Hughes segment currently uses capacity from our owned and leased satellites, including additional satellite capacity leased from third-party providers to provide services to our customers. We also use other multi-transport capacity that includes cable, fiber, 5G, and 4G/LTE. In most areas of the U.S. we are nearing or have reached capacity, which has resulted in our consumer subscriber base becoming increasingly limited. Our Latin America consumer subscriber base in certain areas has also become capacity constrained. These constraints are expected to be addressed by the launch of the EchoStar XXIV satellite.

In May 2019, we entered into an agreement with Bharti Airtel Limited (“BAL”) and its subsidiary, Bharti Airtel Services Limited (together with BAL, “Bharti”), pursuant to which Bharti agreed to contribute its very small aperture terminal (“VSAT”) telecommunications services and hardware business in India to Hughes Communications India Private Limited (“HCIPL”) and its subsidiaries, our less than wholly owned Indian subsidiaries, that conduct our VSAT services and hardware business in India. On January 4, 2022, this joint venture was formed (the “India JV”) and subsequent to the formation of the India JV, we hold a 67% ownership interest and Bharti holds a 33% ownership interest in HCIPL. The India JV combines the VSAT businesses of both companies to offer flexible and scalable enterprise networking solutions using satellite connectivity for primary transport, back-up and hybrid implementation in India. The results of operations related to the India JV have been included in these Consolidated Financial Statements and the accompanying notes (collectively, the “Consolidated Financial Statements”) from the date of formation. The costs associated with the closing of the India JV were not material and were expensed as incurred.

In August 2017, we entered into a long-term contract for the design and construction of the EchoStar XXIV satellite, a next-generation, high throughput geostationary satellite. In December 2020, we entered into an agreement with a launch provider for the launch of EchoStar XXIV. The EchoStar XXIV satellite is primarily intended to provide additional capacity for our HughesNet satellite internet service (“HughesNet service”) in North, Central and South America as well as enterprise broadband services. Following delays of over two years, in November 2022 we negotiated an amendment to our contract with the manufacturer to provide for additional compensation for past delays and a realignment of remedies. The contract now provides relief to us on certain payments, including approximately \$14.0 million in payments through orbit-raising, and \$44.5 million, plus 6% interest on such amounts, in deferred in-orbit incentive payments. Additionally, the contract now requires the payment of additional liquidated damages to us in the event of further delay, and provides for our right to terminate beginning January 1, 2024 if the satellite has not yet been delivered. In addition, the Company and the manufacturer will enter into an agreement under which the Company will provide certain products and/or services during 2023. The EchoStar XXIV satellite is expected to be launched in the second quarter of 2023. Delay in the availability of the EchoStar XXIV satellite could have a material adverse impact on our business operations, future revenues, financial position and prospects, and our planned expansion of satellite broadband services throughout North, South and Central America. Capital expenditures associated with the construction and launch of the EchoStar XXIV satellite are included in our Corporate and Other segment in our segment reporting.

Our Customers

Our enterprise customers include, but are not limited to, lottery agencies, gas station operators, aircraft connectivity providers and companies with multi-branch networks that rely on satellite or terrestrial networks for critical communication across wide geographies. Most of our enterprise customers have contracts with us for the services they purchase. Our Hughes segment also designs, provides and installs gateway and terminal equipment to customers for other satellite systems and provides satellite ground segment systems and terminals for other satellite systems, including mobile system operators. Developments toward the launch of next-generation satellite systems, including LEO, MEO and geostationary systems, as well as other multi-transport technologies, could provide additional opportunities to drive the demand for our equipment, hardware, technology and services.

Our Competition

Our industry is highly competitive. As a global provider of network technologies, products and services, our Hughes segment competes with a large number of telecommunications service providers, which puts pressure on prices and margins. To compete effectively, we emphasize our network quality, customization capability, offering of networks as a turnkey managed service, position as a single point of contact for products and services and competitive prices.

In our consumer broadband satellite technologies and internet services markets, we compete against traditional telecommunications and wireless carriers, other satellite internet providers, as well as fiber, cable, and wireless internet service providers offering competitive services in the markets we seek to serve. Cost, speed and accessibility are key determining factors in the selection of a service provider by the consumer. In addition, government subsidies, such as the Federal Communication Commission's ("FCC") Rural Development Opportunity Fund can have the effect of subsidizing the growth of our wired, wireless and satellite competitors. Our primary satellite competitors in our North American consumer market are ViaSat Communications, Inc., which is owned by ViaSat, Inc. ("ViaSat"), and Space Exploration Technologies Corp. ("SpaceX"). Both ViaSat and SpaceX have also entered the South and Central American consumer markets. We seek to differentiate ourselves based on the ubiquitous availability of our service, quality, proprietary technology, and distribution channels.

In our enterprise markets, we compete against providers of satellite-based and terrestrial-based networks, including fiber, cable, wireless internet service, multiprotocol label switching and internet protocol-based virtual private networks.

Our principal competitors for the supply of VSAT satellite networks are Gilat Satellite Networks Ltd, ViaSat, and ST Engineering iDirect, Inc. To differentiate ourselves from our competitors, we emphasize particular technological features of our products and services, our ability to customize networks and perform desired development work and the quality of our customer service. We also face competition from resellers and numerous local companies who purchase equipment and sell services to local customers, including domestic and international telecommunications operators, cable companies and other major carriers.

Our Manufacturing

Certain products in our Hughes segment are assembled at our facilities in Maryland and we outsource a portion of the manufacturing of our products to third parties. We believe that the manufacturing facilities used by our Hughes segment have sufficient capacity to handle current demand. We adjust our capacity based on our production requirements. We also work with third-party vendors for the development and manufacture of components that are integrated into our products. We develop dual sourcing capabilities for critical parts when practical and we evaluate outsourced subcontract vendors on a periodic basis. Our operations group, together with our engineering group, works with our vendors and subcontractors to reduce development costs, to increase production efficiency, and to obtain components at lower prices.

ESS SEGMENT

Our Services

Our ESS segment provides satellite services on a full-time and/or occasional-use basis to U.S. government service providers, internet service providers, broadcast news organizations, content providers and private enterprise customers. We operate our ESS business using primarily the EchoStar IX satellite and the EchoStar 105/SES-11 satellite and related infrastructure. Revenue in our ESS segment depends largely on our ability to continuously make use of our available satellite capacity with existing customers and our ability to enter into commercial relationships with new customers.

Our Customers

Our satellite capacity is currently used by our customers for a variety of applications, including:

- **Fixed Satellite Services (“FSS”).** We provide satellite services to broadcast news organizations, internet service providers and content providers who use our satellites to deliver programming and internet. Our satellites are also used for the transmission of live sporting events, internet access, disaster recovery and satellite news gathering services.
- **Government Services.** We provide satellite and technical services to U.S. government service providers.
- **Network Services.** We provide satellite services to companies for private networks that allow delivery of video and data services for corporate communications. Our satellites can be used for point-to-point or point to multi-point communications.

Our Competition

Our ESS segment competes against larger, well-established satellite service companies, such as Intelsat S.A., SES S.A., Telesat and Eutelsat Communications S.A., in an industry that is characterized by long-term contracts and high costs for customers to change service providers. Several of our competitors maintain key North American and other international orbital slots that may further limit our ability to compete and offer competitive pricing.

BUSINESS STRATEGIES

- **Focus on optimization of operations and product offerings.** Currently and until the launch of our EchoStar XXIV satellite, our main focus is on optimizing the use of existing assets and services with primary attention on capacity yield. During this period efforts are directed towards the most scalable and profitable regions. The introduction of HughesNet Fusion was announced in September 2022 and is a low-latency satellite internet offering which connects mobile and landline technologies with satellites. The introduction of HughesNet Fusion is a growth opportunity that allows us to expand our service delivery options. Also, we are looking for additional opportunities for cross-functional collaboration within our organization, leading to simplification and centralization of structure to achieve greater efficiencies.
- **Monetize our EchoStar XXIV satellite.** Following the launch of our EchoStar XXIV satellite, which will provide additional capacity and ability to offer higher speed service plans, our focus will be on monetizing it. We are planning not only for the launch itself but for the introduction of our related services with new higher speed plans, including a new higher speed HughesNet Fusion offering. We believe that the kind of services we will be offering are in demand, and we expect to be able to effectively market a highly competitive set of services once EchoStar XXIV enters service.
- **Strong focus on our enterprise business.** We also have a strong focus on growing our global enterprise business by leveraging our business connectivity, managed service portfolio, hybrid business solutions, and our own manufactured products. Increased participation in this vast market segment is a key element of our diversification strategy. During this period, we will also focus on improving operational scale with potential small acquisitions.

- ***Continue development of S-band and other hybrid spectrum resources.*** We hold S-band mobile satellite service (“MSS”) and terrestrial authorizations in Europe, Mexico and Chile, and are in the process of applying for and receiving additional authorizations. We have positioned ourselves to continue to develop the S-band spectrum globally by acquiring Sirion Global Pty Ltd., which we have renamed EchoStar Global Australia Pty Ltd (“EchoStar Global”). EchoStar Global has brought into use the International Telecommunication Union (“ITU”) global S-band non-geostationary satellite spectrum rights for MSS. In February of 2023, we announced an agreement with Astro Digital US, Inc. (“Astro Digital”), a designer, manufacturer and operator of small satellite systems, for the construction of a global S-band MSS network. Under the agreement, Astro Digital will manufacture the satellites for the constellation, which will deliver global Internet of Things, machine-to-machine and other data services beginning in 2024. EchoStar Global will operate this constellation. In addition, we believe we remain in a unique position to develop a stand-alone as well as a hybrid MSS and complementary ground component network service.
- ***Continue to diversify our business by selectively exploring new domestic and international strategic initiatives.*** We intend to continue to selectively explore opportunities to pursue investments, commercial alliances, partnerships, joint ventures, acquisitions, dispositions and other strategic initiatives and transactions, domestically and internationally, that we believe may allow us to increase our existing market share, expand into new markets, and acquire new customers through the use of multi-transport technologies, increase our satellite capacity, broaden our portfolio of services, products and intellectual property and strengthen our relationships with our customers.
- ***Develop improved and new technologies.*** We believe that our engineering capabilities provide us with the opportunity to develop and deploy cutting edge technologies, license our technologies to others and maintain a leading technological position in the industries in which we are active.

OUR SATELLITE FLEET

As of December 31, 2022, our satellite fleet consisted of ten geosynchronous (“GEO”) satellites, seven of which are owned and three of which are leased. They are all in geosynchronous orbit, approximately 22,300 miles above the equator. Our owned S-band LEO nano-satellites are not included in the table below.

The following table presents our GEO satellite fleet as of December 31, 2022:

GEO Satellite	Segment	Launch Date	Nominal Degree Orbital Location (Longitude)	Depreciable Life (In Years)
Owned:				
SPACEWAY 3 ⁽¹⁾	Hughes	August 2007	95 W	10
EchoStar XVII	Hughes	July 2012	107 W	15
EchoStar XIX	Hughes	December 2016	97.1 W	15
Al Yah 3 ⁽²⁾	Hughes	January 2018	20 W	7
EchoStar IX ^{(3) (4)}	ESS	August 2003	121 W	12
EUTELSAT 10A (“W2A”) ⁽⁵⁾	Corporate and Other	April 2009	10 E	-
EchoStar XXI	Corporate and Other	June 2017	10.25 E	15

Finance leases:

Eutelsat 65 West A	Hughes	March 2016	65 W	15
Telesat T19V	Hughes	July 2018	63 W	15
EchoStar 105/SES-11	ESS	October 2017	105 W	15

(1) Depreciable life represents the remaining useful life as of June 8, 2011, the date EchoStar completed its acquisition of Hughes Communications, Inc. (“Hughes Communications”) and its subsidiaries (the “Hughes Acquisition”).

(2) Upon consummation of our joint venture with Al Yah Satellite Communications Company PrJSC (“Yahsat”) in Brazil in November 2019, we acquired the Brazilian Ka-band payload on this satellite. Depreciable life represents the remaining useful life as of November 2019.

(3) We own the Ka-band and Ku-band payloads on this satellite.

(4) EchoStar IX is approaching its end of station-kept life. The Company placed the satellite in an inclined-orbit in the first quarter of 2023. Inclined-orbit will extend its life to enable further revenue generating opportunities.

(5) We acquired the S-band payload on this satellite in December 2013. Prior to acquisition, the S-band payload experienced an anomaly at the time of launch and, as a result, is not fully operational.

Our EchoStar XXIV satellite is included in construction in progress as of December 31, 2022. The satellite is expected to be launched in the second quarter of 2023.

Satellite Anomalies and Impairments

Our satellites may experience anomalies from time to time, some of which may have a significant adverse effect on their remaining useful lives, the commercial operation of the satellites or our operating results or financial position. We are not aware of any anomalies with respect to our owned or leased satellites that have had any such significant adverse effect during the year ended December 31, 2022. During the first quarter of 2023, we lost contact with our third nano-satellite (“EG-3”), which was launched in the second quarter of 2021 and brought into use our Sirion-1 ITU filing in the third quarter of 2021. We are continuing attempts to reestablish contact with EG-3, and in the event we are unable to do so, we will have three years to place a new S-band spacecraft at the altitude prescribed in our Australian ITU filing. We expect the first group of S-band satellites recently ordered from Astro Digital to be launched well in advance of the three year replacement timeline. We are not aware of any other anomalies with respect to our owned or leased satellites as of the date of these Consolidated Financial Statements. There can be no assurance, however, that anomalies will not have a significant adverse effect in the future. In addition, there can be no assurance that we can recover critical transmission capacity in the event one or more of our satellites were to fail.

We generally do not carry in-orbit insurance on our satellites or payloads because we have assessed that the cost of insurance is not economical relative to the risk of failures. Therefore, we generally bear the risk of any in-orbit failures. Pursuant to the terms of our joint venture agreement with Yahsat, we are required to maintain insurance for the Al Yah 3 Brazilian payload during the commercial in-orbit service of such payload, subject to certain limitations on coverage. We have obtained certain insurance for our EchoStar XXIV satellite covering launch plus the first year of operations. We will continue to assess circumstances going forward and make insurance-related decisions on a case-by-case basis.

We evaluate our satellites for impairment and test for recoverability whenever events or changes in circumstances indicate that their carrying amount may not be recoverable. Certain of the anomalies previously disclosed may be considered to represent a significant adverse change in the physical condition of a particular satellite. However, based on the redundancy designed within each satellite, certain of these anomalies are not necessarily considered to be significant events that would require a test of recoverability.

GOVERNMENT REGULATIONS

We are subject to telecommunications regulation by a number of regulatory bodies including the FCC, other U.S. federal and state regulators and government agencies, the ITU and regulators and governments in other countries and regions where we hold licenses including the E.U., the U.K., India, Australia and several Latin American countries. In addition, we are also subject to the export control laws and regulations and trade sanctions laws and regulations of the U.S. and other countries with respect to the export of telecommunications equipment and services. In addition, in the U.S. and some other countries we are subject to country specific approvals of our products. Depending upon the circumstances, non-compliance with applicable legislation or regulations could result in suspension or revocation of our licenses or authorizations, the termination or loss of contracts or the imposition of contractual damages, civil fines or criminal penalties.

The following summary of regulations and legislation is not intended to describe all present and proposed government regulation and legislation affecting our business. Government regulations that are currently the subject of judicial or administrative proceedings, draft legislation or administrative proposals could impact us and our industries to varying degrees. The FCC and other regulators from time to time initiate proceedings that could adversely impact our satellite operations, including spectrum usage. We cannot predict either the outcome of these proceedings or proposals or any potential impact they might have on the industry or on our operations.

FCC Regulations Applicable to Our Operations

FCC Jurisdiction over Satellite Operations. Non-governmental bodies, including commercial entities, that use radio frequencies to provide communications services to, from or within the U.S. are subject to the jurisdiction of the FCC under the Communications Act of 1934, as amended (the “Communications Act”). The Communications Act gives the FCC regulatory jurisdiction over many areas relating to communications operations, including:

- the assignment of satellite radio frequencies and orbital locations to specific services and companies, the licensing of satellites and earth stations and the granting of related authorizations;
- approval for the relocation of satellites to different orbital locations, the replacement of a satellite with another new or existing satellite and the authorization of specific earth stations to communicate with such newly relocated satellites;
- ensuring compliance with the terms and conditions of assignments, licenses, authorizations and approvals;
- avoiding harmful interference with other radio frequency emitters; and
- ensuring compliance with other applicable provisions of the Communications Act and FCC rules and regulations.

All satellite licenses issued by the FCC are subject to expiration unless extended by the FCC. Our U.S. FCC licenses generally have 15 year terms. We hold licenses and authorizations for satellite and earth stations as well as other services. To obtain and operate under such FCC licenses and authorizations, we must satisfy legal, technical qualification requirements and other conditions including, among other things, satisfaction of certain

technical and ongoing due diligence obligations, maintaining bonds, payment of annual regulatory fees and various reporting requirements.

Telecommunications Regulation. Many of the services we provide are also subject to FCC regulation as telecommunications services. For certain services in the U.S., we are required to contribute fees, computed as a percentage of our revenue from telecommunications services to the Universal Service Fund (“USF”) to support mechanisms that subsidize the provision of services to low-income consumers, high-cost areas, schools, libraries and rural health care providers. Current FCC rules permit us to pass this USF contribution through to our customers. The FCC also requires broadband internet access and internet telephony service providers to comply with the requirements of the Federal Communications Assistance for Law Enforcement Act, which generally requires telecommunications carriers to ensure that law enforcement agencies are able to conduct lawfully-authorized surveillance of users of their services. In addition, as a provider of interconnected voice over internet protocol services, we are required to abide by a number of rules related to telephony service, including rules dealing with the protection of customer information and the processing of emergency calls.

State and Local Regulation

We are also regulated by state and local authorities. While the FCC has preempted many state and local regulations that would impair the installation and use of VSAT and other consumer satellite dishes, our businesses nonetheless are subject to state and local regulation, including, among others, obtaining regulatory authorizations and zoning regulations that affect the ability to install these consumer satellite earth station antennas. In addition, in order to obtain universal service funding, we are subject to being an eligible telecommunications carrier in certain states.

International Regulation

Foreign Administrations’ Jurisdiction Over Satellite and Terrestrial Operations. Some of our satellites and earth stations are licensed in foreign jurisdictions. We also have terrestrial authorizations in foreign jurisdictions. In order to provide service to a foreign location from our U.S. satellites, we are required to obtain approvals from the FCC and foreign administrative agencies. The laws and regulations addressing access to satellite and terrestrial systems vary from country to country. In most countries, a license is required to provide our services and to operate satellite systems and earth stations. Such licenses may impose certain conditions, including implementation and operation of the satellite system in a manner consistent with certain milestones (such as for contracting, satellite design, construction, launch and implementation of service), that the satellite or its launch be procured through a national entity, that the satellite control center be located in national territory, that a license be obtained prior to launching or operating the satellite, or that a license be obtained before interconnecting with the local switched telephone network and we may be subject to penalties or fines for failing to meet such conditions. Additionally, some countries may have restrictions on the services we provide and how we provide them and/or may limit the rates that can be charged for the services we provide or impose other service terms or restrictions. Furthermore, foreign countries in which we currently, or may in the future, operate may not authorize us access to all of the spectrum that we need to provide service in a particular country.

The ITU Frequency and Orbital Location Registration. The orbital location and frequencies for our satellites are subject to the frequency registration and coordination process of the ITU. The ITU Radio Regulations define the international rules, regulations and rights for a satellite and associated earth stations to use specific radio frequencies at a specific orbital location. These rules, which include deadlines for the bringing of satellite networks into use, differ depending on the type of service to be provided and the frequencies to be used by the satellite. On our behalf, various countries have made and may in the future make, additional filings for the frequency assignments at particular orbital locations that are used or to be used by our current satellite networks and potential future satellite networks we may build or acquire. In the event the international coordination process that is triggered by ITU filings under applicable rules is not successfully completed, or that the requests for modification of the broadcast satellite services plan regarding the allocation of orbital locations and frequencies are not granted by the ITU, we will have to operate the applicable satellite(s) on a non-interference basis, which could have an adverse impact on our business operations. If we cannot do so, we may have to cease operating such satellite(s) at the affected orbital locations. We cannot be sure of the successful outcome of these ITU coordination processes. We make commercially reasonable efforts to cooperate with the filing nation in the preparation of ITU filings,

coordination of our operations in accordance with the relevant ITU Radio Regulations and responses to relevant ITU inquiries.

Registration in the United Nations (“UN”) Registry of Space Objects. The U.S. and other jurisdictions in which we license satellites are generally parties to the UN Convention on the Registration of Objects Launched into Outer Space, which requires a satellite’s launching state to register the satellite as a space object. The act of registration carries liability for the registering country in the event that the satellite causes third party damage. Administrations may place certain requirements on satellite licensees in order to procure the necessary launch or operational authorizations that accompany registration of the satellite. In some jurisdictions, these authorizations are separate and distinct, with unique requirements, from the authorization to use a set of frequencies to provide satellite services.

Telecommunications Regulation. Many of the services we provide are also subject to the regulation of other countries as telecommunications services. For certain services, we may be required to contribute fees to a universal service or other fund to support mechanisms that subsidize the provision of services to designated groups. Many countries also impose requirements on telecommunications carriers to ensure that law enforcement agencies are able to conduct lawfully-authorized surveillance of users of their services. In addition, we are subject to a number of other rules, including rules related to telephony service such as the protection of customer information and processing of emergency calls.

Export Control Regulation

In the operation of our business, we must comply with all applicable export control and trade sanctions laws and regulations of the U.S. and other countries. Applicable U.S. laws and regulations include the Arms Export Control Act, the International Traffic in Arms Regulations (“ITAR”), the Export Administration Regulations (“EAR”) and the trade sanctions laws and regulations administered by the U.S. Department of the Treasury’s Office of Foreign Assets Control (“OFAC”).

The export of certain hardware, technical data, and services relating to satellites and the supply of certain ground control equipment, technical data and services to non-U.S. persons or to destinations outside the U.S. is regulated by the U.S. Department of Commerce’s Bureau of Industry and Security (“BIS”) under the EAR. In addition, BIS regulates our export of satellite communications network equipment to non-U.S. persons or to destinations outside of the U.S. The export of other items is regulated by the U.S. Department of State’s Directorate of Defense Trade Controls under the ITAR and are subject to strict export control and prior approval requirements. In addition, we cannot provide certain equipment or services to certain countries subject to U.S. trade sanctions unless we first obtain the necessary authorizations from OFAC. We are also subject to the Foreign Corrupt Practices Act and similar anti-bribery laws in other jurisdictions that generally prohibit companies and their intermediaries from making improper payments or giving or promising to give anything of value to foreign government officials and other individuals for the purpose of obtaining or retaining business or gaining a competitive advantage.

Environmental Regulation

We are subject to the requirements of federal, state, local and foreign environmental and occupational safety and health laws and regulations. These include laws regulating air emissions, waste-water discharge and waste management, most significantly the Resource Conservation and Recovery Act and the Emergency Planning and Community Right-to-Know Act (“EPCRA”). Under the Resource Conservation and Recovery Act, our Hughes segment is considered a small quantity generator.

As required by the EPCRA, we file annual reports with regulatory agencies covering four areas: Emergency Planning, Emergency Release, Hazardous Chemical Storage and Toxic Chemical Release Inventory. We maintain small quantities of hazardous materials on our premises and, therefore, have relatively modest reporting requirements under the EPCRA. We are also subject to the requirements of other environmental and occupational safety and health laws and regulations. Additionally, we review the Superfund Amendments and Reauthorization Act Title III regulatory requirements and annually report quantities of onsite material storage using Tier II, state DEQ (Department of Environmental Quality) reporting systems.

Our environmental compliance costs, capital and other expenditures to date have not been material, and we do not expect them to be material in 2023. However, environmental requirements are complex, change frequently and have become more stringent over time. Accordingly, we cannot provide assurance that these requirements will not change or become more stringent in the future in a manner that could have a material adverse effect on our business and/or environmental compliance costs, capital or other expenditures.

PATENTS AND TRADEMARKS

We currently rely on a combination of patent, trade secret, copyright and trademark law, together with licenses, non-disclosure and confidentiality agreements and technical measures, to establish and protect proprietary rights in our products. We hold U.S. and foreign patents covering various aspects of our products and services. The duration of each of our U.S. patents is generally 20 years from the earliest filing date to which the patent has priority. We have granted licenses to use our trademarks and service-marks to affiliates and resellers worldwide, and we typically retain the right to monitor the use of those marks and impose significant restrictions on their use in efforts to ensure a consistent brand identity. We protect our proprietary rights in our software through software licenses that, among other things, require that the software source code be maintained as confidential information and that prohibit any reverse-engineering of that code.

We believe that our patents are important to our business. We also believe that, in some areas, the improvement of existing products and the development of new products, as well as reliance upon trade secrets and unpatented proprietary know-how, are important in establishing and maintaining a competitive advantage. We believe, to a certain extent, that the value of our products and services are dependent upon our proprietary software, hardware and other technology remaining trade secrets and/or subject to copyright protection. Generally, we enter into non-disclosure and invention assignment agreements with our employees, subcontractors and certain customers and other business partners. Please see Item 3. Legal Proceedings of this Form 10-K for more information.

RESEARCH AND DEVELOPMENT AND ENGINEERING

We have a skilled and multi-disciplined engineering organization that develops our products and services. Our in-house technological capability includes a wide range of skills required to develop systems, hardware, software and firmware used in our products and services.

With respect to hardware development, we have skill sets that include complex digital designs, radio frequency and intermediate frequency analog designs, advanced application-specific integrated circuit designs and sophisticated consumer and system level packaging designs. We also have extensive experience in developing products for high-volume, low-cost manufacturing for the consumer industry, including dual mode satellite and wireless handsets.

As a complement to our hardware development, we have extensive experience in designing reliable, real time, embedded software systems as part of our communication systems and services offerings. For example, our broadband product line for the enterprise market supports an extensive range of protocols for data communications. Our engineers have also developed many large turnkey systems for our customers by designing the overall solution, implementing the various subsystems, deploying the entire network and user terminals, integrating and verifying the operational system and ultimately training the customers' technicians and operators.

Costs incurred in research and development activities are generally expensed as incurred. A significant portion of our research and development costs are incurred in connection with the specific requirements of a customer's order. In such instances, the amounts for these customer funded development efforts are included in *Cost of sales - equipment* in the Consolidated Statements of Operations in our Consolidated Financial Statements.

GEOGRAPHIC AREA DATA AND TRANSACTIONS WITH MAJOR CUSTOMERS

For principal geographic area data and transactions with major customers for 2022, 2021 and 2020, see Note 22 in our Consolidated Financial Statements. See Item 1A. Risk Factors for information regarding risks related to our foreign operations.

HUMAN CAPITAL RESOURCES

Our Human Capital

As of December 31, 2022, we had approximately 2,300 employees globally; of which approximately 1,700 were located in the U.S. and 600 internationally. We generally consider relations with our employees to be good. Other than approximately 200 of our employees located in Italy and Brazil, none are represented by a union. Our mission is to be a global connectivity provider for people, enterprises and things.

Employee Training and Development

We have a robust ongoing training and development program to enable employees to further refine and develop their skills. These training and development programs include technical programs meant to keep our employees abreast of the latest developments in our industry as well as courses to assist employees in developing their business communications and management skills.

Worker Health and Safety

Our commitment is to provide a safe, healthy and reliable workplace. We provide access to a variety of innovative, flexible, and convenient health and wellness programs. Due to the COVID-19 pandemic, we have taken a number of steps to prioritize health and safety of our employees including enabling employees to work from home as required or appropriate. We also implemented precautions at various sites around the world in compliance with local government requirements and Centers for Disease Control and Prevention guidelines.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the informational requirements of the Securities Exchange Act of 1934, as amended, and accordingly file an annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy statements and other information with the SEC. Our public filings are maintained on the SEC's internet site at <http://www.sec.gov>, which contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC.

WEBSITE ACCESS

Our Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, may also be accessed free of charge through our website at <http://www.echostar.com> as soon as reasonably practicable after we have electronically filed such material with, or furnished it to, the SEC.

We have adopted a written code of ethics that applies to all of our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer and controller, in accordance with the Sarbanes-Oxley Act of 2002 and the rules of the SEC promulgated thereunder. Our code of ethics is available on our corporate website at <http://www.echostar.com>. In the event that we make changes in, or provide waivers of, the provisions of this code of ethics that the SEC requires us to disclose, we intend to disclose these events on our website.

INFORMATION ABOUT OUR EXECUTIVE OFFICERS

Furnished in accordance with Item 401(b) of Regulation S-K, pursuant to General Instruction G(3) of Form 10-K.

The following table and information below sets forth the name, age and position with EchoStar of each of our executive officers, the period during which each executive officer has served as such and each executive officer's business experience during at least the past five years:

Name	Age	Position
Charles W. Ergen	69	Chairman
Hamid Akhavan	61	Chief Executive Officer, and President
Paul Gaske	69	Chief Operating Officer
Dean A. Manson	56	Chief Legal Officer and Secretary
Adrian Morris	68	Chief Technology Officer
Michelle Pearre	54	Chief Human Resources Officer
Ramesh Ramaswamy	63	Executive Vice President - International

Charles W. Ergen. Mr. Ergen has served as our executive Chairman since November 2009 and Chairman of the Board of Directors since our formation in 2007. Mr. Ergen served as our Chief Executive Officer from our formation in 2007 until November 2009. Mr. Ergen serves as executive Chairman and has been Chairman of the Board of Directors of DISH Network Corporation ("DISH") since its formation and, during the past five years, has held executive officer and director positions with DISH and its subsidiaries (together with DISH, "Dish Network") most recently serving as the Chief Executive Officer of DISH from March 2015 to December 2017.

Hamid Akhavan. Mr. Akhavan has served as our Chief Executive Officer and President since April 2022. Prior to joining EchoStar, Mr. Akhavan has accumulated extensive leadership experience at major telecommunications and technology companies, including Chief Executive Officer of Unify, Inc, and Chief Executive Officer of T-Mobile International, where he also served as a member of the Board of Management of Deutsche Telekom. In recent years, Akhavan has been active in private equity and investing serving on the board of directors of several public and private companies.

Paul Gaske. Mr. Gaske became Chief Operating Officer effective January 1, 2023, reporting to the Company's Chief Executive Officer. Prior to becoming the Chief Operating Officer, Mr. Gaske was the Executive President and General Manager of the North American Division of Hughes Network Systems, LLC since 1999. Mr. Gaske also oversees Hughes manufacturing.

Dean A. Manson. Mr. Manson has served as our Chief Legal Officer and Secretary since November 2011 and is responsible for all our legal, government affairs and corporate information security. Mr. Manson joined our subsidiary Hughes Network Systems, LLC in 2000 and was appointed its General Counsel in 2004. He was previously with the law firm of Milbank, Tweed, Hadley & McCloy LLP, where he focused on international project finance and corporate transactions.

Adrian Morris. Mr. Morris has served as our Chief Technology Officer since January 2023 leading our engineering team at EchoStar and its subsidiaries. Mr. Morris' career began at our subsidiary, Hughes Network Systems, in 1982 as an engineer and he served as an Executive Vice President, Engineering, of Hughes Network Systems since 2006.

Michelle Pearre. Ms. Pearre has served as our Chief Human Resources Officer since 2017. She has responsibility for Human Resources, Administration, Facilities, Real Estate and Physical Security. Since joining Hughes Network Systems in 1998, Ms. Pearre has held various positions of increasing responsibility in human resources.

Ramesh Ramaswamy. Mr. Ramaswamy has served as our Executive Vice President, International since 2021 and was our Senior Vice President, International since 2017. He oversees our international, mobile satellite and EchoStar Global businesses. Mr. Ramaswamy joined Hughes Network Systems in 1985 as a software engineer and has held positions of increasing responsibility in engineering, operations, marketing and sales.

There are no arrangements or understandings between any executive officer and any other person pursuant to which any executive officer was selected as such. Pursuant to the Bylaws of EchoStar, executive officers serve at the discretion of the Board of Directors.

ITEM 1A. RISK FACTORS

The risks and uncertainties described below are not the only ones facing us. If any of the following events occur or evolve in a way different than expected, our business, financial condition, results of operation, prospects or ability to fund a share or debt repurchase program, invest capital in or otherwise run our business, execute on our strategic plans or return capital to our shareholders could be materially and adversely affected.

RISKS RELATED TO OUR BUSINESS OPERATIONS

We may pursue acquisitions, dispositions, capital expenditures, the development, acquisition and launch of new satellites and other strategic initiatives to complement or expand our business, which may not be successful and we may lose a portion or all of our investment.

Our success may depend on the existence of, and our ability to capitalize on, opportunities to acquire or develop other businesses or technologies or partner with other companies that could complement, enhance or expand our current business, services or products or that may otherwise offer us growth opportunities. We may pursue a number of strategic initiatives to complement or expand our business. Any such strategic initiatives may involve a high degree of risk, including, but not limited to, the following:

- the risks associated with developing and constructing new satellites;
- the diversion of our management's attention away from our existing business onto a strategic initiative;
- possible adverse effects on our and our targets' and partners' business, financial condition or operating results during the integration process;
- exposure to significant financial losses if the strategic initiatives are not successful;
- the inability to obtain regulatory approvals in the anticipated time frame, or at all;
- the risks associated with complying with regulations applicable to the acquired or developed business or technologies which may cause us to incur substantial expenses;
- the disruption of relationships with employees, vendors or customers; and
- the risks associated with foreign and international operations and/or investments or dispositions.

New strategic initiatives may require the commitment of significant capital that would otherwise have been directed to investments in our existing businesses or distributed to shareholders.

We may not be able to successfully develop and execute our S-band business strategy which could materially adversely affect our ability to grow our revenue and our business.

Our future revenue and business growth partially depends on the successful development and execution of our S-band strategy. We may not be able to maintain or further develop our existing S-band spectrum rights. Additionally, in order to successfully develop and execute our S-band strategy, we will likely need to reach collaborative agreements with other relevant players in the S-band eco-system. We may not be able to reach such agreements with some of the relevant players, or at all, or may not be able to agree on economic terms that would provide the desired economic benefits to the Company. In addition, there can be no assurance that, even if we are able to successfully develop our S-band strategy, we will be able to attract and retain a customer base sufficiently large to be profitable. If we do not execute our S-band business strategy as planned, our business and operating results could be materially adversely affected.

We are facing increasing competition which could impact demand for, and result in increasing pricing pressures with respect to, our products and services.

Our business operates in an intensely competitive, consumer- and enterprise-driven and rapidly changing environment and competes with a growing number of companies that provide similar products and services to consumer and enterprise customers. There can be no assurance that we will be able to effectively compete against our competitors due to their significant resources and operating history. Material competitive risks to our business include, but are not limited to, the following:

- Competition from new or different technology compared to our offerings;
- Competition from existing or new competitors entering the same markets we serve;
- Government funding for competing products and services, reducing demand for our products and services; and
- Competitive pressures to provide enhanced functionality for the same or lower price with each new generation of technology.

Our business will be negatively impacted if we fail to adequately anticipate our satellite capacity needs or are unable to obtain satellite capacity.

We have made substantial contractual commitments for satellite capacity based on our existing customer contracts and backlog. If our existing customer contracts were to be terminated prior to their respective expiration dates, we may have insufficient revenue to cover our satellite capacity costs. On the other hand, we may not have sufficient satellite capacity available to meet increases in demand and we may not be able to quickly or easily adjust our capacity to such changes in demand. At present, until the launch and operation of additional satellites that our systems can utilize, there is limited additional capacity in North America and in certain areas of Latin America, including within our own fleet of satellites, which could materially and adversely affect our ability to provide services to customers and grow our revenue and business. Our business could be adversely affected if we are not able to renew our capacity leases at economically viable rates, or if sufficient capacity is not available to us.

We are dependent upon third-party providers for components, manufacturing, installation services and customer support services, and our results of operations may be materially adversely affected if any of these third-party providers fail to appropriately deliver the contracted goods or services.

Our dependence upon third-party providers causes certain risks to our business, including the following:

- **Components.** A limited number of suppliers manufacture, and in some cases a single supplier manufactures, some of the key components required to build our products. We do not generally maintain long-term agreements with our suppliers or subcontractors for our products. If we change or lose suppliers, we could experience a delay in manufacturing our products. In addition, if either our current suppliers or any new suppliers increase prices beyond what we currently pay, we may be unable to produce our products at competitive prices and we may be unable to satisfy demand from our customers.
- **Commodity Price Risk.** Fluctuations in pricing of raw materials can affect our product costs and we may not be able to pass on the increased costs to our customers. Additionally, we are seeing increasing inflationary price pressure and where we have fixed-price customer contracts, we may have to absorb the increased costs.
- **Manufacturing.** While we develop and manufacture prototypes for certain of our products, we use contract manufacturers to produce a portion of our hardware. If these contract manufacturers fail to provide products that meet our specifications in a timely manner or at all, our business could be adversely impacted.
- **Installation, customer support, and other services.** Some of our products and services utilize a network of third-party service providers. The costs incurred for these services may increase due to a shortage of experienced workers and higher salaries required to recruit and retain a skilled third-party workforce. A decline in levels of service or attention to the needs of our customers could adversely affect our reputation,

renewal rates and ability to win and retain customers. In addition, if the agreements for the provision of these services are terminated or not renewed, we could face difficulties replacing these service providers.

Our foreign operations and investments expose us to risks and restrictions not present in our domestic operations.

Our sales outside the U.S. accounted for 23.7%, 21.4% and 19.6% of our revenue for the years ended December 31, 2022, 2021 and 2020, respectively. We expect our foreign operations to represent a significant and growing portion of our business. Our foreign operations involve varying degrees of risk and uncertainties inherent in doing business abroad. Such risks include:

- **Complications in complying with restrictions on foreign ownership and investment and limitations on repatriation of earnings.** We may not be permitted to be the sole owner of our operations in some countries and may have to enter into partnership or joint venture relationships. Many foreign legal regimes and/or our contractual arrangements restrict our repatriation of earnings to the U.S. from our subsidiaries and joint venture entities. Applicable law in such foreign countries may also limit our ability to distribute or access our assets or offer our products and services in certain circumstances. In such event, we will not have unrestricted access to the cash flow and assets of our subsidiaries and joint ventures.
- **Regulatory restrictions.** Satellite market access, landing rights and terrestrial wireless rights are dependent on the national regulations established by foreign governments and international non-governmental bodies. Non-compliance with these requirements may result in the loss of the authorizations and licenses to conduct business in these countries, as well as fines, penalties, or other sanctions.
- **Financial and legal constraints and obligations.** Operating pursuant to foreign licenses subjects us to certain financial constraints and obligations, including, but not limited to: (a) tax liabilities that may or may not be dependent on revenue; (b) the regulatory requirements associated with maintaining such licenses, which may be subject to interpretation by foreign courts and regulatory bodies; (c) the burden of creating and maintaining additional entities, branches, facilities and/or staffing in foreign jurisdictions; and (d) regulations requiring that we make certain satellite capacity available for “free” or available at reduced rates.
- **Compliance with applicable export control laws and regulations in the U.S. and other countries.** We must comply with all applicable export control and trade sanctions laws and regulations of the U.S. and other countries. A violation any export or trade-related regulations could materially adversely affect our business.
- **Changes in exchange rates between foreign currencies and the U.S. dollar.** Fluctuations in currency exchange rates, recessions and currency devaluations have affected, and may in the future affect, revenue, profits and cash earned from our international businesses.
- **Regulations may favor state-owned enterprises or local service providers.** Many of the countries in which we conduct business have traditionally had state-owned or state-granted monopolies on telecommunications services that favor an incumbent service provider. We face competition from these favored and entrenched companies in countries that have not liberalized.

We may not be able to generate cash to meet our debt service needs or fund our operations.

As of December 31, 2022, our total indebtedness was \$1.5 billion. Our ability to make payments on or to refinance our indebtedness and to fund our operations will depend on our ability to generate cash in the future. If we are unable to generate sufficient cash, we may be forced to take actions such as revising or delaying our strategic plans, reducing or delaying capital expenditures and/or the development, design, acquisition and construction of new satellites, selling assets, restructuring or refinancing our debt or seeking additional equity capital. We may not be able to implement any of these actions on satisfactory terms, or at all.

Covenants in our indentures restrict our business in many ways.

The indentures governing the Hughes Satellite Systems Corporation (“HSSC”) 5.250% Senior Secured Notes due August 1, 2026 and 6.625% Senior Unsecured Notes due August 1, 2026 contain various covenants, subject to certain exceptions, that limit HSSC’s ability and/or certain of its subsidiaries’ ability to, among other things:

- incur additional debt;
- pay dividends or make distributions on HSSC's capital stock or repurchase HSSC's capital stock;
- allow to exist certain restrictions on such subsidiaries' ability to pay dividends, make distributions, make other payments, or transfer assets;
- make certain investments;
- create liens or enter into sale and leaseback transactions;
- enter into transactions with affiliates;
- merge or consolidate with another company; and
- transfer and sell assets.

Failure to comply with these and certain other financial covenants, if not cured or waived, may result in an event of default under the indentures, which could have a material adverse effect on our business, financial condition, results of operations or prospects. If certain events of default occur and are continuing under the respective indenture, the trustee under that indenture or the requisite holders of the notes under that indenture may declare all such notes to be immediately due and payable and, in the case of the indenture governing our secured notes, could proceed against the collateral that secures the secured notes. If certain other events of default occur, the indentures will become immediately due and payable. Certain of our subsidiaries have pledged a significant portion of our assets as collateral to secure the 5.250% Senior Secured Notes due August 1, 2026.

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

Natural disasters could damage or destroy our ground infrastructure and/or our other or our vendors' infrastructure, equipment and facilities, resulting in a disruption of service to our customers, which may adversely affect our business.

RISKS RELATED TO OUR HUMAN CAPITAL

We rely on key personnel and the loss of their services may negatively affect our businesses.

We believe that our future success depends to a significant extent upon the performance of Mr. Charles W. Ergen, our Chairman, and certain other key executives. The loss of Mr. Ergen or certain other key executives, the ability to effectively provide for the succession of our senior management, or the ability of Mr. Ergen or such other key executives to devote sufficient time and effort to our business could have a material adverse effect on our business, financial condition and results of operations. Although some of our key executives may have agreements relating to their equity compensation that limit their ability to work for or consult with competitors, we generally do not have employment agreements with them. To the extent Mr. Ergen is performing services for both DISH Network and us, his attention may be diverted away from our business and therefore adversely affect our business.

Our business growth and customer retention strategies rely in part on the work of technically skilled employees.

Our response to technological developments depends, to a significant degree, on the work of technically skilled employees. In addition, we have made and will continue to make significant investments in research, development, and marketing for new products, services, satellites and related technologies, as well as entry into new business areas. Investments in new technologies, satellites and business areas are inherently dependent on these technically skilled employees as well. Competition for the services of such employees has become more intense as demand for these types of employees grows. We compete with other companies for these employees and although we strive to attract and retain these employees, we may not succeed in these respects. Additionally, if we were to lose certain key technically skilled employees, the loss of knowledge and intellectual capital might have an adverse impact on our business.

Restrictions on immigration or increased enforcement of immigration laws could limit our access to qualified and skilled professionals, increase our cost of doing business or otherwise disrupt our operations.

The success of our business is dependent on our ability to recruit engineers and other professionals, including those who are citizens of other countries. Immigration laws in the U.S. and other countries in which we operate are subject to legislative and regulatory changes, as well as variations in the standards of application and enforcement due to political forces and economic conditions. It is difficult to predict the political and economic events that could affect immigration laws, or the restrictive impact they could have on obtaining or renewing work visas for our professionals. If immigration laws are changed or if new and more restrictive government regulations are enacted or increased, our access to qualified and skilled professionals may be limited.

RISKS RELATED TO OUR SATELLITES

Our ability to operate and control our satellites is subject to risks related to DISH Network's operation and third-parties' operation of satellite operations centers.

In September 2019, we transferred our satellite operation centers, which are used to monitor and control our satellites, to DISH Network in connection with our 2019 transfer to DISH of our broadband satellite services and certain related businesses and assets (the "BSS Transaction"). Therefore, we now are subject to the inherent risks of having a related party operate, maintain and manage these satellite operations centers. In addition, certain of our satellites are operated, maintained and managed by third parties.

Our owned and leased satellites in orbit are subject to significant operational and environmental risks that could limit our ability to utilize these satellites.

Satellites are subject to significant operational risks while in orbit. These risks include malfunctions, commonly referred to as anomalies, which have occurred and may occur in the future in our satellites and the satellites of other operators. Any single anomaly could materially and adversely affect our ability to utilize the satellite. Anomalies may also reduce the expected capacity, commercial operation and/or useful life of a satellite, thereby reducing the revenue that could be generated by that satellite, or create additional expenses due to the need to provide replacement or back-up satellites or satellite capacity earlier than planned and could have a material adverse effect on our business. We may not be able to prevent or mitigate the impacts of anomalies in the future.

Meteoroid events, decommissioned satellites, and increased solar activity also pose a potential threat to all in-orbit satellites. We may be required to perform maneuvers to avoid collisions and these maneuvers may prove unsuccessful or could reduce the useful life of the satellite through the expenditure of fuel to perform these maneuvers.

Generally, the minimum design life of each of our satellites is 15 years. We can provide no assurance, however, as to the actual operational lives of our satellites, which may be shorter or longer than their design lives. Our ability to earn revenue depends on the continued operation of our satellites, each of which has a limited useful life.

We generally do not carry in-orbit insurance on our satellites or payloads because we have assessed that the cost of insurance is not economical relative to the risk of failures. If one or more of our in-orbit uninsured satellites or payloads fail, we could be required to record significant impairment charges for the satellite or payload.

Our satellites under construction, including the EchoStar XXIV satellite, are subject to risks related to construction, technology, regulations and launch that could limit our ability to utilize these satellites, increase costs and adversely affect our business.

Satellite construction and launch are subject to significant risks, including manufacturing and delivery delays, anomalies, launch failure and incorrect orbital placement. The technologies in our satellite designs are very complex and difficulties in constructing our designs could result in delays in the deployment of our satellites or increased or unanticipated costs. For example, we have seen delays in the delivery calendar for EchoStar XXIV. There can be no assurance that the technologies in our existing satellites or in new satellites that we design,

acquire and build will work as we expect, will not become obsolete, that we will realize any or all of the anticipated benefits of our satellite designs or our new satellites, and/or that we will obtain all regulatory approvals required to operate our new or acquired satellites. Launch anomalies and failures can result in significant delays in the deployment of satellites because of the need both to construct replacement satellites, which can take significant amounts of time, and to obtain other launch opportunities. Such significant delays have and could in the future materially affect our business, our ability to meet regulatory or contractual required milestones, the availability and our use of other or replacement satellite resources and our ability to provide services to customers. In addition, significant delays in a satellite program could give customers who have purchased or reserved capacity on that satellite a right to terminate their service contracts relating to the satellite. We may not be able to accommodate affected customers on other satellites until a replacement satellite is available. In addition, we may not be able to obtain launch or in-orbit insurance on reasonable economic terms or at all. If we do obtain launch or in-orbit insurance, it may not cover the full cost of constructing and launching or replacing a satellite nor fully cover our losses in the event of a launch failure or significant degradation.

Our use of certain satellites is often dependent on satellite coordination agreements, which may be difficult to obtain.

Satellite operators are required to enter into international spectrum coordination agreements with other affected satellite operators and must be approved by the relevant governments. If a required agreement cannot be concluded, we may have to operate the applicable satellite(s) in a manner that does not cause harmful radio frequency interference with the affected satellite. If we cannot do so, we may have to cease operating such satellite(s) at the affected orbital locations.

We may face interference from other services sharing satellite spectrum.

The FCC and other regulators have adopted rules or may adopt rules in the future that require us to share spectrum on a basis with other radio services. There can be no assurance that these operations would not interfere with our operations and adversely affect our business.

RISKS RELATED TO OUR PRODUCTS AND TECHNOLOGY

Our future growth depends on growing demand for our services.

Future demand and effective delivery for our products and services will depend significantly on the growing demand for our services, such as broadband internet connectivity. If the deployment of, or demand for, our services is not as widespread or as rapid as we or our customers expect, our revenue growth will be negatively impacted.

Our business depends on certain intellectual property rights and on not infringing the intellectual property rights of others.

We rely on our patents, copyrights, trademarks, trade secrets, licenses and other agreements to conduct our business. Legal challenges to our intellectual property rights and claims of intellectual property infringement could result in significant monetary liability and require us to change our business practices or limit our ability to compete effectively or could otherwise have a material adverse effect on our business. Even if any such challenges or claims prove to be without merit, they can be time-consuming and costly to defend and may divert management's attention and resources away from our business.

Moreover, we rely in part on technologies developed or licensed by third parties. If we are unable to obtain or retain licenses or other required intellectual property rights from these third parties on reasonable terms, our business could be adversely affected. In addition, we work with suppliers for the development and manufacture of components that are integrated into our products and our products may contain technologies provided to us by these suppliers. We may have little or no ability to determine in advance whether any such technology infringes the intellectual property rights of others, or whether such suppliers have obtained or continue to obtain the appropriate licenses or other intellectual property rights to use such technology. Our suppliers may not be required to indemnify us in the event that a claim of infringement is asserted against us, or they may be required to indemnify us only up to a maximum amount. Legal challenges to these intellectual property rights may impair our ability to use the products and technologies that we need in order to operate our business and may have a material adverse effect on

our business. See further discussion under Item 1. Business — Patents and Trademarks and Item 3. Legal Proceedings of this Form 10-K.

Litigation or governmental proceedings could result in material adverse consequences.

We are involved in lawsuits, regulatory inquiries, audits, consumer claims and governmental and other legal proceedings. Some of these proceedings may raise difficult and complicated factual and legal issues and can be subject to uncertainties and complexities. The timing of the final resolutions is typically uncertain. Additionally, the possible outcomes of, or resolutions to, these proceedings could include adverse judgments, settlements, injunctions or liabilities, any of which could require substantial payments or have other adverse impacts on our business.

If our products contain defects, we could be subject to significant costs to correct such defects and our product and network service contracts could be delayed or cancelled, which could adversely affect our revenue.

The products and the networks we deploy are highly complex, and some may contain defects when first introduced or when new versions or enhancements are released, despite testing and our quality control procedures. Defects may also occur in components and products that we purchase from third parties. In addition, many of our products and network services are designed to interface with our customers' existing networks, each of which has different specifications and utilizes multiple protocol standards. Our products and services must interoperate with the other products and services within our customers' networks, as well as with future products and services that might be added to these networks, to meet our customers' requirements. There can be no assurance that we will be able to detect and fix all defects in the products and networks we sell. The occurrence of, and failure to remedy, any defects, errors or failures in our products or network services could materially affect our business.

RISKS RELATED TO CYBERSECURITY

The confidentiality, integrity, and availability of our services and products depends on the continuing operation of our information technology and other enabling systems.

Our systems are vulnerable to damage, intrusion, or disruption from criminal and/or terrorist attacks, telecommunications failures, computer viruses, ransomware attacks, digital denial of service attacks, phishing, or other attempts to injure or maliciously access our systems. Some of our systems are not fully redundant, and disaster recovery planning cannot account for all possibilities. In addition, our products and services are highly technical and complex and may contain errors or vulnerabilities, which could result in interruptions in or failure of our services or systems.

Our international businesses expose us to additional risks that could harm our business.

Our international operations continue to grow. In addition to risks described elsewhere in this segment, the different regions and countries in which we operate our businesses outside of the U.S. expose us to increased risks due to different privacy and cyber-related laws in each of these locations. The same cyber-related issue could have different consequences depending on the region or country of occurrence, the laws applicable in each case and the different levels of enforcement by regulatory and governmental authorities in each jurisdiction. These risks include but are not limited to the following:

- a. Data privacy and security concerns relating to our technology and our practices could damage our reputation, cause us to incur significant liability, and deter current and potential users or customers from using our products and services.
- b. Software bugs or defects, security breaches, and attacks on our systems could result in the improper disclosure of our user data which could harm our business reputation.
- c. Concerns about our practices about the collection, use, disclosure, or security of personal information or other data-privacy-related matters, even if unsubstantiated, could harm our reputation and financial condition. Our policies and practices may change over time as expectations regarding privacy and data change.

We experience cyber-attacks and other attempts to gain unauthorized access to our systems on a consistent basis.

We have experienced and may experience in the future security issues, whether due to insider error or malfeasance or system errors or vulnerabilities in our or our 3rd parties' systems, which could result in substantial legal and financial exposure, government inquiries and enforcement actions, litigation, and unfavorable media coverage. We may be unable to anticipate or detect attacks or vulnerabilities or implement adequate preventative measures. Attacks and security issues could also compromise trade secrets and other sensitive information.

Our ongoing investments in security will likely continue to identify new vulnerabilities within our services and products.

In addition to our efforts to mitigate cyber-attacks, we are making significant investments to assure that our products are resistant to compromise. As a result of these efforts, we could discover new vulnerabilities within our products and systems that would be undesirable for our users and customers. We may not discover all such vulnerabilities due to the scale of activities on our platforms, or due to other factors, including but not limited to issues outside of our control such as natural disasters/climate change such as sea level rise, drought, flooding, wildfires, increased storm severity, pandemics like COVID-19 and power loss, and we may be notified of such vulnerabilities via third parties. Any of the foregoing developments may negatively affect user and customer trust, harm our reputation and brands, and adversely affect our business and financial results. Any such developments may also subject us to litigation and regulatory inquiries, which could result in monetary penalties and damages, distract management's time and attention, and lead to enhanced regulatory oversight.

Compliance with data privacy laws may be costly, and non-compliance with such laws may result in significant liability.

The personal information and data we process and store is increasingly subject to data security and data privacy laws of many jurisdictions. These laws impose a significant compliance burden and complying with them has required us to change our business practices or the functionality of our products and services. Privacy laws and regulations are becoming more complex and onerous, and a data privacy breach could have a material adverse effect on our business.

RISKS RELATED TO THE REGULATION OF OUR BUSINESS

The risk of non-compliance with laws and regulations, including the risk of changes to laws and regulations, could adversely affect our business.

Our business is regulated by numerous governmental agencies and other regulatory bodies, both domestically and internationally. Also, our international operations are subject to the laws and regulations of many different jurisdictions that may differ significantly from U.S. laws and regulations. Violations of these laws and regulations could result in fines or penalties or other sanctions which could have a material adverse impact on our business. Additionally, our ability to operate and grow our business depends on laws and regulations that govern the frequency bands and/or orbital locations we operate in or may operate in in the future.

These laws and regulations are subject to the administrative and political process and do change from time to time. Our business could suffer a material adverse impact if laws and regulations change and we are not able to adapt to these changes efficiently.

Our business depends on regulatory authorizations issued by the FCC and state and foreign regulators that can expire, be revoked or modified, and applications for licenses and other authorizations that may not be granted.

Generally, all licenses granted by the FCC and most other countries are subject to expiration unless renewed by the regulatory agency. Our satellite licenses are currently set to expire at various times. In addition, we occasionally receive special temporary authorizations that are granted for limited periods of time (e.g., 180 days or less) and

subject to possible renewal. Generally, our licenses and special temporary authorizations have been renewed on a routine basis, but there can be no assurance that this will continue.

RISKS RELATED TO THE BSS TRANSACTION

If the BSS Transaction does not qualify as a tax-free distribution and merger under the Internal Revenue Code of 1986, as amended (the “Code”), then we and/or our stockholders may be required to pay substantial U.S. federal income taxes and under certain circumstances we may have indemnification obligations to DISH Network.

The parties to the BSS Transaction received a tax opinion from their respective counsels as to the tax-free nature of the transaction. They did not obtain a private letter ruling from the IRS in this respect and instead are relying solely on their respective tax opinions for comfort that the transaction qualifies for tax-free treatment for U.S. federal income tax purposes under the Code. The failure of any factual representation or assumption to be true, correct and complete, or any undertaking to be fully complied with, could affect the validity of the tax opinions and result in tax liabilities for our shareholders and/or us.

RISKS RELATED TO OUR OWNERSHIP

We are controlled by one principal stockholder who is our Chairman.

Charles W. Ergen, our Chairman, beneficially owns approximately 60% of our total equity securities (assuming conversion of the Class B common stock beneficially owned by Mr. Ergen into Class A common stock and giving effect to the exercise of options held by Mr. Ergen that are either currently exercisable as of, or may become exercisable within 60 days after, February 6, 2023) and beneficially owns approximately 93% of the total voting power of all classes of shares (assuming no conversion of any Class B common stock and giving effect to the exercise of options held by Mr. Ergen that are either currently exercisable as of, or may become exercisable within 60 days after, February 6, 2023). Through his beneficial ownership of our equity securities, Mr. Ergen has the ability to elect a majority of our directors and to control all other matters requiring the approval of our stockholders. As a result of Mr. Ergen’s voting power, we are a “controlled company” as defined in the NASDAQ listing rules and, therefore, are not subject to NASDAQ requirements that would otherwise require us to have (i) a majority of independent directors; (ii) a nominating committee composed solely of independent directors; (iii) compensation of our executive officers determined by a majority of the independent directors or a compensation committee composed solely of independent directors; (iv) a compensation committee charter which provides the compensation committee with the authority and funding to retain compensation consultants and other advisors; and/or (v) director nominees selected, or recommended for the Board’s selection, either by a majority of the independent directors or a nominating committee composed solely of independent directors.

We have potential conflicts of interest with DISH Network due to our common ownership.

A substantial majority of the voting power of the shares of each of EchoStar and DISH is owned beneficially by Charles W. Ergen, our Chairman, and by certain entities established for the benefit of his family. Questions relating to conflicts of interest may arise between DISH Network and us in a number of areas relating to our past and ongoing relationships. Areas in which conflicts of interest between DISH Network and us could arise include, but are not limited to, the following:

- **Cross directorships and stock ownership.** Charles W. Ergen serves as the Chairman of our and DISH’s board of directors, is employed by both companies and has fiduciary duties to our and DISH’s shareholders. Mr. Ergen may have actual or apparent conflicts of interest with respect to matters involving or affecting each company. For example, there is potential for a conflict of interest when we or DISH Network look at acquisitions and other corporate opportunities that may be suitable for both companies. In addition, some of our directors and officers, including Mr. Ergen, own DISH stock and options to purchase DISH stock. These ownership interests could create actual, apparent or potential conflicts of interest when these individuals are faced with decisions that could have different implications for our company and DISH Network.

- ***Intercompany agreements with DISH Network.*** We have entered into various agreements with DISH Network. Pursuant to certain agreements, we obtain certain products, services and rights from DISH Network; DISH Network obtains certain products, services and rights from us; and we and DISH Network indemnify each other against certain liabilities arising from our respective businesses. Generally, the amounts paid for products and services provided under the agreements are based on cost plus a fixed margin, which varies depending on the nature of the products and services provided. Certain other intercompany agreements cover matters such as tax sharing and our responsibility for certain liabilities previously undertaken by DISH Network for certain of our businesses. We have also entered into certain commercial agreements with DISH Network. The terms of certain of these agreements were established while we were a wholly-owned subsidiary of DISH and were not the result of arm's length negotiations. The allocation of assets, liabilities, rights, indemnifications and other obligations between DISH Network and us under certain agreements with DISH Network may not necessarily reflect what two unaffiliated parties might have agreed to. Had these agreements been negotiated with unaffiliated third parties, their terms may have been more or less favorable to us. In addition, DISH Network or its affiliates will likely continue to enter into transactions, including joint ventures, acquisitions, dispositions and other strategic initiatives and transactions, with us or other affiliates. Although the terms of any such transactions will be established based upon negotiations between us and DISH Network and, when appropriate, subject to approval by a committee of non-interlocking directors or in certain instances non-interlocking management, there can be no assurance that the terms of any such transactions will be as favorable to us or our subsidiaries or affiliates as may otherwise be obtained in negotiations between unaffiliated third parties.
- ***Competition for business opportunities.*** DISH Network may have interests in various companies that have subsidiaries or controlled affiliates that own or operate domestic or foreign services that may compete with services offered by our businesses. From time to time we may pursue the same business opportunities as DISH Network, such as when we participate in auctions for spectrum or orbital slots for our satellites or other business opportunities. In certain auctions, we and DISH Network may be prohibited from participating separately, and cooperating with DISH Network may result in a less favorable outcome for us.

We may not be able to resolve any potential conflicts of interest with DISH Network and, even if we do so, the resolution may be less favorable to us than if we were dealing with an unaffiliated party.

We do not have any agreements not to compete with DISH Network. However, many of our potential customers who compete with DISH Network have historically perceived us as a competitor due to our affiliation with DISH Network. There can be no assurance that we will be successful in entering into any commercial relationships with potential customers who are competitors of DISH Network (particularly if we continue to be perceived as affiliated with DISH Network as a result of common ownership, certain shared management services and other arrangements with DISH Network).

It may be difficult for a third party to acquire us, even if doing so may be beneficial to our shareholders, because of our capital structure.

Certain provisions of our articles of incorporation and bylaws may discourage, delay or prevent a change in control of our company that a shareholder may consider favorable. These provisions include the following:

- a capital structure with multiple classes of common stock: a Class A that entitles the holders to one vote per share; a Class B that entitles the holders to ten votes per share; a Class C that entitles the holders to one vote per share, except upon a change in control of our company in which case the holders of Class C are entitled to ten votes per share; and a non-voting Class D;
- a provision that authorizes the issuance of "blank check" preferred stock, which could be issued by our board of directors to increase the number of outstanding shares and thwart a takeover attempt;
- a provision limiting who may call special meetings of shareholders; and
- a provision establishing advance notice requirements for nominations of candidates for election to our board of directors or for proposing matters that can be acted upon by shareholders at shareholder meetings.

As discussed above, Mr. Ergen beneficially owns approximately 60% of our total equity securities and approximately 93% of the total voting power of all classes of shares and such ownership may make it impractical for any third party to obtain control of us.

In addition, pursuant to our articles of incorporation we have a significant amount of authorized and unissued stock that would allow our board of directors to issue shares to persons friendly to current management, thereby protecting the continuity of management, or which could be used to dilute the stock ownership of persons seeking to obtain control of us.

RISKS RELATED TO THE COVID-19 PANDEMIC

Our operations, and those of our customers, suppliers, vendors, and other third parties with whom we conduct business, including regulatory agencies, have been, and may continue to be, adversely affected by the COVID-19 pandemic.

The effects of the COVID-19 pandemic have disrupted our and our customers', suppliers', vendors' and other business partners' and investees' businesses, and have delayed the manufacture and deployment of our satellites, specifically our EchoStar XXIV satellite. Additionally, some regulatory bodies may still have reduced activities which may materially delay the review and/or approval of licenses or authorizations we need to operate our business. We cannot currently estimate or determine the final magnitude of these impacts.

Additionally, many of our subscribers continue to work remotely or engage in distance learning. These activities have increased the usage on our HughesNet service so that there is little or no capacity remaining for subscriber growth in our most popular geographic areas. This limitation on capacity has resulted in our subscribers experiencing slower speeds, which, in turn, has resulted in higher churn.

GENERAL RISKS

Our articles of incorporation designate the Eighth Judicial District Court of Clark County of the State of Nevada as the sole and exclusive forum for certain types of actions and proceedings that may be initiated by our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, employees or agents.

Any person purchasing or otherwise acquiring any interest in any shares of our capital stock shall be deemed to have notice of and to have consented to this provision of our articles of incorporation. This choice of forum provision may limit our stockholders' ability to bring certain claims, including claims against our directors, officers or employees, in a judicial forum that the stockholder finds favorable and therefore the choice of forum provision may discourage lawsuits or increase costs with respect to such claims.

We may face other risks described from time to time in periodic and current reports we file with the SEC.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Our principal executive offices are located at 100 Inverness Terrace East, Englewood, Colorado 80112-5308 and our telephone number is (303) 706-4000. We operate various facilities in the United States and abroad. We believe that our facilities are well maintained and are sufficient to meet our current and projected needs. The following table sets forth certain information concerning our principal properties related to our Hughes segment, our ESS segment, and our Corporate and Other segment as of December 31, 2022.

Location	Segment(s)	Function
Owned:		
Englewood, Colorado	ESS/Corporate and Other	Corporate headquarters and ESS operations
Germantown, Maryland	Hughes	Hughes corporate headquarters, engineering offices, network operations and shared hubs
Griesheim, Germany	Hughes/Corporate and Other	Shared hub, operations, administrative offices and warehouse
Leased:		
Gilbert, Arizona	Hughes	Gateways
San Diego, California	Hughes	Engineering and sales offices
Englewood, Colorado	Hughes	Gateways and equipment
Gaithersburg, Maryland	Hughes	Manufacturing and testing facilities and logistics offices
Gaithersburg, Maryland	Hughes	Engineering and administrative offices
Southfield, Michigan	Hughes	Shared hub and regional network management center
Las Vegas, Nevada	Hughes	Shared hub, antennae yards, gateway, backup network operation and control center for Hughes corporate headquarters
Cheyenne, Wyoming	Hughes/ESS	Gateways, equipment and ESS operations
Barueri, Brazil	Hughes	Shared hub
Sao Paulo, Brazil	Hughes	Hughes Brazil corporate headquarters, sales offices and warehouse
Bangalore, India	Hughes	Engineering office and office space
Gurgaon, India	Hughes	Administrative offices, shared hub, operations, warehouse, and development center
New Delhi, India	Hughes	Hughes India corporate headquarters
Milton Keynes, United Kingdom	Hughes	Hughes Europe corporate headquarters and operations

ITEM 3. LEGAL PROCEEDINGS

For a discussion of legal proceedings, see Note 21 in our Consolidated Financial Statements.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT’S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Price of and Dividends on the Registrant’s Common Equity and Related Stockholder Matters

Market Information. Our Class A common stock is publicly traded on the NASDAQ Global Select Market under the symbol “SATS.”

Holders. As of February 6, 2023, there were 35,594,333 shares of our Class A common stock outstanding held by 7,316 holders of record of our Class A common stock, not including stockholders who beneficially own Class A common stock held in nominee or street name. As of February 6, 2023, there were 47,687,039 shares of our Class B common stock outstanding, of which 25,066 shares were held by Charles W. Ergen, our Chairman and 47,661,973 shares were held in trusts and entities established for the benefit of Mr. Ergen’s family. There is currently no established trading market for our Class B common stock.

Dividends. We have not paid any cash dividends on our common stock in the past two years. We currently do not intend to declare dividends on our common stock. Payment of any future dividends will depend upon our earnings, capital requirements, contractual restrictions and other factors the board of directors considers appropriate. We currently intend to retain our earnings, if any, to support operations, future growth and expansion, although we have repurchased and may, in the future, repurchase shares of our common stock from time to time. Our ability to declare dividends is affected by the covenants in our subsidiary HSSC’s indentures. See further discussion under Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources of this Form 10-K.

Securities Authorized for Issuance Under Equity Compensation Plans. See Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters of this Form 10-K.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

On November 2, 2021, our Board of Directors authorized us to repurchase up to \$500.0 million of our Class A common stock commencing January 1, 2022 through and including December 31, 2022. In addition, on October 20, 2022, our Board of Directors authorized us to repurchase up to \$500.0 million of our Class A common stock commencing January 1, 2023 through and including December 31, 2023. Purchases under our repurchase authorizations may be made through privately negotiated transactions, open market repurchases, one or more trading plans in accordance with Rule 10b5-1 under the Securities Exchange Act of 1934, as amended, or otherwise, subject to market conditions and other factors. We may elect not to purchase the maximum amount or any of the shares allowable under these authorizations and we may also enter into additional share repurchase programs authorized by our Board of Directors. During the year ended December 31, 2022, we repurchased 3,980,612 shares of our Class A common stock.

The following table provides information regarding repurchases of our Class A common stock during the three months ended December 31, 2022:

Period	Total Number of Shares (or Units) Purchased	Average Price Paid Per Share (or Unit)	Total Number of Shares (or Units) Purchased as Part of Publicly Disclosed Plans or Program	Maximum Number (or Approximate Dollar Value) of Shares (or Units) That May Yet Be Purchased under the Plans or Program (1)
October 1 - 31	—	\$ —	—	\$ 410,736
November 1 - 30	—	—	—	410,736
December 1 - 31	—	—	—	410,736
Total	—	\$ —	—	\$ 410,736

⁽¹⁾ On November 2, 2021, our Board of Directors authorized us to repurchase up to \$500.0 million of our Class A common stock commencing January 1, 2022 through and including December 31, 2022. In addition, on October 20, 2022, our Board of Directors authorized us to repurchase up to \$500.0 million of our Class A common stock commencing January 1, 2023 through and including December 31, 2023. All shares repurchased have been converted to treasury shares.

ITEM 6. [RESERVED]

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following Management's Discussion and Analysis of our Financial Condition and Results of Operations ("Management's Discussion and Analysis") should be read in conjunction with our Consolidated Financial Statements. This Management's Discussion and Analysis is intended to help provide an understanding of our financial condition, changes in our financial condition and our results of operations. Many of the statements in this Management's Discussion and Analysis are forward-looking statements that involve assumptions and are subject to risks and uncertainties that are often difficult to predict and beyond our control. Actual results could differ materially from those expressed or implied by such forward-looking statements. See Disclosure Regarding Forward-Looking Statements of this Form 10-K for further discussion. For a discussion of additional risks, uncertainties and other factors that could impact our results of operations or financial condition, see Item 1A. Risk Factors of this Form 10-K. Further, such forward-looking statements speak only as of the date of this Form 10-K and we undertake no obligation to update them.

EXECUTIVE SUMMARY

Overview

We currently operate in two business segments: our Hughes segment and our ESS segment. Our operations include various corporate functions that have not been assigned to our business segments. These activities, costs and income, as well as eliminations of intersegment transactions, are accounted for in our Corporate and Other segment in our segment reporting.

All amounts presented in this Management's Discussion and Analysis are expressed in thousands of U.S. dollars, except share and per share amounts and unless otherwise noted.

Hughes Segment

Our Hughes segment is an industry leader in both networking technologies and services, innovating to deliver the global solutions that power a connected future for people, enterprises and things everywhere. We offer broadband satellite technologies and broadband internet products and services to consumer customers. We offer broadband network technologies, managed services, equipment, hardware, satellite services and communications solutions to government and enterprise customers.

Our Hughes segment continues to focus its efforts on optimizing financial returns of our existing satellites while planning for new satellite capacity to be launched, leased or acquired. Our consumer revenue growth depends on our success in adding new and retaining existing subscribers, as well as increasing our Average Revenue Per User/subscriber ("ARPU"). Service and acquisition costs related to ongoing support for our direct and indirect customers and partners are typically impacted most significantly by our growth. The growth of our enterprise and consumer businesses relies heavily on global economic conditions and the competitive landscape for pricing relative to competitors and alternative technologies. In most areas of the U.S. we are nearing or have reached capacity, which has resulted in our consumer subscriber base becoming increasingly limited. Our Latin America consumer subscriber base in certain areas has also become capacity constrained. These constraints are expected to be addressed by the launch of the EchoStar XXIV satellite.

To date, we have not experienced a material adverse impact from the Russia-Ukraine conflict and the associated sanctions.

On January 4, 2022, our India JV was formed, which allows us to offer flexible and scalable enterprise networking solutions using satellite connectivity for primary transport, back-up and hybrid implementation in India.

We expect to launch the EchoStar XXIV satellite in the second quarter of 2023. The EchoStar XXIV satellite is primarily intended to provide additional capacity for our HughesNet service in North, Central and South America as well as enterprise broadband services. Following delays of over two years, in November 2022 we negotiated an amendment to our contract with the manufacturer to provide for additional compensation for past delays and a realignment of remedies. See Item 1 Business – Hughes Segment of this Form 10-K for further information. Delay in the availability of the EchoStar XXIV satellite could have a material adverse impact on our business operations, future revenues, financial position and prospects, and our planned expansion of satellite broadband services

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS - CONTINUED

throughout North, South and Central America. Capital expenditures associated with the construction and launch of the EchoStar XXIV satellite are included in our Corporate and Other segment in our segment reporting.

Our broadband subscribers include customers that subscribe to our HughesNet services in the U.S. and Latin America through retail, wholesale and small/medium enterprise service channels.

The following table presents our approximate number of broadband subscribers:

	As of December 31,		
	2022	2021	2020
United States	931,000	1,090,000	1,189,000
Latin America	297,000	372,000	375,000
Total broadband subscribers	1,228,000	1,462,000	1,564,000

The following table presents the approximate number of net subscriber additions for each quarter in 2022:

	For the Three Months Ended			
	December 31	September 30	June 30	March 31
United States	(43,000)	(46,000)	(35,000)	(35,000)
Latin America	(14,000)	(15,000)	(25,000)	(21,000)
Total net subscriber additions	(57,000)	(61,000)	(60,000)	(56,000)

Our ability to gain new customers and retain existing customers in the U.S. is being impacted by our capacity limitations as well as competitive pressure from satellite-based competitors and other technologies. For the three months ended December 31, 2022, these factors resulted in lower total subscribers as compared to the three months ended September 30, 2022.

Our ability to gain new customers and retain existing customers in Latin America is also being impacted by adverse economic conditions. In addition, capacity constraints in certain areas limit our ability to add new subscribers. For the three months ended December 31, 2022, the decline in net subscribers was primarily due to more selective customer screening and improved churn as compared to the three months ended September 30, 2022.

We continued to execute our strategy of maximizing financial returns by utilizing capacity for higher economic value enterprise and government applications in Latin America. Continued success of this strategy will further reduce the available capacity for consumer subscribers.

As of December 31, 2022 and 2021, our Hughes segment had \$1.5 billion and \$1.4 billion of contracted revenue backlog, respectively, an increase of 7.1% during that period, primarily due to an increase in contracts from our domestic and international customers. Of the total Hughes segment contracted revenue backlog as of December 31, 2022, we expect to recognize \$461.0 million of revenue in 2023. We define Hughes segment contracted revenue backlog as our expected future revenue under enterprise customer contracts that are non-cancelable, including lease revenue.

Goodwill Impairment Assessment

We test goodwill for impairment annually in our second fiscal quarter, or more frequently if indicators of impairment exist. Goodwill is assessed for impairment at the reporting unit level. Reporting units are identified based on how segment management evaluates the results of segment operations and makes resource allocation decisions to such reporting units. All of our goodwill is assigned to our Hughes segment. We conducted our annual impairment test of goodwill during our second fiscal quarter on a qualitative basis and determined that no adjustment to the carrying value of goodwill was then necessary because the fair value exceeded carrying value for our Hughes reporting unit.

During the quarter ended December 31, 2022, we conducted a quantitative interim test of goodwill for all of our reporting units due to the decline of our stock price since our interim test in the third quarter of 2022. As a result of

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS - CONTINUED

this interim test, no goodwill impairment was identified. The fair value of the Hughes reporting unit exceeded the carrying value by more than 20%. We concluded that there were no other indicators of impairment for the quarter ended December 31, 2022. Given the decline in our stock price during the year ended December 31, 2022, we believe it is reasonably possible that a further sustained decline in our stock price and market capitalization would result in all or a significant portion of our goodwill becoming impaired. The impairment of goodwill has no effect on liquidity or capital resources. However, it would result in a material non-cash charge and would materially adversely affect our financial results in the period recognized.

When estimating the fair value of our Hughes reporting unit, we used a combination of the discounted cash flow and market multiple methodologies. We weighted 50% of the fair value using a discounted cash flow methodology and 50% using a market multiple approach. Although we concluded that recent transactions further supported our estimate of fair value, we gave them no such weight as the discounted cash flow and market multiple methodologies were considered more relevant and more reliable to be used in our fair value estimate.

In our discounted cash flow methodology, we developed and utilized a range of inputs that we believe to be reasonable and appropriately conservative. These inputs included, but were not limited to, revenue growth, EBITDA margins, capital expenditures, a terminal growth rate and a discount rate. In our market multiple approach, we also utilized what we believe to be a reasonable and appropriately conservative range of revenue and EBITDA multiples.

ESS Segment

Our ESS segment provides satellite services on a full-time and/or occasional-use basis to U.S. government service providers, internet service providers, broadcast news organizations, content providers and private enterprise customers. We operate our ESS business using primarily the EchoStar IX satellite and the EchoStar 105/SES-11 satellite and related infrastructure. Revenue in our ESS segment depends largely on our ability to continuously make use of our available satellite capacity with existing customers and our ability to enter into commercial relationships with new customers.

As of December 31, 2022 and 2021, our ESS segment had contracted revenue backlog of \$22.3 million and \$10.4 million, respectively, an increase of 114.4% during that period, primarily due to an increase in satellite service contracts with existing and new customers. Of the total ESS segment contracted revenue backlog as of December 31, 2022, we expect to recognize \$16.5 million of revenue in 2023. We define contracted revenue backlog for our ESS segment as contracted future satellite lease revenue.

Corporate and Other Segment

Satellite Anomalies and Impairments

During the first quarter of 2023, we lost contact with our third nano-satellite ("EG-3"), which was launched in the second quarter of 2021 and brought into use our Sirion-1 ITU filing in the third quarter of 2021. We are continuing attempts to reestablish contact with EG-3, and in the event we are unable to do so, we will have three years to place a new S-band spacecraft at the altitude prescribed in our Australian ITU filing. We expect the first group of S-band satellites recently ordered from Astro Digital to be launched well in advance of the three year replacement timeline. We are not aware of any other anomalies with respect to our owned or leased satellites as of the date of these Consolidated Financial Statements. There can be no assurance, however, that anomalies will not have a significant adverse effect in the future. In addition, there can be no assurance that we can recover critical transmission capacity in the event one or more of our satellites were to fail.

Cybersecurity

We are not aware of any cyber-incidents with respect to our owned or leased satellites or other networks, equipment or systems that have had a material adverse effect on our business, costs, operations, prospects, results of operation or financial position during the year ended December 31, 2022 and through February 22, 2023. There can be no assurance, however, that any such incident can be detected or thwarted or will not have such a material adverse effect in the future.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS - CONTINUED

EXPLANATION OF KEY METRICS AND OTHER ITEMS

Services and other revenue. Services and other revenue primarily includes the sales of consumer and enterprise broadband services, maintenance and other contracted services, revenue associated with satellite and transponder leases and services, satellite uplinking/downlinking, subscriber wholesale service fees for the HughesNet service, professional services and facilities rental revenue.

Equipment revenue. Equipment revenue primarily includes broadband equipment and networks sold to customers in our consumer and enterprise markets.

Cost of sales - services and other. Cost of sales - services and other primarily includes the cost of broadband services provided to our consumer and enterprise customers, maintenance and other contracted services, costs associated with satellite and transponder leases and services, professional services and facilities rental.

Cost of sales - equipment. Cost of sales - equipment consists primarily of the cost of broadband equipment and networks provided to customers in our consumer and enterprise markets. It also includes certain other costs associated with the deployment of equipment to our customers.

Selling, general and administrative expenses. Selling, general and administrative expenses primarily include selling and marketing costs and employee-related costs associated with administrative services (e.g., information systems, human resources and other services), including bad debt expense and stock-based compensation expense. It also includes professional fees (e.g. legal, information systems and accounting services) and other expenses associated with facilities and administrative services.

Research and development expenses. Research and development expenses primarily include costs associated with the design and development of products to support future growth and provide new technology and innovation to our customers.

Impairment of long-lived assets. Impairment of long-lived assets includes our impairment losses related to our property and equipment, goodwill, regulatory authorizations and other intangible assets.

Interest income, net. Interest income, net primarily includes interest earned on our cash, cash equivalents and marketable investment securities, and other investments including premium amortization and discount accretion on debt securities.

Interest expense, net of amounts capitalized. Interest expense, net of amounts capitalized primarily includes interest expense associated with our debt and finance lease obligations (net of capitalized interest), amortization of debt issuance costs and interest expense related to certain legal proceedings.

Gains (losses) on investments, net. Gains (losses) on investments, net primarily includes changes in fair value of our marketable equity securities and other investments for which we have elected the fair value option. It may also include realized gains and losses on the sale or exchange of our available-for-sale debt securities, other-than-temporary impairment losses on our available-for-sale securities, realized gains and losses on the sale or exchange of equity securities and debt securities without readily determinable fair value and adjustments to the carrying amount of investments in unconsolidated affiliates and marketable equity securities resulting from impairments and observable price changes.

Equity in earnings (losses) of unconsolidated affiliates, net. Equity in earnings (losses) of unconsolidated affiliates, net includes earnings or losses from our investments accounted for using the equity method.

Foreign currency transaction gains (losses), net. Foreign currency transaction gains (losses), net include gains and losses resulting from the re-measurement of transactions denominated in foreign currencies.

Other, net. Other, net primarily includes dividends received from our marketable investment securities and other non-operating income and expense items that are not appropriately classified elsewhere in the Consolidated Statements of Operations in our Consolidated Financial Statements.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS - CONTINUED

Earnings before interest, taxes, depreciation and amortization ("EBITDA"). EBITDA is defined as Net income (loss) excluding Interest income and expense, net, Income tax benefit (provision), net, Depreciation and amortization, and Net income (loss) attributable to non-controlling interests. EBITDA is not a measure determined in accordance with U.S. generally accepted accounting principles ("GAAP"). This non-GAAP measure is reconciled to Net income (loss) in our discussion of Results of Operations section below. EBITDA should not be considered in isolation or as a substitute for operating income, net income or any other measure determined in accordance with GAAP. EBITDA is used by our management as a measure of operating efficiency and overall financial performance for benchmarking against our peers and competitors. Management believes EBITDA provides meaningful supplemental information regarding the underlying operating performance of our business and is appropriate to enhance an overall understanding of our financial performance. Management also believes that EBITDA is useful to investors because it is frequently used by securities analysts, investors and other interested parties to evaluate the performance of companies in our industry.

Subscribers. Subscribers include customers that subscribe to our HughesNet service, through retail, wholesale and small/medium enterprise service channels.

Highlights from our Financial Results

Consolidated Results of Operations for the Year Ended December 31, 2022:

- Revenue of \$2.0 billion
- Operating income of \$189.6 million
- Net income of \$166.5 million
- Net income attributable to EchoStar common stock of \$177.1 million and basic and diluted earnings per share of common stock of \$2.10
- EBITDA of \$707.6 million (see reconciliation of this non-GAAP measure in Results of Operations)

Consolidated Financial Condition as of December 31, 2022:

- Total assets of \$6.2 billion
- Total liabilities of \$2.6 billion
- Total stockholders' equity of \$3.6 billion
- Cash and cash equivalents and marketable investment securities of \$1.7 billion

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS - CONTINUED

RESULTS OF OPERATIONS

Year Ended December 31, 2022 Compared to the Year Ended December 31, 2021

The following table presents our consolidated results of operations for the year ended December 31, 2022 compared to the year ended December 31, 2021:

Statements of Operations Data ⁽¹⁾	For the year ended December 31,		Variance	
	2022	2021	Amount	%
Revenue:				
Services and other revenue	\$ 1,623,931	\$ 1,715,287	\$ (91,356)	(5.3)
Equipment revenue	374,162	270,433	103,729	38.4
Total revenue	1,998,093	1,985,720	12,373	0.6
Costs and expenses:				
Cost of sales - services and other	569,755	551,679	18,076	3.3
% of total services and other revenue	35.1 %	32.2 %		
Cost of sales - equipment	292,318	231,975	60,343	26.0
% of total equipment revenue	78.1 %	85.8 %		
Selling, general and administrative expenses	455,234	461,705	(6,471)	(1.4)
% of total revenue	22.8 %	23.3 %		
Research and development expenses	32,810	31,777	1,033	3.3
% of total revenue	1.6 %	1.6 %		
Depreciation and amortization	457,621	491,329	(33,708)	(6.9)
Impairment of long-lived assets	711	245	466	190.2
Total costs and expenses	1,808,449	1,768,710	39,739	2.2
Operating income (loss)	189,644	217,010	(27,366)	(12.6)
Other income (expense):				
Interest income, net	50,900	22,801	28,099	123.2
Interest expense, net of amounts capitalized	(57,170)	(95,512)	38,342	(40.1)
Gains (losses) on investments, net	47,107	69,531	(22,424)	(32.3)
Equity in earnings (losses) of unconsolidated affiliates, net	(5,703)	(5,170)	(533)	10.3
Foreign currency transaction gains (losses), net	5,235	(12,613)	17,848	(141.5)
Other-than-temporary impairment losses on equity method investments	—	(55,266)	55,266	(100.0)
Other, net	3,210	(12,434)	15,644	(125.8)
Total other income (expense), net	43,579	(88,663)	132,242	(149.2)
Income (loss) before income taxes	233,223	128,347	104,876	81.7
Income tax benefit (provision), net	(66,675)	(65,626)	(1,049)	1.6
Net income (loss)	166,548	62,721	103,827	165.5
Less: Net loss (income) attributable to non-controlling interests	10,503	10,154	349	3.4
Net income (loss) attributable to EchoStar Corporation common stock	\$ 177,051	\$ 72,875	\$ 104,176	143.0
Other data:				
EBITDA ⁽²⁾	\$ 707,617	\$ 702,541	\$ 5,076	0.7
Subscribers, end of period	1,228,000	1,462,000	(234,000)	(16.0)

(1) An explanation of our key metrics is included in Explanation of Key Metrics and Other Items.

(2) A reconciliation of EBITDA to Net income (loss), the most directly comparable GAAP measure in our Consolidated Financial Statements, is included in Results of Operations. For further information on our use of EBITDA, see Explanation of Key Metrics and Other Items.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS - CONTINUED

The following discussion relates to our results of operations for the year ended December 31, 2022 compared to the year ended December 31, 2021:

Services and other revenue. Services and other revenue totaled \$1.6 billion for the year ended December 31, 2022, a decrease of \$91.4 million, or 5.3%, as compared to 2021. The decrease was primarily attributable to our Hughes segment related to lower sales of broadband services to our consumer customers of \$103.1 million, partially offset by higher sales of broadband services to our enterprise customers of \$5.3 million and to our mobile satellite system and other customers of \$4.5 million. Our ESS segment increased by \$2.9 million. These variances reflect an estimated negative impact of exchange rate fluctuations of \$5.9 million, primarily attributable to our enterprise customers.

Equipment revenue. Equipment revenue totaled \$374.2 million for the year ended December 31, 2022, an increase of \$103.7 million, or 38.4%, as compared to 2021. The increase was primarily attributable to: i) increases in hardware sales to our enterprise customers of \$102.6 million mainly associated with a certain customer in North America and to international customers, and ii) increases on our hardware sales to our mobile satellite system customers of \$6.6 million, partially offset by decreases in hardware sales of \$5.5 million to our consumer customers.

Cost of sales - services and other. Cost of sales - services and other totaled \$569.8 million for the year ended December 31, 2022, an increase of \$18.1 million, or 3.3%, as compared to 2021. The increase was attributable to a non-recurring decrease in a certain international regulatory fee of \$4.5 million in 2021 and increases in cost of services provided to our consumer and enterprise customers, mainly related to service delivery expenses, such as field services and customer care.

Cost of sales - equipment. Cost of sales - equipment totaled \$292.3 million for the year ended December 31, 2022, an increase of \$60.3 million, or 26.0%, as compared to 2021. The increase was primarily attributable to the corresponding increase in equipment revenue and change in product mix.

Selling, general and administrative expenses. Selling, general and administrative expenses totaled \$455.2 million for the year ended December 31, 2022, a decrease of \$6.5 million, or 1.4%, as compared to 2021. The decrease was primarily attributable to decreases in: i) sales and marketing expenses of \$18.5 million and ii) legal expenses of \$2.3 million, offset by increases in: i) bad debt expense of \$7.4 million primarily due to the recovery of bad debt reserves in 2021 and ii) other general and administrative expenses of \$6.9 million.

Depreciation and amortization. Depreciation and amortization expenses totaled \$457.6 million for the year ended December 31, 2022, a decrease of \$33.7 million, or 6.9%, as compared to 2021. The decrease was primarily attributable to: i) decreases in other property and equipment depreciation expense of \$27.7 million, ii) decreases in our satellite depreciation of \$8.9 million, mainly related to our SPACEWAY 3 satellite which was fully depreciated at the end of the first quarter of 2021, and iii) decreases in amortization of intangibles of \$2.1 million. These decreases were partially offset by increases in amortization of our capitalized software of \$5.7 million.

Interest income, net. Interest income, net totaled \$50.9 million for the year ended December 31, 2022, an increase of \$28.1 million, or 123.2%, as compared to 2021, primarily attributable to increases in the yield on our marketable investment securities and an increase in our marketable investment securities average balance.

Interest expense, net of amounts capitalized. Interest expense, net of amounts capitalized, totaled \$57.2 million for the year ended December 31, 2022, a decrease of \$38.3 million, or 40.1%, as compared to 2021. The decrease was primarily attributable to a decrease of \$30.8 million in interest expense and the amortization of deferred financing cost as a result of the repurchases and maturity of our 7 5/8% Senior Unsecured Notes due 2021 and an increase of \$6.8 million in capitalized interest relating to the EchoStar XXIV satellite program.

Gains (losses) on investments, net. Gains (losses) on investments, net totaled \$47.1 million in gains for the year ended December 31, 2022, as compared to \$69.5 million in gains for the year ended December 31, 2021, a negative change of \$22.4 million. The change was primarily attributable to a net loss of \$28.3 million related to the exit of our investment in Dish Mexico in 2022.

Foreign currency transaction gains (losses), net. Foreign currency transaction gains (losses), net totaled \$5.2 million in gains for the year ended December 31, 2022, as compared to \$12.6 million in losses for the year ended

ITEM 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS - CONTINUED

December 31, 2021, a positive change of \$17.8 million. The change was due to the net impact of foreign exchange rate fluctuations of certain foreign currencies during the period, primarily related to the Brazilian Real, Indian Rupee, and the European Euro.

Other-than-temporary impairment losses on equity method investments. Other-than-temporary impairment losses on equity method investments was \$55.3 million for the year ended December 31, 2021, related to the impairment of our investment in Dish Mexico. Given changing market trends, conditions, and company-specific events, we concluded that our investment in Dish Mexico was not recoverable.

Other, net. Other, net totaled \$3.2 million in gains for the year ended December 31, 2022, as compared to \$12.4 million in losses for the year ended December 31, 2021, a positive change of \$15.6 million. The change was primarily attributable to a litigation expense of \$16.8 million in 2021.

Income tax benefit (provision), net. Income tax benefit (provision), net was \$(66.7) million for the year ended December 31, 2022, as compared to \$(65.6) million for the year ended December 31, 2021. Our effective income tax rate was 28.6% and 51.1% for the year ended December 31, 2022 and 2021, respectively. The variations in our effective tax rate from the U.S. federal statutory rate for the year ended December 31, 2022 were primarily due to excluded foreign losses where the Company carries a full valuation allowance, and the impact of state and local taxes. The variations in our current year effective tax rate from the U.S. federal statutory rate for the year ended December 31, 2021 were primarily due to excluded foreign losses where the Company carries a full valuation allowance and the impact of state and local taxes.

On August 16, 2022, the Inflation Reduction Act (“IRA”) was signed into law. Among other provisions, the IRA includes a 15% corporate minimum tax rate applied to certain large corporations and a 1% excise tax on corporate stock repurchases made after December 31, 2022. We do not expect the IRA to have a material impact on our Consolidated Financial Statements.

Net income (loss) attributable to EchoStar Corporation common stock. The following table reconciles the change in Net income (loss) attributable to EchoStar Corporation common stock:

	Amounts
Net income (loss) attributable to EchoStar Corporation for the year ended December 31, 2021	\$ 72,875
Decrease (increase) in other-than-temporary impairment losses on equity method investments	55,266
Decrease (increase) in interest expense, net of amounts capitalized	38,342
Increase (decrease) in interest income, net	28,099
Increase (decrease) in foreign currency transaction gains (losses), net	17,848
Increase (decrease) in other, net	15,644
Increase (decrease) in net income (loss) attributable to non-controlling interest	349
Decrease (increase) in equity in earnings (losses) of unconsolidated affiliates, net	(533)
Decrease (increase) in income tax benefit (provision), net	(1,049)
Increase (decrease) in gains (losses) on investments, net	(22,424)
Increase (decrease) in operating income (loss), including depreciation and amortization	(27,366)
Net income (loss) attributable to EchoStar Corporation for the year ended December 31, 2022	<u>\$ 177,051</u>

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS - CONTINUED

EBITDA. EBITDA is a non-GAAP financial measure and is described under Explanation of Key Metrics and Other Items section. The following table reconciles EBITDA to Net income (loss), the most directly comparable GAAP measure in our Consolidated Financial Statements:

	For the year ended December 31,		Variance	
	2022	2021	Amount	%
Net income (loss)	\$ 166,548	\$ 62,721	\$ 103,827	165.5
Interest income, net	(50,900)	(22,801)	(28,099)	123.2
Interest expense, net of amounts capitalized	57,170	95,512	(38,342)	(40.1)
Income tax provision (benefit), net	66,675	65,626	1,049	1.6
Depreciation and amortization	457,621	491,329	(33,708)	(6.9)
Net loss (income) attributable to non-controlling interests	10,503	10,154	349	3.4
EBITDA	\$ 707,617	\$ 702,541	\$ 5,076	0.7

The following table reconciles the change in EBITDA:

	Amounts
EBITDA for the year ended December 31, 2021	\$ 702,541
Decrease (increase) in other-than-temporary impairment losses on equity method investments	55,266
Increase (decrease) in foreign currency transaction gains (losses), net	17,848
Increase (decrease) in other, net	15,644
Decrease (increase) in net loss (income) attributable to non-controlling interests	349
Decrease (increase) in equity in earnings (losses) of unconsolidated affiliates, net	(533)
Increase (decrease) in gains (losses) on investments, net	(22,424)
Increase (decrease) in operating income (loss), excluding depreciation and amortization	(61,074)
EBITDA for the year ended December 31, 2022	\$ 707,617

Segment Operating Results and Capital Expenditures

The following tables present our total revenue, capital expenditures and EBITDA by segment for the year ended December 31, 2022, as compared to the year ended December 31, 2021:

	Hughes	ESS	Corporate and Other	Consolidated Total
For the year ended December 31, 2022				
Total revenue	\$ 1,966,587	\$ 20,533	\$ 10,973	\$ 1,998,093
Capital expenditures	239,403	—	86,488	325,891
EBITDA	732,929	14,416	(39,728)	707,617
For the year ended December 31, 2021				
Total revenue	\$ 1,956,226	\$ 17,679	\$ 11,815	\$ 1,985,720
Capital expenditures	296,303	—	142,127	438,430
EBITDA	781,824	9,185	(88,468)	702,541

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS - CONTINUED

Hughes Segment

	For the year ended December 31,		Variance	
	2022	2021	Amount	%
Total revenue	\$ 1,966,587	\$ 1,956,226	\$ 10,361	0.5
Capital expenditures	239,403	296,303	(56,900)	(19.2)
EBITDA	732,929	781,824	(48,895)	(6.3)

Total revenue was \$2.0 billion for the year ended December 31, 2022, an increase of \$10.4 million, or 0.5%, as compared to 2021. Services and other revenue decreased primarily due to lower sales of broadband services to our consumer customers of \$103.1 million, partially offset by higher sales of broadband services to our enterprise customers of \$5.3 million and to our mobile satellite system and other customers of \$4.5 million. Equipment revenue increased primarily due to: i) increases in hardware sales to our enterprise customers of \$102.6 million mainly associated with a certain customer in North America and to international customers, and ii) increases on our hardware sales to our mobile satellite system customers of \$6.6 million, partially offset by decreases in hardware sales of \$5.5 million to our consumer customers. These variances reflect an estimated negative impact of exchange rate fluctuations of \$6.7 million, primarily attributable to our enterprise customers.

Capital expenditures were \$239.4 million for the year ended December 31, 2022, a decrease of \$56.9 million, or 19.2%, as compared to 2021, primarily due to decreases in expenditures associated with our consumer business, and decreases in expenditures related to the construction of our satellite-related ground infrastructure.

The following table reconciles the change in the Hughes Segment EBITDA:

	Amounts
EBITDA for the year ended December 31, 2021	\$ 781,824
Increase (decrease) in foreign currency transaction gains (losses), net	17,438
Decrease (increase) in net loss (income) attributable to non-controlling interests	349
Decrease (increase) in equity in earnings (losses) of unconsolidated affiliates, net	39
Increase (decrease) in gains (losses) on investments, net	(1,883)
Increase (decrease) in other, net	(3,344)
Increase (decrease) in operating income (loss), excluding depreciation and amortization	(61,494)
EBITDA for the year ended December 31, 2022	<u>\$ 732,929</u>

ESS Segment

	For the year ended December 31,		Variance	
	2022	2021	Amount	%
Total revenue	\$ 20,533	\$ 17,679	\$ 2,854	16.1
EBITDA	14,416	9,185	5,231	57.0

Total revenue was \$20.5 million for the year ended December 31, 2022, an increase of \$2.9 million, or 16.1%, compared to 2021, primarily due to an increase in transponder services provided to third parties.

EBITDA was \$14.4 million for the year ended December 31, 2022, an increase of \$5.2 million, or 57.0%, as compared to 2021, primarily due to the increase in overall ESS segment revenue and lower expenses.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS - CONTINUED

Corporate and Other Segment

	For the year ended December 31,		Variance	
	2022	2021	Amount	%
Total revenue	\$ 10,973	\$ 11,815	\$ (842)	(7.1)
Capital expenditures	86,488	142,127	(55,639)	(39.1)
EBITDA	(39,728)	(88,468)	48,740	(55.1)

Total revenue was \$11.0 million for the year ended December 31, 2022, which is primarily flat compared to 2021.

Capital expenditures were \$86.5 million for the year ended December 31, 2022, a decrease of \$55.6 million, as compared to 2021, primarily due to decreases in expenditures related to the EchoStar XXIV satellite program.

The following table reconciles the change in the Corporate and Other Segment EBITDA:

	Amounts
EBITDA for the year ended December 31, 2021	\$ (88,468)
Increase (decrease) in gains (losses) on investments, net	(20,541)
Increase (decrease) in operating income (loss), excluding depreciation and amortization	(4,827)
Decrease (increase) in equity in earnings (losses) of unconsolidated affiliates, net	(572)
Increase (decrease) in foreign currency transaction gains (losses), net	411
Increase (decrease) in other, net	74,269
EBITDA for the year ended December 31, 2022	<u>\$ (39,728)</u>

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS - CONTINUED

Year Ended December 31, 2021 Compared to the Year Ended December 31, 2020

The following table presents our consolidated results of operations for the year ended December 31, 2021 compared to the year ended December 31, 2020:

Statements of Operations Data ⁽¹⁾	For the years ended December 31,		Variance	
	2021	2020	Amount	%
Revenue:				
Services and other revenue	\$ 1,715,287	\$ 1,682,304	\$ 32,983	2.0
Equipment revenue	270,433	205,603	64,830	31.5
Total revenue	1,985,720	1,887,907	97,813	5.2
Costs and expenses:				
Cost of sales - services and other	551,679	577,943	(26,264)	(4.5)
% of total services and other revenue	32.2 %	34.4 %		
Cost of sales - equipment	231,975	166,435	65,540	39.4
% of total equipment revenue	85.8 %	80.9 %		
Selling, general and administrative expenses	461,705	474,912	(13,207)	(2.8)
% of total revenue	23.3 %	25.2 %		
Research and development expenses	31,777	29,448	2,329	7.9
% of total revenue	1.6 %	1.6 %		
Depreciation and amortization	491,329	525,011	(33,682)	(6.4)
Impairment of long-lived assets	245	1,685	(1,440)	(85.5)
Total costs and expenses	1,768,710	1,775,434	(6,724)	(0.4)
Operating income (loss)	217,010	112,473	104,537	92.9
Other income (expense):				
Interest income, net	22,801	39,982	(17,181)	(43.0)
Interest expense, net of amounts capitalized	(95,512)	(147,927)	52,415	(35.4)
Gains (losses) on investments, net	69,531	(31,306)	100,837	*
Equity in earnings (losses) of unconsolidated affiliates, net	(5,170)	(7,267)	2,097	(28.9)
Foreign currency transaction gains (losses), net	(12,613)	6,015	(18,628)	*
Other-than-temporary impairment losses on equity method investments	(55,266)	—	(55,266)	*
Other, net	(12,434)	195	(12,629)	*
Total other income (expense), net	(88,663)	(140,308)	51,645	(36.8)
Income (loss) before income taxes	128,347	(27,835)	156,182	*
Income tax benefit (provision), net	(65,626)	(24,069)	(41,557)	*
Net income (loss)	62,721	(51,904)	114,625	*
Less: Net loss (income) attributable to non-controlling interests	10,154	11,754	(1,600)	(13.6)
Net income (loss) attributable to EchoStar Corporation common stock	\$ 72,875	\$ (40,150)	\$ 113,025	*
Other data:				
EBITDA ⁽²⁾	\$ 702,541	\$ 616,875	\$ 85,666	13.9
Subscribers, end of period	1,462,000	1,564,000	(102,000)	(6.5)

* Percentage is not meaningful.

(1) An explanation of our key metrics is included in Explanation of Key Metrics and Other Items.

(2) A reconciliation of EBITDA to Net income (loss), the most directly comparable GAAP measure in our Consolidated Financial Statements, is included in Results of Operations. For further information on our use of EBITDA, see Explanation of Key Metrics and Other Items.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS - CONTINUED

The following discussion relates to our results of operations for the years ended December 31, 2021 compared to the year ended December 31, 2020:

Services and other revenue. Services and other revenue totaled \$1.7 billion for the year ended December 31, 2021, an increase of \$33.0 million, or 2.0%, as compared to 2020. The increase was primarily attributable to our Hughes segment related to higher sales of broadband services to our consumer customers of \$27.8 million and to our mobile satellite system customers of \$1.4 million. Sales of broadband services to our enterprise customers remained flat compared to 2020. Our Corporate and Other segment increased by \$2.1 million. These variances reflect the negative impact of exchange rate fluctuations of \$4.6 million, primarily attributable to our consumer customers.

Equipment revenue. Equipment revenue totaled \$270.4 million for the year ended December 31, 2021, an increase of \$64.8 million, or 31.5%, as compared to 2020. The increase was primarily attributable to increases in hardware sales of \$76.7 million to our enterprise customers, partially offset by decreases in hardware sales to our mobile satellite system customers of \$8.0 million and to our consumer customers of \$3.9 million.

Cost of sales - services and other. Cost of sales - services and other totaled \$551.7 million for the year ended December 31, 2021, a decrease of \$26.3 million, or 4.5%, as compared to 2020. The decrease was attributable to lower costs of services provided to our consumer customers associated with customer care and field services as well as a non-recurring decrease in a certain international regulatory fee of \$4.5 million.

Cost of sales - equipment. Cost of sales - equipment totaled \$232.0 million for the year ended December 31, 2021, an increase of \$65.5 million, or 39.4%, as compared to 2020. The increase was primarily attributable to the corresponding increase in equipment revenue and product mix.

Selling, general and administrative expenses. Selling, general and administrative expenses totaled \$461.7 million for the year ended December 31, 2021, a decrease of \$13.2 million, or 2.8%, as compared to 2020. The decrease was primarily attributable to decreases in bad debt expense of \$4.7 million and decreases in other selling, general and administrative expenses of \$7.1 million.

Depreciation and amortization. Depreciation and amortization expenses totaled \$491.3 million for the year ended December 31, 2021, a decrease of \$33.7 million, or 6.4%, as compared to 2020. The decrease was primarily attributable to (i) decreases in our satellite depreciation of \$27.1 million, mainly related to our SPACEWAY 3 satellite which was fully depreciated at the end of the first quarter of 2021, (ii) decreases in amortization of intangibles of \$6.5 million, and (iii) decreases in other property and equipment depreciation expense of \$2.9 million.

Impairment of long-lived assets. Impairment of long-lived assets totaled \$0.2 million for the year ended December 31, 2021, a decrease of \$1.4 million, or 85.5%, as compared to 2020. The decrease was primarily attributable to an impairment loss related to our nano-satellites which experienced technical anomalies following launch in 2020.

Interest income, net. Interest income, net totaled \$22.8 million for the year ended December 31, 2021, a decrease of \$17.2 million, or 43.0%, as compared to 2020, primarily attributable to decreases in the yield on our marketable investment securities and a decrease in our marketable investment securities average balance.

Interest expense, net of amounts capitalized. Interest expense, net of amounts capitalized totaled \$95.5 million for the year ended December 31, 2021, a decrease of \$52.4 million, or 35.4%, as compared to 2020. The decrease was primarily attributable to a decrease of \$41.4 million in interest expense and the amortization of deferred financing cost as a result of the repurchases and maturity of our 7 5/8% Senior Unsecured Notes due 2021 and an increase of \$9.8 million in capitalized interest relating to the EchoStar XXIV satellite program.

Gains (losses) on investments, net. Gains (losses) on investments, net totaled \$69.5 million in gains for the year ended December 31, 2021, an increase of \$100.8 million, as compared to 2020. The change was primarily attributable to increased gains on marketable investment securities of \$ 63.7 million in 2021 as compared to 2020, gains on other equity securities of \$7.1 million in 2021 and a \$29.8 million impairment loss in 2020.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS - CONTINUED

Equity in earnings (losses) of unconsolidated affiliates, net. Equity in earnings (losses) of unconsolidated affiliates, net totaled \$5.2 million in losses for the year ended December 31, 2021, a decrease in losses of \$2.1 million, or 28.9%, as compared to 2020. The decrease was related to net increased earnings from our investments in our equity method investees.

Foreign currency transaction gains (losses), net. Foreign currency transaction gains (losses), net totaled \$12.6 million in losses for the year ended December 31, 2021, as compared to \$6.0 million in gains for the year ended December 31, 2020, a negative change of \$18.6 million. The change was due to the net impact of foreign exchange rate fluctuations of certain foreign currencies during the year.

Other-than-temporary impairment losses on equity method investments. Other-than-temporary impairment losses on equity method investments was \$55.3 million for the year ended December 31, 2021, related to the impairment of our investment in Dish Mexico. Given changing market trends, conditions, and company-specific events, we concluded that our investment in Dish Mexico was not recoverable.

Other, net. Other, net totaled \$12.4 million in losses for the year ended December 31, 2021, as compared to \$0.2 million in gains for the year ended December 31, 2020, an increase in losses of \$12.6 million. The increase was primarily attributable to a litigation expense of \$16.8 million and losses from debt repurchases on our 7 5/8% Senior Unsecured Notes due 2021 of \$1.9 million, partially offset by dividends received from certain marketable equity securities of \$2.5 million..

Income tax benefit (provision), net. Income tax benefit (provision), net was \$(65.6) million for the year ended December 31, 2021, as compared to \$(24.1) million for the year ended December 31, 2020. Our effective income tax rate was 51.1% and (86.5)% for the years ended December 31, 2021 and 2020, respectively. The variations in our effective tax rate from the U.S. federal statutory rate for the year ended December 31, 2021 were primarily due to certain foreign losses and impairments where the Company carries a full valuation allowance, and the impact of state and local taxes. The variations in our current year effective tax rate from the U.S. federal statutory rate for the year ended December 31, 2020 were primarily due to the increase in our valuation allowance associated with certain foreign losses, permanent book tax differences, and by the impact of state and local taxes, partially offset by the change in net losses that are capital in nature and research and experimentation credits.

Net income (loss) attributable to EchoStar Corporation common stock. The following table reconciles the change in Net income (loss) attributable to EchoStar Corporation common stock:

	Amounts
Net income (loss) attributable to EchoStar Corporation for the year ended December 31, 2020	\$ (40,150)
Decrease (increase) in other-than-temporary impairment losses on equity method investments	(55,266)
Decrease (increase) in income tax benefit (provision), net	(41,557)
Increase (decrease) in foreign currency transaction gains (losses), net	(18,628)
Increase (decrease) in interest income, net	(17,181)
Increase (decrease) in other, net	(12,629)
Increase (decrease) in net income (loss) attributable to non-controlling interest	(1,600)
Decrease (increase) in equity in earnings (losses) of unconsolidated affiliates, net	2,097
Decrease (increase) in interest expense, net of amounts capitalized	52,415
Increase (decrease) in gains (losses) on investments, net	100,837
Increase (decrease) in operating income (loss), including depreciation and amortization	104,537
Net income (loss) attributable to EchoStar Corporation for the year ended December 31, 2021	<u>\$ 72,875</u>

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS - CONTINUED

EBITDA. EBITDA is a non-GAAP financial measure and is described under Explanation of Key Metrics and Other Items section. The following table reconciles EBITDA to Net income (loss), the most directly comparable GAAP measure in our Consolidated Financial Statements:

	For the years ended December 31,		Variance	
	2021	2020	Amount	%
Net income (loss)	\$ 62,721	\$ (51,904)	\$ 114,625	*
Interest income, net	(22,801)	(39,982)	17,181	(43.0)
Interest expense, net of amounts capitalized	95,512	147,927	(52,415)	(35.4)
Income tax provision (benefit), net	65,626	24,069	41,557	*
Depreciation and amortization	491,329	525,011	(33,682)	(6.4)
Net loss (income) attributable to non-controlling interests	10,154	11,754	(1,600)	(13.6)
EBITDA	\$ 702,541	\$ 616,875	\$ 85,666	13.9

* Percentage is not meaningful.

The following table reconciles the change in EBITDA:

	Amounts
EBITDA for the year ended December 31, 2020	\$ 616,875
Increase (decrease) in gains (losses) on investments, net	100,837
Increase (decrease) in operating income (loss), excluding depreciation and amortization	70,855
Decrease (increase) in equity in earnings (losses) of unconsolidated affiliates, net	2,097
Decrease (increase) in net loss (income) attributable to non-controlling interests	(1,600)
Increase (decrease) in other, net	(12,629)
Increase (decrease) in foreign currency transaction gains (losses), net	(18,628)
Decrease (increase) in other-than-temporary impairment losses on equity method investments	(55,266)
EBITDA for the year ended December 31, 2021	\$ 702,541

Segment Operating Results and Capital Expenditures

The following tables present our total revenue, capital expenditures and EBITDA by segment for the year ended December 31, 2021, as compared to the year ended December 31, 2020:

	Hughes	ESS	Corporate and Other	Consolidated Total
For the year ended December 31, 2021				
Total revenue	\$ 1,956,226	\$ 17,679	\$ 11,815	\$ 1,985,720
Capital expenditures	296,303	—	142,127	438,430
EBITDA	781,824	9,185	(88,468)	702,541
For the year ended December 31, 2020				
Total revenue	\$ 1,860,834	\$ 17,398	\$ 9,675	\$ 1,887,907
Capital expenditures	355,197	41	53,560	408,798
EBITDA	727,608	7,873	(118,606)	616,875

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS - CONTINUED

Hughes Segment

	For the years ended December 31,		Variance	
	2021	2020	Amount	%
Total revenue	\$ 1,956,226	\$ 1,860,834	\$ 95,392	5.1
Capital expenditures	296,303	355,197	(58,894)	(16.6)
EBITDA	781,824	727,608	54,216	7.5

Total revenue was \$2.0 billion for the year ended December 31, 2021, an increase of \$95.4 million, or 5.1%, as compared to 2020. Services and other revenue increased primarily due to increases in sales of broadband services to our consumer customers of \$27.8 million and to our mobile satellite system customers of \$1.4 million. Sales of broadband services to our enterprise customers remained flat compared to 2020. Equipment revenue increased primarily due to increases in hardware sales of \$76.7 million to our enterprise customers, partially offset by decreases in hardware sales to our mobile satellite system customers of \$8.0 million and to our consumer customers of \$ 3.9 million. These variances reflect the negative impact of exchange rate fluctuations of \$4.7 million.

Capital expenditures were \$296.3 million for the year ended December 31, 2021, a decrease of \$58.9 million, or 16.6%, as compared to 2020, primarily due to decreases in expenditures associated with our consumer business, partially offset by increased expenditures related to our enterprise business and construction of our satellite-related ground infrastructure in preparation of the launch of EchoStar XXIV.

The following table reconciles the change in the Hughes Segment EBITDA:

	Amounts
EBITDA for the year ended December 31, 2020	\$ 727,608
Increase (decrease) in operating income (loss), excluding depreciation and amortization	65,216
Increase (decrease) in other, net	3,658
Increase (decrease) in gains (losses) on investments, net	2,249
Decrease (increase) in equity in earnings (losses) of unconsolidated affiliates, net	(229)
Decrease (increase) in net loss (income) attributable to non-controlling interests	(1,600)
Increase (decrease) in foreign currency transaction gains (losses), net	(15,078)
EBITDA for the year ended December 31, 2021	<u>\$ 781,824</u>

ESS Segment

	For the years ended December 31,		Variance	
	2021	2020	Amount	%
Total revenue	\$ 17,679	\$ 17,398	\$ 281	1.6
Capital expenditures	—	41	(41)	(100.0)
EBITDA	9,185	7,873	1,312	16.7

Total revenue was \$17.7 million for the year ended December 31, 2021, which is primarily flat compared to 2020.

EBITDA was \$9.2 million for the year ended December 31, 2021, an increase of \$1.3 million, or 16.7%, as compared to 2020, primarily due to the recovery of a bad debt reserve.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS - CONTINUED

Corporate and Other Segment

	For the years ended December 31,		Variance	
	2021	2020	Amounts	%
Total revenue	\$ 11,815	\$ 9,675	\$ 2,140	22.1
Capital expenditures	142,127	53,560	88,567	*
EBITDA	(88,468)	(118,606)	30,138	(25.4)

* Percentage is not meaningful.

Total revenue was \$11.8 million for the year ended December 31, 2021, an increase of \$2.1 million, or 22.1%, as compared to 2020, primarily due to increased services and other revenue from DISH Network.

Capital expenditures were \$142.1 million for the year ended December 31, 2021, an increase of \$88.6 million, as compared to 2020, primarily due to increases in expenditures related to the EchoStar XXIV satellite program.

The following table reconciles the change in the Corporate and Other Segment EBITDA:

	Amounts
EBITDA for the year ended December 31, 2020	\$ (118,606)
Increase (decrease) in gains (losses) on investments, net	98,588
Increase (decrease) in operating income (loss), excluding depreciation and amortization	4,353
Decrease (increase) in equity in earnings (losses) of unconsolidated affiliates, net	2,326
Increase (decrease) in foreign currency transaction gains (losses), net	(3,672)
Increase (decrease) in other, net	(16,191)
Decrease (increase) in other-than-temporary impairment losses on equity method investments	(55,266)
EBITDA for the year ended December 31, 2021	\$ (88,468)

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS - CONTINUED

LIQUIDITY AND CAPITAL RESOURCES

Cash, Cash Equivalents and Marketable Investment Securities

We consider all liquid investments purchased with an original maturity of 90 days or less to be cash equivalents. See Item 7A. Quantitative and Qualitative Disclosures about Market Risk of this Form 10-K for further discussion regarding our marketable investment securities.

As of December 31, 2022 and 2021, our cash, cash equivalents and marketable investment securities totaled \$1.7 billion and \$1.5 billion, respectively, of which \$1.0 billion and \$1.0 billion, respectively, we held as marketable investment securities, consisting of various debt and equity instruments including corporate bonds, corporate equity securities, government bonds and mutual funds.

The following discussion highlights our cash flow activities for the years ended December 31, 2022, 2021 and 2020.

Cash Flow Activities

The following table summarizes our cash flows provided by (used for) operating, investing and financing activities, as reflected in the Consolidated Statement of Cash Flows:

	For the years ended December 31,		
	2022	2021	Variance
Operating activities	\$ 529,605	\$ 632,226	\$ (102,621)
Investing activities	(275,185)	158,930	(434,115)
Financing activities	(83,105)	(1,147,345)	1,064,240
Effect of exchange rates on cash and cash equivalents	(2,306)	(3,749)	1,443
Net increase (decrease) in cash and cash equivalents	\$ 169,009	\$ (359,938)	\$ 528,947

Cash flows provided by (used for) operating activities decreased by \$102.6 million primarily attributable to changes in assets and liabilities, net of \$(85.6) million, other-than-temporary impairment losses on equity method investments of \$(55.3) million, depreciation and amortization of \$(33.7) million, other, net of \$(23.5) million, foreign currency translation losses (gains), net of \$(17.8) million, deferred tax provision (benefit), net of \$(16.2) million, losses (gains) on investments, net of \$22.4 million and changes in net income (loss) of \$103.8 million.

Cash flows provided by (used for) investing activities decreased by \$434.1 million primarily attributable to our marketable investment securities net activity, other investments net activity, a decrease in expenditures for property and equipment, a decrease in expenditures in externally marketed software, and the India JV formation.

Cash flows provided by (used for) financing activities improved by \$1.1 billion primarily attributable to the repurchase and maturity of our 7 5/8% Senior Unsecured Notes due 2021 of \$901.8 million and decreases in treasury share repurchases of \$172.1 million.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS - CONTINUED

	For the years ended December 31,		
	2021	2020	Variance
Operating activities	\$ 632,226	\$ 534,388	\$ 97,838
Investing activities	158,930	(1,142,455)	1,301,385
Financing activities	(1,147,345)	(15,620)	(1,131,725)
Effect of exchange rates on cash and cash equivalents	(3,749)	(1,390)	(2,359)
Net increase (decrease) in cash and cash equivalents	<u>\$ (359,938)</u>	<u>\$ (625,077)</u>	<u>\$ 265,139</u>

Cash flows provided by (used for) operating activities increased by \$97.8 million primarily attributable to changes in net income (loss) of \$114.6 million, gains (losses) on investments, net of \$(100.8) million, foreign currency translation losses (gains), net of \$18.6 million, deferred tax provision (benefit), net of \$19.5 million, other-than-temporary impairment losses on equity method investments of \$55.3 million, and changes in assets and liabilities, net of \$(1.3) million.

Cash flows provided by (used for) investing activities increased by \$1.3 billion primarily attributable to our marketable investment securities net activity, other investments net activity and an increase in expenditures for property and equipment.

Cash flows provided by (used for) financing activities decreased by \$1.1 billion primarily attributable to the repurchase and maturity of our 7 5/8% Senior Unsecured Notes due 2021 of \$(901.8) million and treasury share repurchases of \$(261.4) million.

Obligations and Future Capital Requirements

Contractual Obligations

The following table summarizes our contractual obligations as of December 31, 2022:

	Payments Due in the Years Ending December 31,						
	Total ⁽⁴⁾⁽⁵⁾	2023	2024	2025	2026	2027	Thereafter
Long-term debt ⁽¹⁾	\$1,500,000	\$ —	\$ —	\$ —	\$1,500,000	\$ —	\$ —
Interest on long-term debt	356,252	89,063	89,063	89,063	89,063	—	—
Satellite-related commitments ⁽²⁾	169,252	60,822	19,105	18,618	17,156	15,460	38,091
Operating lease obligations ⁽³⁾	201,625	25,101	23,180	19,578	18,770	17,256	97,740
Total	<u>\$2,227,129</u>	<u>\$ 174,986</u>	<u>\$ 131,348</u>	<u>\$ 127,259</u>	<u>\$1,624,989</u>	<u>\$ 32,716</u>	<u>\$ 135,831</u>

(1) Assumes all long-term debt is outstanding until scheduled maturity.

(2) Includes payments pursuant to: i) the EchoStar XXIV launch contract, ii) regulatory authorizations, iii) non-lease costs associated with our finance lease satellites, iv) in-orbit incentives relating to certain satellites and v) commitments for satellite service arrangements.

(3) Operating leases consist primarily of leases for office space, data centers and satellite-related ground infrastructure.

(4) The table excludes amounts related to deferred tax liabilities, unrecognized tax positions and certain other amounts recorded in our non-current liabilities as the timing of any payments is uncertain.

(5) The table excludes long-term deferred revenue and other long-term liabilities that do not require future cash payments.

In certain circumstances, the dates on which we are obligated to pay our contractual obligations could change.

Off-Balance Sheet Arrangements

We generally do not engage in off-balance sheet financing activities or use derivative financial instruments for hedge accounting or speculative purposes.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS - CONTINUED

As of December 31, 2022, we had foreign currency forward contracts with a notional value of \$8.3 million in place to partially mitigate foreign currency exchange risk. From time to time, we may enter into foreign currency forward contracts, or take other measures, to mitigate risks associated with foreign currency denominated assets, liabilities, commitments and anticipated foreign currency transactions.

Letters of Credit and Surety Bonds

The following table presents the components of our letters of credit and surety bonds as of December 31, 2022:

	Amounts
Letters of credit secured by restricted cash	\$ 10,676
Surety bonds	16,153
Credit arrangement available to our foreign subsidiaries	27,411
Total letters of credit and surety bonds	<u>\$ 54,240</u>

Certain letters of credit are secured by assets of our foreign subsidiaries.

Satellites

As our satellite fleet ages, we will evaluate whether and to what extent to utilize replacement alternatives such as acquiring, leasing or constructing additional satellites, with or without customer commitments for capacity. We may also construct, acquire or lease additional satellites or satellite capacity in the future to provide satellite services at additional orbital locations, to improve the quality of our satellite services or to provide new satellites services.

Satellite Insurance

We generally do not carry in-orbit insurance on our satellites or payloads because we have assessed that the cost of insurance is not economical relative to the risk of failures. Therefore, we generally bear the risk of any in-orbit failures. Pursuant to the terms of our joint venture agreement with Yahsat, we are required to maintain insurance for the Al Yah 3 Brazilian payload during the commercial in-orbit service of such payload, subject to certain limitations on coverage. We have obtained certain insurance for our EchoStar XXIV satellite covering launch plus the first year of operations. We will continue to assess circumstances going forward and make insurance-related decisions on a case-by-case basis.

Future Capital Requirements

We primarily rely on our existing cash and marketable investment securities balances, as well as cash flow generated through our operations, to fund our business. Revenue in our ESS segment depends largely on our ability to continuously make use of our available satellite capacity with existing customers and our ability to enter into commercial relationships with new customers. Consumer revenue in our Hughes segment depends on our success in adding new and retaining existing subscribers and driving higher ARPU. Revenue in our enterprise and equipment businesses relies heavily on global economic conditions and the competitive landscape for pricing relative to competitors and alternative technologies. There can be no assurance that we will have positive cash flows from operations. Furthermore, if we experience negative cash flows, our existing cash and marketable investment securities balances may be reduced.

We have a significant amount of outstanding indebtedness. As of December 31, 2022, our total indebtedness was \$1.5 billion. Our liquidity requirements will continue to be significant, primarily due to our remaining debt service requirements. We may from time to time seek to purchase amounts of our outstanding debt in open market purchases, privately negotiated transactions or otherwise, depending on market conditions, our liquidity needs and other factors. The amounts we may repurchase may be material. In the future, we may require material capital expenditures to make significant acquisitions or investments in infrastructure, technologies or joint ventures to support and expand our business, or if we decide to purchase or build additional satellites or other technologies or assets. Other aspects of our business operations may also require additional capital. We also expect to owe U.S. Federal income tax for 2022.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS - CONTINUED

We anticipate that our existing cash and marketable investment securities are sufficient to fund the currently anticipated operations of our business through the next twelve months.

Stock Repurchases

On November 2, 2021, our Board of Directors authorized us to repurchase up to \$500.0 million of our Class A common stock commencing January 1, 2022 through and including December 31, 2022. In addition, on October 20, 2022, our Board of Directors authorized us to repurchase up to \$500.0 million of our Class A common stock commencing January 1, 2023 through and including December 31, 2023. Purchases under our repurchase authorizations may be made through privately negotiated transactions, open market repurchases, one or more trading plans in accordance with Rule 10b5-1 under the Securities Exchange Act of 1934, as amended, or otherwise, subject to market conditions and other factors. We may elect not to purchase the maximum amount or any of the shares allowable under these authorizations and we may also enter into additional share repurchase programs authorized by our Board of Directors. During the year ended December 31, 2022, we repurchased 3,980,612 shares of our Class A common stock for \$89.3 million under this program. The remaining authorization under this program, which expired on December 31, 2022, was \$410.7 million.

CRITICAL ACCOUNTING POLICIES

For a summary of our significant accounting policies, including those discussed below, see Note 2 in our Consolidated Financial Statements.

CRITICAL ACCOUNTING ESTIMATES

The preparation of our Consolidated Financial Statements in conformity with GAAP requires us to make certain estimates, judgments and assumptions that affect the reported amounts of assets and liabilities at the date of the balance sheets, the reported amounts of revenue and expenses for each reporting period, and certain information disclosed in our Consolidated Financial Statements. We base our estimates, judgments and assumptions on historical experience and on various other factors that we believe to be relevant under the circumstances. Actual results may differ from previously estimated amounts, and such differences may be material to our Consolidated Financial Statements. We review our estimates and assumptions periodically, and the effects of revisions are reflected in the period they occur or prospectively if the revised estimate affects future periods. The following represent what we believe are the critical accounting policies that may involve a high degree of estimation, judgment and complexity.

Contingent Liabilities

We record an accrual for litigation and other loss contingencies when we determine that a loss is probable and the amount of the loss can be reasonably estimated. Legal fees and other costs of defending legal proceedings are charged to expense as incurred. A significant amount of management judgment is required in determining whether an accrual should be recorded for a loss contingency and the amount of such accrual. Estimates generally are developed in consultation with legal counsel and are based on an analysis of potential outcomes. Due to the inherent uncertainty in determining the likelihood of potential outcomes and the potential financial statement impact of such outcomes, it is possible that upon further development or resolution of a contingent matter, charges related to existing loss contingencies could be recorded in future periods, which could be material to our consolidated results of operations and financial position.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS - CONTINUED

Revenue Recognition

Our Hughes segment enters into contracts to design, develop and deliver telecommunication networks to customers in our enterprise and mobile satellite systems markets. Those contracts require significant effort to develop and construct the network over an extended time period. Revenue from such contracts is recognized over time using an appropriate method to measure progress toward completion. Depending on the nature of the arrangement, we measure progress toward completion using the cost-to-cost input method or the units-of-delivery output method. Under the cost-to-cost method, revenue reflects the ratio of costs incurred to estimated total costs at completion. Under the units-of-delivery method, revenue and related costs are recognized as products are delivered based on the expected profit for the entire agreement. Profit margins on long-term contracts are based on estimates of total revenue and costs at completion. We review and revise our estimates periodically and recognize related adjustments in the period in which the revisions are made. Estimated losses on contracts are recorded in the period in which they are identified. Changes in our periodic estimates for these contracts could result in significant adjustments to our revenue or costs, which could be material to our consolidated results of operations.

Impairment of Assets

Impairment of long-lived assets

We evaluate our long-lived assets other than goodwill and intangible assets with indefinite lives for impairment whenever events and changes in circumstances indicate that their carrying amounts may not be recoverable. The carrying amount of a long-lived asset or asset group is considered to not be recoverable when the market value or estimated future undiscounted cash flows from such asset or asset group is less than its carrying amount. In that event, an impairment loss is recorded in the determination of operating income based on the amount by which the carrying amount exceeds the estimated fair value of the long-lived asset or asset group. The estimated fair value is determined primarily using market value or cash flow techniques reflecting the estimated cash flows and discount rate that would be assumed by a market participant for the asset or asset group under review. Our discounted cash flow estimates typically include assumptions based on unobservable inputs and may reflect probability-weighting of alternative scenarios. Estimated losses on long-lived assets to be disposed of by sale may be determined in a similar manner, except that fair value estimates are reduced for estimated selling costs. Changes in estimates of future cash flows, discount rates and other assumptions could result in recognition of additional impairment losses in future periods.

We evaluate goodwill and intangible assets with indefinite lives for impairment on an annual basis or whenever events and changes in circumstances indicate the reporting unit's fair value is more likely than not less than carrying value. Impairments may result from, among other things, deterioration in financial and operational performance, declines in stock price, increased attrition, adverse market conditions, adverse changes in applicable laws and/or regulations, deterioration of general macroeconomic conditions, fluctuations in foreign exchange rates, increased competitive markets in which we operate in, declining financial performance over a sustained period, changes in key personnel and/or strategy, and a variety of other factors. Our impairment assessment typically begins with a qualitative assessment to determine whether it is more likely than not the fair value of the reporting unit is less than its carrying amount. The qualitative assessment includes comparing the overall financial performance against the planned results. In the performance of the qualitative assessment, we analyze a variety of events or factors that may influence the fair value of the reporting unit, that could include, but are not limited to: macroeconomic conditions, industry and market considerations, cost factors, and other relevant entity-specific events which requires significant judgment. If we determine in the qualitative assessment that it is more likely than not that the fair value is less than its carrying value, then we perform a quantitative assessment to determine the estimated fair value of the indefinite lived asset or reporting unit. We could also choose the option to bypass the qualitative assessment for any reporting unit in any period and proceed directly to the quantitative impairment test. In the quantitative assessment, fair value is usually estimated using two valuation approaches: the discounted cash flows method and the market comparable method. In the performance of the quantitative assessment, we use a variety of inputs, some of which may require significant judgment, that influence the fair value of the reporting unit, that could include, but are not limited to: discount rate, revenue growth rate, amount and timing of future cash flows, control premium, guideline public company metrics, and comparable market transactions. In addition, we also perform a market capitalization reconciliation to compare the estimated fair value, determined using the discounted cash flows method and the market comparable method, to the Company's market capitalization as of the date of the test. If the carrying value exceeds the estimated fair value, then an impairment is recognized for the difference.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS - CONTINUED

Impairment of investments

We periodically evaluate all of our investments to determine whether events or changes in circumstances have occurred that may have a significant adverse effect on the fair value of the investment and/or if there has been observable price changes in orderly transactions for identical or similar securities of the same issuer. We consider information if provided to us by our investees such as current financial statements, business plans, investment documentation, capitalization tables, liquidation waterfalls, and board materials, and we may make additional inquiries of investee management.

Indicators of impairment may include, but are not limited to, unprofitable operations, material loss contingencies, changes in business strategy, changes in the investees' enterprise value and changes in the investees' investment pricing. When we determine that one of our other investments is impaired we reduce its carrying value to its estimated fair value and recognize the impairment loss. Additionally, when there has been an observable price change to a cost method investment, we adjust the carrying amount of the investment to its then estimated fair value and recognize the investment gain or loss.

Income Taxes

Our income tax policy is to record the estimated future tax effects of temporary differences between the tax bases of assets and liabilities and amounts reported in the accompanying consolidated balance sheets, as well as operating loss and tax credit carryforwards. Determining necessary valuation allowances requires us to make assessments about the timing of future events, including the probability of expected future taxable income and available tax planning opportunities. We periodically evaluate our need for a valuation allowance based on both historical evidence, including trends, and future expectations in each reporting period. Any such valuation allowance is recorded in either *Income tax benefit (provision), net* on our Consolidated Statements of Operations and Consolidated Statements of Comprehensive Income (Loss) or Accumulated other comprehensive income (loss) within *Stockholders' equity* on our Consolidated Balance Sheets. Future performance could have a significant effect on the realization of tax benefits, or reversals of valuation allowances, as reported in our consolidated results of operations.

Management evaluates the recognition and measurement of uncertain tax positions based on applicable tax law, regulations, case law, administrative rulings and pronouncements and the facts and circumstances surrounding the tax position. Changes in our estimates related to the recognition and measurement of the amount recorded for uncertain tax positions could result in significant changes in our *Income tax benefit (provision), net*, which could be material to our consolidated results of operations.

NEW ACCOUNTING PRONOUNCEMENTS

For a discussion of new accounting pronouncements, refer to Note 2. Summary of Significant Accounting Policies in our Consolidated Financial Statements.

SEASONALITY

For our Hughes segment, service revenue is generally not impacted by seasonal fluctuations other than those associated with fluctuations related to sales and promotional activities.

Our ESS segment is not generally affected by seasonal impacts.

We cannot predict with any certainty whether these trends will continue in the near future.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS - CONTINUED

INFLATION AND SUPPLY CHAIN

Inflation started to impact our operations in 2021 as we have continued to experience increased costs in certain functional areas including field services and customer care. We are unable to predict the extent or nature of any future inflationary pressure at this time. Our ability to increase the prices charged for our products and services in future periods will depend primarily on competitive pressures or contractual terms.

The worldwide interruptions and delays in the supply of components, materials and parts, although not materially impacting our operations during 2022, may impact our ability to timely provide equipment deliveries in the future. These interruptions and delays could also increase the cost of our equipment which we may not be able to pass onto our customers.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market Risks Associated with Financial Instruments and Foreign Currency

Our investments and debt are exposed to market risks, discussed below.

Cash, Cash Equivalents and Marketable Investment Securities

As of December 31, 2022, our cash, cash equivalents and marketable investment securities had a fair value of \$1.7 billion. Of this amount, a total of \$1.6 billion was invested in: (a) cash; (b) commercial paper and corporate notes with an overall average maturity of less than one year and rated in one of the four highest rating categories by at least two nationally recognized statistical rating organizations; (c) debt instruments of the U.S. government and its agencies; and/or (d) instruments with similar risk, duration and credit quality characteristics to the commercial paper and corporate obligations described above. The primary purpose of these investing activities has been to preserve principal until the cash is required to, among other things, fund operations, make strategic investments and expand the business. Consequently, the size of this portfolio fluctuates significantly as cash is received and used in our business. The value of this portfolio may be negatively impacted by credit losses; however, this risk is mitigated through diversification that limits our exposure to any one issuer.

Interest Rate Risk

A change in interest rates would not affect the fair value of our cash, or materially affect the fair value of our cash equivalents due to their maturities of less than 90 days. A change in interest rates would affect the fair value of our current marketable debt securities portfolio; however, we normally hold these investments to maturity. Based on our cash, cash equivalents and current marketable debt securities investment portfolio of \$1.6 billion as of December 31, 2022, a hypothetical 10% change in average interest rates during 2022 would not have had a material impact on the fair value of our cash, cash equivalents and debt securities portfolio due to the limited duration of our investments.

Our cash, cash equivalents and current marketable debt securities had an average annual rate of return for the year ended December 31, 2022 of 2.21%. A change in interest rates would affect our future annual interest income from this portfolio, since funds would be re-invested at different rates as the instruments mature. A hypothetical 10% decrease in average interest rates during 2022 would have resulted in a decrease of \$2.8 million in annual interest income.

Strategic Marketable Investment Securities

As of December 31, 2022, we held investments in the publicly traded securities of several companies with a fair value of \$118.8 million. These investments, which are held for strategic and financial purposes, are concentrated in a small number of companies, are highly speculative and have historically experienced, and continue to experience volatility. The fair value of these investments are subject to significant fluctuations in fair value and can be significantly impacted by the risk of adverse changes in securities markets generally, as well as risks related to the performance of the companies whose securities we have invested in, risks associated with specific industries and other factors. In general, our strategic marketable investment securities portfolio is not significantly impacted by interest rate fluctuations as it currently consists primarily of equity securities, the value of which is more closely related to factors specific to the underlying business. A hypothetical 10% adverse change in the market price of our public strategic equity investments during 2022 would have resulted in a decrease of \$11.9 million in the fair value of these investments.

Other Investments

As of December 31, 2022, we had \$273.2 million of other equity investments and other debt investments of privately held companies that we hold for strategic business purposes. The fair value of these investments is not readily determinable. We periodically review these investments and may adjust the carrying amount to their estimated fair value when there are indications of impairment, observable prices changes for the investments or observable transactions of the same investments. A hypothetical adverse change equal to 10% of the carrying amount of these investments during 2022 would have resulted in a decrease of \$27.3 million in the value of these investments.

Our ability to realize value from our strategic investments in companies that are privately held depends on the success of those companies' businesses and their ability to obtain sufficient capital to execute their business plans. Because private markets are not as liquid as public markets, there is also increased risk that we will not be able to sell these investments, or that when we sell them, we will not be able to recover our investment.

Foreign Currency Exchange Risk

Our international business is conducted in a variety of foreign currencies with our largest exposures being to the Brazilian real, the Indian rupee, European euro and the British pound. Transactions in foreign currencies are converted into U.S. dollars using exchange rates in effect on the dates of the transactions. This exposes us to fluctuations in foreign currency exchange rates.

Our objective in managing our exposure to foreign currency changes is to reduce earnings and cash flow volatility associated with foreign currency exchange rate fluctuations, primarily resulting from loans to foreign subsidiaries in U.S. dollars. Accordingly, we may enter into foreign currency forward contracts, or take other measures, to mitigate risks associated with foreign currency denominated assets, liabilities, commitments and anticipated foreign currency transactions. As of December 31, 2022, we had foreign currency forward contracts with a notional amount of \$8.3 million in place to partially mitigate foreign currency exchange risk. The estimated fair values of the foreign currency contracts were not material as of December 31, 2022. The impact of a hypothetical 10% adverse change in exchange rates on the carrying amount of the net assets and liabilities of our foreign subsidiaries during 2022 would have resulted in an estimated loss to the cumulative translation adjustment of \$42.5 million as of December 31, 2022.

Derivative Financial Instruments

We generally do not use derivative financial instruments for speculative purposes and we generally do not apply hedge accounting treatment to our derivative financial instruments. We evaluate our derivative financial instruments from time to time but there can be no assurance that we will not enter into additional foreign currency forward contracts, or take other measures, in the future to mitigate our foreign currency exchange risk.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Our Consolidated Financial Statements are included in Item 15 of this Form 10-K.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we evaluated the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) and Rule 15d-15(e) under the Securities Exchange Act of 1934, as amended) as of the end of the period covered by this Form 10-K. Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of the end of the period covered by this Form 10-K such that the information required to be disclosed in our SEC reports is recorded, processed, summarized and reported within the time periods specified in the SEC rules and forms, and is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

Changes in Internal Control Over Financial Reporting

There has been no change in our internal control over financial reporting (as defined in Rule 13a-15(f) and Rule 15d-15(f) under the Securities Exchange Act of 1934, as amended) that occurred during the three months ended December 31, 2022 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting. We continue to review our internal control over financial reporting and may from time to time make changes aimed at enhancing its effectiveness and to ensure that our systems evolve with our business.

Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Our internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP.

Our internal control over financial reporting includes those policies and procedures that:

- (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect our transactions and dispositions of our assets;
- (ii) provide reasonable assurance that our transactions are recorded as necessary to permit preparation of our financial statements in accordance with GAAP, and that our receipts and expenditures are being made only in accordance with authorizations of our management and our directors; and
- (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of our assets that could have a material effect on our financial statements.

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

Our management conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring

Organizations of the Treadway Commission. Based on this evaluation, our management has concluded that our internal control over financial reporting was effective as of December 31, 2022.

The effectiveness of our internal control over financial reporting as of December 31, 2022 has been audited by KPMG LLP, an independent registered public accounting firm, as stated in their report which appears in Item 15(a) of this Form 10-K.

ITEM 9B. OTHER INFORMATION

Financial Results

On February 22, 2023, we issued a press release (the “Press Release”) announcing our financial results for the quarter and year ended December 31, 2022. A copy of the Press Release is furnished herewith as Exhibit 99.1. The foregoing information, including the exhibit related thereto, is furnished in response to Item 2.02 of Form 8-K and shall not be deemed “filed” for the purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise, and shall not be incorporated by reference into any registration statement or other document pursuant to the Securities Act of 1933, as amended, or into any filing or other document pursuant to the Securities Exchange Act of 1934, as amended, except as otherwise expressly stated in any such filing.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this Item with respect to the identity and business experience of our directors and corporate governance will be set forth in our Proxy Statement for the 2023 Annual Meeting of Shareholders, which will be filed no later than 120 days after December 31, 2022, under the caption “Election of Directors,” which information is hereby incorporated herein by reference.

The information required by this Item with respect to the identity and business experience of our executive officers is set forth in Part I of this Form 10-K under the caption Item 1. Business — Information about our Executive Officers.

The information required by this Item with respect to our code of ethics is contained in Part I of this Form 10-K under the caption Item 1. Business — Website Access.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item will be set forth in our Proxy Statement for the 2023 Annual Meeting of Shareholders, which will be filed no later than 120 days after December 31, 2022, under the caption “Executive Compensation and Other Information,” which information is hereby incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this Item will be set forth in our Proxy Statement for the 2023 Annual Meeting of Shareholders, which will be filed no later than 120 days after December 31, 2022, under the captions “Election of Directors,” “Equity Security Ownership” and “Equity Compensation Plan Information,” which information is hereby incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this Item will be set forth in our Proxy Statement for the 2023 Annual Meeting of Shareholders, which will be filed no later than 120 days after December 31, 2022, under the caption “Certain Relationships and Related Party Transactions,” which information is hereby incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this Item will be set forth in our Proxy Statement for the 2023 Annual Meeting of Shareholders, which will be filed no later than 120 days after December 31, 2022, under the caption “Principal Accountant Fees and Services,” which information is hereby incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as part of this report:

	<u>Page</u>
(1) Consolidated Financial Statements	
<u>Index to Consolidated Financial Statements</u>	<u>F-1</u>
<u>Report of Independent Registered Public Accounting Firm</u>	<u>F-2</u>
<u>Consolidated Balance Sheets as of December 31, 2022 and 2021</u>	<u>F-4</u>
<u>Consolidated Statements of Operations for the years ended December 31, 2022, 2021 and 2020</u>	<u>F-6</u>
<u>Consolidated Statements of Comprehensive Income (Loss) for the years ended December 31, 2022, 2021 and 2020</u>	<u>F-7</u>
<u>Consolidated Statements of Changes in Stockholders' Equity for the years ended December 31, 2022, 2021 and 2022</u>	<u>F-8</u>
<u>Consolidated Statements of Cash Flows for the years ended December 31, 2022, 2021 and 2020</u>	<u>F-9</u>
<u>Notes to Consolidated Financial Statements</u>	<u>F-11</u>
(2) Exhibits	
<u>2.1*</u> <u>Form of Separation Agreement between EchoStar Corporation and DISH Network Corporation (incorporated by reference to Exhibit 2.1 to Amendment No. 1 of EchoStar Corporation's Form 10 filed December 12, 2007, Commission File No. 001-33807).</u>	
<u>2.2*</u> <u>Agreement and Plan of Merger between EchoStar Corporation, EchoStar Satellite Services L.L.C., Broadband Acquisition Corporation and Hughes Communications, Inc. dated as of February 13, 2011 (incorporated by reference to Exhibit 2.1 to Hughes Communications Inc.'s Current Report on Form 8-K, filed February 15, 2011, Commission File No. 1-33040). ****</u>	
<u>2.3*</u> <u>Master Transaction Agreement by and among DISH Network Corporation, BSS Merger Sub Inc., EchoStar Corporation, and EchoStar BSS Corporation, dated as of May 19, 2019 (incorporated by reference to Exhibit 2.1 to EchoStar Corporation's Quarterly Report on Form 10-Q for the quarter ended June 30, 2019, filed August 8, 2019, Commission File No. 001-33807). ****</u>	
<u>3.1*</u> <u>Articles of Incorporation of EchoStar Corporation (incorporated by reference to Exhibit 3.1 to Amendment No. 1 of EchoStar Corporation's Form 10 filed December 12, 2007, Commission File No. 001-33807).</u>	
<u>3.2*</u> <u>Amendment to the Articles of Incorporation of EchoStar Corporation (incorporated by reference to Exhibit 3.1 to EchoStar Corporation's Current Report on Form 8-K filed January 25, 2008, Commission File No. 001-33807).</u>	
<u>3.3*</u> <u>Certificate of Amendment to Articles of Incorporation of EchoStar Corporation, dated as of May 4, 2016 (incorporated by reference to Exhibit 3.1 to EchoStar Corporation's Current Report on Form 8-K, filed May 5, 2016, Commission File No. 001-33807).</u>	
<u>3.4*</u> <u>Certificate of Withdrawal of Certificate of Designation of EchoStar Corporation (incorporated by reference to Exhibit 31 to EchoStar Corporation's Current Report on Form 8-K, filed March 6, 2017, Commission File No. 001-33807).</u>	
<u>3.5*</u> <u>Bylaws of EchoStar Corporation (incorporated by reference to Exhibit 3.2 to Amendment No. 1 of EchoStar Corporation's Form 10 filed December 12, 2007, Commission File No. 001-33807).</u>	

- 4.1* [Specimen Class A Common Stock Certificate of EchoStar Corporation \(incorporated by reference to Exhibit 4.1 to Amendment No. 1 of EchoStar Corporation's Form 10 filed December 12, 2007, Commission File No. 001-33807\).](#)
- 4.2* [Security Agreement, dated as of June 8, 2011, among EH Holding Corporation \(currently known as Hughes Satellite Systems Corporation\), the guarantors listed on the signature pages thereto, and U.S. Bank National Association, as successor collateral agent \(incorporated by reference to Exhibit 4.1 to EchoStar Corporation's Current Report on Form 8-K filed June 9, 2011, Commission File No. 001-33807\).](#)
- 4.3* [Indenture, relating to the 5.250% Senior Secured Notes, dated as of July 27, 2016, among Hughes Satellite Systems Corporation, the guarantors party thereto, U.S. Bank National Association, as trustee and successor collateral agent \(incorporated by reference to Exhibit 4.1 to EchoStar Corporation's Current Report on Form 8-K filed on July 27, 2016, Commission File No. 001-33807\).](#)
- 4.4* [Indenture, relating to the 6.625% Senior Unsecured Notes, dated as of July 27, 2016, among Hughes Satellite Systems Corporation, the guarantors party thereto and U.S. Bank National Association, as trustee \(incorporated by reference to Exhibit 4.2 to EchoStar Corporation's Current Report on Form 8-K filed on July 27, 2016, Commission File No. 001-33807\).](#)
- 4.5* [Registration Rights Agreement, dated as of July 27, 2016, among Hughes Satellite Systems Corporation, the guarantors party thereto and Deutsche Bank Securities Inc. \(incorporated by reference to Exhibit 4.3 to EchoStar Corporation's Current Report on Form 8-K filed on July 27, 2016, Commission File No. 001-33807\).](#)
- 4.6* [Additional Secured Party Joinder, dated as of July 27, 2016, among U.S. Bank National Association, as trustee and successor collateral agent, and Hughes Satellite Systems Corporation \(incorporated by reference to Exhibit 4.4 to EchoStar Corporation's Current Report on Form 8-K filed on July 27, 2016, Commission File No. 001-33807\).](#)
- 4.7* [Form of 5.250% Senior Secured Note due 2026 \(included as part of Exhibit 4.3\).](#)
- 4.8* [Form of 6.625% Senior Unsecured Note due 2026 \(included as part of Exhibit 4.4\).](#)
- 4.9* [Supplemental Indenture relating to Hughes Satellite Systems Corporation's 5.250% Senior Secured Notes due 2026, dated March 23, 2017, by and among Hughes Satellite Systems Corporation, the guarantors and the supplemental guarantor listed on the signature pages thereto, U.S. Bank National Association, as trustee and successor collateral agent \(incorporated by reference to Exhibit 4.19 to Hughes Satellite Systems Corporation's Registration Statement on Form S-4, filed April 6, 2017, Commission File No. 333-179121\).](#)
- 4.10* [Supplemental Indenture relating to Hughes Satellite Systems Corporation's 6.625% Senior Notes due 2026, dated as of March 23, 2017, by and among Hughes Satellite Systems Corporation, the guarantors and the supplemental guarantor listed on the signature pages thereto and U.S. Bank National Association, as trustee \(incorporated by reference to Exhibit 4.20 to Hughes Satellite Systems Corporation's Registration Statement on Form S-4, filed April 6, 2017, Commission File No. 333-179121\).](#)
- 4.11* [Joinder Agreement, dated as of August 10, 2017, to the Security Agreement dated as of June 8, 2011, by and between HNS Americas, L.L.C., HNS Americas II, L.L.C. and U.S. Bank National Association, as successor collateral agent \(incorporated by reference to Exhibit 4.24 to EchoStar Corporation's Annual Report on Form 10-K for the year ended December 31, 2017, filed February 22, 2018, Commission File No. 001-33807\).](#)
- 4.12* [Second Supplemental Indenture relating to Hughes Satellite Systems Corporation's 5.250% Senior Secured Notes due 2026, dated August 10, 2017, by and among Hughes Satellite Systems Corporation, the guarantors and the supplemental guarantor listed on the signature pages thereto, U.S. Bank National Association, as trustee and successor collateral agent \(incorporated by reference to Exhibit 4.25 to EchoStar Corporation's Annual Report on Form 10-K for the year ended December 31, 2017, filed February 22, 2018, Commission File No. 001-33807\).](#)

- 4.13* [Second Supplemental Indenture relating to Hughes Satellite Systems Corporation's 6.625% Senior Notes due 2026, dated as of August 10, 2017, by and among Hughes Satellite Systems Corporation, the guarantors and the supplemental guarantor listed on the signature pages thereto and U.S. Bank National Association, as trustee \(incorporated by reference to Exhibit 4.26 to EchoStar Corporation's Annual Report on Form 10-K for the year ended December 31, 2017, filed February 22, 2018, Commission File No. 001-33807\).](#)
- 4.14* [Joinder Agreement, dated as of June 12, 2019, to the Security Agreement dated as of June 8, 2011, by and between EchoStar BSS Corporation, EchoStar FSS L.L.C. and U.S. Bank National Association, as successor collateral agent \(incorporated by reference to Exhibit 4.1 to EchoStar Corporation's Quarterly Report on Form 10-Q for the quarter ended June 30, 2019, filed August 8, 2019, Commission File No. 001-33807\).](#)
- 4.15* [Third Supplemental Indenture relating to Hughes Satellite Systems Corporation's 5.250% Senior Secured Notes due 2026, dated June 12, 2019, by and among Hughes Satellite Systems Corporation, the guarantors and the supplemental guarantors listed on the signature pages thereto, U.S. Bank National Association, as trustee and successor collateral agent \(incorporated by reference to Exhibit 4.2 to EchoStar Corporation's Quarterly Report on Form 10-Q for the quarter ended June 30, 2019, filed August 8, 2019, Commission File No. 001-33807\).](#)
- 4.16* [Third Supplemental Indenture relating to Hughes Satellite Systems Corporation's 6.625% Senior Notes due 2026, dated as of June 12, 2019, by and among Hughes Satellite Systems Corporation, the guarantors and the supplemental guarantors listed on the signature pages thereto and U.S. Bank National Association, as trustee \(incorporated by reference to Exhibit 4.3 to EchoStar Corporation's Quarterly Report on Form 10-Q for the quarter ended June 30, 2019, filed August 8, 2019, Commission File No. 001-33807\).](#)
- 4.17* [Description of our Capital Stock \(\(incorporated by reference to Exhibit 4.25 to EchoStar Corporations' Annual Report on Form 10-K for the year ended December 31, 2019, filed February 20, 2020, Commission File No. 001-33807\).](#)
- 10.1* [Form of Tax Sharing Agreement between EchoStar Corporation and DISH Network Corporation \(incorporated by reference to Exhibit 10.2 to Amendment No. 1 of EchoStar Corporation's Form 10 filed December 12, 2007, Commission File No. 001-33807\).](#)
- 10.2* [Form of EchoStar Corporation 2008 Class B CEO Stock Option Plan \(incorporated by reference to Exhibit 10.25 to Amendment No. 1 of EchoStar Corporation's Form 10 filed December 12, 2007, Commission File No. 001-33807\).**](#)
- 10.3* [Amended and Restated EchoStar Corporation 2008 Stock Incentive Plan \(the "2008 Stock Incentive Plan"\) \(incorporated by reference to EchoStar Corporation's Definitive Proxy Statement on Form 14, filed September 18, 2014, Commission File No. 001-33807\).**](#)
- 10.4* [Amended and Restated EchoStar Corporation 2008 Non-Employee Director Stock Option Plan \(the "2008 Non-Employee Director Stock Option Plan"\) \(incorporated by reference to EchoStar Corporation's Definitive Proxy Statement on Form 14, filed March 31, 2009, Commission File No. 001-33807\).**](#)
- 10.5* [Allocation Agreement, dated August 4, 2009, between EchoStar Corporation and DISH Network Corporation \(incorporated by reference from Exhibit 10.4 to EchoStar Corporation's Quarterly Report on Form 10-Q for the quarter ended September 30, 2009, filed November 9, 2009, Commission File No. 001-33807\).](#)
- 10.6* [Form of Restricted Stock Unit Agreement for 2008 Stock Incentive Plan — Executive or Director \(incorporated by reference to Exhibit 10.1 to EchoStar Corporation's Quarterly Report on Form 10-Q for the quarter ended September 30, 2015, filed November 6, 2015, Commission File No. 001-33807\).**](#)

- 10.7* [Form of Stock Option Agreement for 2008 Stock Incentive Plan \(1999\) \(incorporated by reference to Exhibit 10.39 to EchoStar Corporation's Annual Report on Form 10-K for the year ended December 31, 2015, filed February 24, 2016, Commission File No. 001-33807\).**](#)
- 10.8* [Form of Stock Option Agreement for 2008 Stock Incentive Plan — Employee \(2008\) \(incorporated by reference to Exhibit 10.40 to EchoStar Corporation's Annual Report on Form 10-K for the year ended December 31, 2015, filed February 24, 2016, Commission File No. 001-33807\).**](#)
- 10.9* [Form of Stock Option Agreement for 2008 Stock Incentive Plan — Executive \(2008\) \(incorporated by reference to Exhibit 10.41 to EchoStar Corporation's Annual Report on Form 10-K for the year ended December 31, 2015, filed February 24, 2016, Commission File No. 001-33807\).**](#)
- 10.10* [Form of Stock Option Agreement for 2008 Stock Incentive Plan — Employee \(2014\) \(incorporated by reference to Exhibit 10.42 to EchoStar Corporation's Annual Report on Form 10-K for the year ended December 31, 2015, filed February 24, 2016, Commission File No. 001-33807\).**](#)
- 10.11* [Form of Stock Option Agreement for 2008 Stock Incentive Plan — Executive \(2014\) \(incorporated by reference to Exhibit 10.43 to EchoStar Corporation's Annual Report on Form 10-K for the year ended December 31, 2015, filed February 24, 2016, Commission File No. 001-33807\).**](#)
- 10.12* [Form of Non-Employee Director Stock Option Agreement for 2008 Non-Employee Director Stock Option Plan \(incorporated by reference to Exhibit 10.44 to EchoStar Corporation's Annual Report on Form 10-K for the year ended December 31, 2015, filed February 24, 2016, Commission File No. 001-33807\).**](#)
- 10.13* [Form of Restricted Stock Unit Agreement for 2008 Stock Incentive Plan — Executive or Director \(2011\) \(incorporated by reference to Exhibit 10.45 to EchoStar Corporation's Annual Report on Form 10-K for the year ended December 31, 2015, filed February 24, 2016, Commission File No. 001-33807\).**](#)
- 10.14* [Share Exchange Agreement among DISH Network Corporation, DISH Network L.L.C., DISH Operating L.L.C., EchoStar Corporation, EchoStar Broadcasting Holding Parent L.L.C., EchoStar Broadcasting Holding Corporation, EchoStar Technologies Holding Corporation, and EchoStar Technologies L.L.C., dated as of January 31, 2017 \(incorporated by reference to Exhibit 10.1 to EchoStar Corporation's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017, filed May 10, 2017, Commission File No. 001-33807\).***/***](#)
- 10.15* [EchoStar Corporation 2017 Stock Incentive Plan \(incorporated by reference to EchoStar Corporation's Definitive Proxy Statement on Form 14, filed March 23, 2017, Commission File No. 001-33807\).**](#)
- 10.16* [EchoStar Corporation 2017 Non-Employee Director Stock Incentive Plan \(incorporated by reference to EchoStar Corporation's Definitive Proxy Statement on Form 14, filed March 23, 2017, Commission File No. 001-33807\).**](#)
- 10.17* [Amended and Restated EchoStar Corporation 2017 Employee Stock Purchase Plan \(incorporated by reference to EchoStar Corporation's Definitive Proxy Statement on Form 14, filed March 23, 2017, Commission File No. 001-33807\).**](#)
- 10.18* [Amendment No. 1 to EchoStar Corporation 2017 Amended and Restated Employee Stock Purchase Plan dated October 20, 2022 \(incorporated by reference to Exhibit 10.5 to EchoStar Corporation's Quarterly Report on Form 10-Q for the quarter ended September 30, 2022, filed November 3, 2022, Commission File No. 001-33807\).**](#)
- 10.19* [EchoStar Non-Qualified Plan -- Executive Plan and Adoption Agreement, as amended \(incorporated by reference to Exhibit 10.1 to EchoStar Corporation's Quarterly Report on Form 10-Q for the quarter ended June 30, 2017, filed August 9, 2017, Commission File No. 001-33807\).**](#)

- 10.20* [Form of Stock Option Agreement for the EchoStar Corporation 2017 Stock Incentive Plan - Employee \(2017\) \(incorporated by reference to Exhibit 10.2 to EchoStar Corporation's Quarterly Report on Form 10-Q for the quarter ended June 30, 2017, filed August 9, 2017, Commission File No. 001-33807\).**](#)
- 10.21* [Form of Stock Option Agreement for the EchoStar Corporation 2017 Stock Incentive Plan - Executive \(2017\) \(incorporated by reference to Exhibit 10.3 to EchoStar Corporation's Quarterly Report on Form 10-Q for the quarter ended June 30, 2017, filed August 9, 2017, Commission File No. 001-33807\).**](#)
- 10.22* [Form of Non-Employee Director Stock Option Agreement for the EchoStar Corporation 2017 Non-Employee Director Stock Incentive Plan \(incorporated by reference to Exhibit 10.4 to EchoStar Corporation's Quarterly Report on Form 10-Q for the quarter ended June 30, 2017, filed August 9, 2017, Commission File No. 001-33807\).**](#)
- 10.23* [Form of Restricted Stock Unit Agreement for the EchoStar Corporation 2017 Stock Incentive Plan - Executive \(2017\) \(incorporated by reference to Exhibit 10.5 to EchoStar Corporation's Quarterly Report on Form 10-Q for the quarter ended June 30, 2017, filed August 9, 2017, Commission File No. 001-33807\).**](#)
- 10.24* [Form of Stock Option Agreement for the EchoStar Corporation 2017 Stock Incentive Plan — Employee \(2022\) \(incorporated by reference to Exhibit 10.1 to EchoStar Corporation's Quarterly Report on Form 10-Q for the quarter ended September 30, 2022, filed November 3, 2022, Commission File No. 001-33807\).**](#)
- 10.25* [Form of Stock Option Agreement for the EchoStar Corporation 2017 Stock Incentive Plan — Executive \(2022\) \(incorporated by reference to Exhibit 10.2 to EchoStar Corporation's Quarterly Report on Form 10-Q for the quarter ended September 30, 2022, filed November 3, 2022, Commission File No. 001-33807\).**](#)
- 10.26* [Form of Non-Employee Director Stock Option Agreement for the EchoStar Corporation 2017 Non-Employee Director Stock Incentive Plan \(2022\) \(incorporated by reference to Exhibit 10.3 to EchoStar Corporation's Quarterly Report on Form 10-Q for the quarter ended September 30, 2022, filed November 3, 2022, Commission File No. 001-33807\).**](#)
- 10.27* [Form of Restricted Stock Unit Agreement for the EchoStar Corporation 2017 Stock Incentive Plan — Executive \(2022\) \(incorporated by reference to Exhibit 10.4 to EchoStar Corporation's Quarterly Report on Form 10-Q for the quarter ended September 30, 2022, filed November 3, 2022, Commission File No. 001-33807\).**](#)
- 10.28* [Offer Letter to Hamid Akhavan \(incorporated by reference to Exhibit 10.1 to EchoStar Corporation's Current Report on Form 8-K filed February 22, 2022, Commission File No. 001-33807\).**](#)
- 10.29* [Form of Stock Option Agreement for Hamid Akhavan \(incorporated by reference to Exhibit 10.2 to EchoStar Corporation's Quarterly Report on Form 10-Q for the quarter ended March 31, 2022, filed May 5, 2022, Commission File No. 001-33807\).**](#)
- 10.30* [Form of Restricted Stock Unit Agreement for Hamid Akhavan \(incorporated by reference to Exhibit 10.3 to EchoStar Corporation's Quarterly Report on Form 10-Q for the quarter ended March 31, 2022, filed May 5, 2022, Commission File No. 001-33807\).**](#)
- 10.31* [Letter Agreement, dated December 30, 2022, between EchoStar Corporation and Pradman P. Kaul \(incorporated by reference to Exhibit 10.1 to EchoStar Corporation's Current Report on Form 8-K filed December 30, 2022, Commission File No. 001-33807\).**/**](#)
- 10.32* [Letter Agreement between EchoStar Corporation and DISH Network Corporation, dated August 3, 2018, amending that certain Form of Tax Sharing Agreement between EchoStar Corporation and DISH Network \(incorporated by reference to Exhibit 10.1 to EchoStar Corporation's Quarterly Report on Form 10-Q for the quarter ended September 2018, filed November 8, 2018, Commission File No. 001-33807\).](#)
- 10.33* [Amendment to EchoStar Non-Qualified Plan -- Executive Plan and Adoption Agreement, dated November 1, 2018 \(incorporated by reference to Exhibit 10.35 to EchoStar Corporation's Annual Report on Form 10-K for the year ended December 31, 2018, filed February 21, 2019, Commission File No. 001-33807\).**](#)

<u>10.34*</u>	<u>Amended and Restated EchoStar Corporation Executive Officer Bonus Incentive Plan, dated as of April 30, 2019 (incorporated by reference to Exhibit 10.1 to EchoStar Corporation's Quarterly Report on Form 10-Q for the quarter ended June 30, 2019, filed August 8, 2019, Commission File No. 001-33807).</u>**
<u>10.35*</u>	<u>Amendment to EchoStar Non-Qualified Plan – Executive Plan and Adoption Agreement, dated October 21, 2019 (incorporated by reference to Exhibit 10.1 to EchoStar Corporation's Quarterly Report on Form 10-Q for the quarter ended September 30, 2020, filed November 5, 2020, Commission File No. 001-33807).</u>**
<u>10.36*</u>	<u>Contract between EchoStar XXIV L.L.C. and Space Systems/Loral, LLC (currently known as Maxar Space LLC) for the Jupiter 3 Satellite programs, dated as April 19, 2017 (incorporated by reference to Exhibit 10.30 to EchoStar Corporations' Annual Report on Form 10-K for the year ended December 31, 2019, filed February 20, 2020, Commission File No. 001-33807).</u>***/**
<u>10.37*</u>	<u>Amendment No. 1 to Contract between EchoStar XXIV L.L.C. and SpaceSystems/Loral, LLC (currently known as Maxar Space LLC) for the Jupiter 3 Satellite Program, dated October 1, 2018 (incorporated by reference to Exhibit 10.2 to EchoStar Corporation's Quarterly Report on Form 10-Q for the quarter ended September 30, 2020, filed November 5, 2020, Commission File No. 001-33807).</u>****
<u>10.38*</u>	<u>Amendment No. 2 dated as of November 16, 2022 to the Contract between EchoStar XXIV L.L.C. and Maxar Space LLC for the Jupiter 3 Satellite Program (incorporated by reference to Exhibit 10.1 to EchoStar Corporation's Current Report on Form 8-K filed November 22, 2022, Commission File No. 001-33807)</u>***
<u>10.39*</u>	<u>Amendment No. 1 to EchoStar Corporation 2017 Non-Employee Director Stock Incentive Plan (incorporated by reference to EchoStar Corporation's Definitive Proxy Statement on Schedule 14A, filed March 17, 2021, Commission File No. 001-33807).</u>**
<u>10.40*</u>	<u>Second Amended and Restated EchoStar Corporation Executive Officer Bonus Incentive Plan, dated as of November 2, 2021.</u>**
<u>21(H)</u>	<u>Subsidiaries of EchoStar Corporation.</u>
<u>23(H)</u>	<u>Consent of KPMG LLP, Independent Registered Public Accounting Firm.</u>
<u>24(H)</u>	<u>Powers of Attorney of Charles W. Ergen, R. Stanton Dodge, Michael T. Dugan, Lisa W. Hershman, Pradman P. Kaul, Jeffrey R. Tarr, C. Michael Schroeder and William David Wade.</u>
<u>99.1(I)</u>	<u>Press release dated February 22, 2023 issued by EchoStar Corporation regarding financial results for the quarter and full year ended December 31, 2022.</u>
<u>31.1(H)</u>	<u>Section 302 Certification of Chief Executive Office and Principal Financial Officer</u>
<u>32.1(I)</u>	<u>Section 906 Certification of Chief Executive Officer and Principal Financial Officer.</u>
101.INS	XBRL Instance Document. The instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH	XBRL Taxonomy Extension Schema.
101.CAL	XBRL Taxonomy Extension Calculation Linkbase.
101.DEF	XBRL Taxonomy Extension Definition Linkbase.
101.LAB	XBRL Taxonomy Extension Label Linkbase.

101.PRE XBRL Taxonomy Extension Presentation Linkbase.

(H) Filed herewith.

(I) Furnished herewith.

* Incorporated by reference.

** Constitutes a management contract or compensatory plan or arrangement.

*** Certain portions of the exhibit have been omitted in accordance with the Securities and Exchange Commission's rules and regulations regarding confidential treatment.

**** Schedules and exhibits have been omitted pursuant to Item 601(a)(5) of Regulation S-K. We agree to furnish supplementally to the Securities and Exchange Commission a copy of any omitted schedule or exhibit upon request, subject to our right to request confidential treatment of any requested schedule or exhibit.

ITEM 16. FORM 10-K SUMMARY

None.

SIGNATURES

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

ECHOSTAR CORPORATION

By: /s/ Hamid Akhavan

Hamid Akhavan

Chief Executive Officer and President

(Principal Executive Officer and Principal Financial Officer)

Date: February 22, 2023

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

Signature	Title	Date
<u>/s/ Hamid Akhavan</u> Hamid Akhavan	Chief Executive Officer and President <i>(Principal Executive Officer and Principal Financial Officer)</i>	February 22, 2023
<u>/s/ Jeffrey S. Boggs</u> Jeffrey S. Boggs	Interim Principal Accounting Officer	February 22, 2023
* <u>Charles W. Ergen</u>	Chairman	February 22, 2023
* <u>Pradman P. Kaul</u>	Vice Chair	February 22, 2023
* <u>R. Stanton Dodge</u>	Director	February 22, 2023
* <u>Michael T. Dugan</u>	Director	February 22, 2023
* <u>Lisa W. Hershman</u>	Director	February 22, 2023
* <u>Jeffrey R. Tarr</u>	Director	February 22, 2023
* <u>C. Michael Schroeder</u>	Director	February 22, 2023
* <u>William David Wade</u>	Director	February 22, 2023
* By: <u>/s/ Dean A. Manson</u> Dean A. Manson Attorney-in-Fact		

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

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Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
EchoStar Corporation:

Opinions on the Consolidated Financial Statements and Internal Control Over Financial Reporting

We have audited the accompanying consolidated balance sheets of EchoStar Corporation and subsidiaries (the Company) as of December 31, 2022 and 2021, the related consolidated statements of operations, comprehensive income (loss), changes in stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2022, and the related notes (collectively, the consolidated financial statements). We also have audited the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021 and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2022, in conformity with U.S. generally accepted accounting principles. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022 based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

Basis for Opinions

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

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control Over Financial Reporting

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

assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

Critical Audit Matter

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

Sufficiency of audit evidence over certain Hughes segment revenue

As discussed in Note 2 and Note 3 to the consolidated financial statements, the Company reported \$1,966,587,000 in total revenue for the Hughes segment for the year ended December 31, 2022, of which \$1,592,438,000 and \$374,149,000 was related to total services and other revenue and certain equipment related revenue, respectively. The Hughes segment provides broadband satellite technologies and broadband internet services to consumer customers, and broadband network technologies, managed services, equipment, hardware, satellite services, and communications solutions to consumer and enterprise customers.

We identified the evaluation of the sufficiency of audit evidence over certain Hughes segment revenue as a critical audit matter. Specifically, a high degree of auditor judgment was required to evaluate the nature and extent of audit evidence obtained related to the total services and other revenue and certain equipment related revenue of the Hughes segment. IT professionals with specialized skills and knowledge were required to assess the multiple information technology (IT) applications, data interfaces, and procedures used to initiate, process, and record transactions.

The following are the primary procedures we performed to address this critical audit matter. We applied auditor judgment to determine the nature and extent of procedures to be performed. We evaluated the design and tested the operating effectiveness of internal controls, including controls related to the multiple IT applications, data interfaces, and procedures used to initiate, process, and record transactions. We assessed the recorded amounts by sampling transactions and comparing the amounts recognized for consistency with underlying documentation, including contracts or payment and transaction support. We involved IT professionals with specialized skills and knowledge, who assisted in testing IT applications used by the Company in its revenue recognition process, and configuration and interface controls over the transfer of relevant data between systems used in the revenue recognition processes. We evaluated the sufficiency of audit evidence obtained by assessing the results of the procedures performed, including the appropriateness of the nature and extent of such evidence.

/s/ KPMG LLP

We have served as the Company's auditor since 2007.

Denver, Colorado
February 22, 2023

ECHOSTAR CORPORATION
CONSOLIDATED BALANCE SHEETS

(Amounts in thousands, except share and per share amounts)

	As of December 31,	
	2022	2021
Assets		
Current assets:		
Cash and cash equivalents	\$ 704,541	\$ 535,894
Marketable investment securities	973,915	1,010,496
Trade accounts receivable and contract assets, net	236,479	182,063
Other current assets, net	210,446	198,444
Total current assets	<u>2,125,381</u>	<u>1,926,897</u>
Non-current assets:		
Property and equipment, net	2,237,617	2,338,285
Operating lease right-of-use assets	151,518	149,198
Goodwill	532,491	511,086
Regulatory authorizations, net	462,531	469,766
Other intangible assets, net	15,698	13,984
Other investments, net	356,705	297,747
Other non-current assets, net	317,062	338,241
Total non-current assets	<u>4,073,622</u>	<u>4,118,307</u>
Total assets	<u><u>\$ 6,199,003</u></u>	<u><u>\$ 6,045,204</u></u>
Liabilities and Stockholders' Equity		
Current liabilities:		
Trade accounts payable	\$ 101,239	\$ 109,338
Contract liabilities	121,739	141,343
Accrued expenses and other current liabilities	199,853	209,442
Total current liabilities	<u>422,831</u>	<u>460,123</u>
Non-current liabilities:		
Long-term debt, net	1,496,777	1,495,994
Deferred tax liabilities, net	424,621	403,684
Operating lease liabilities	135,932	134,897
Other non-current liabilities	119,787	136,426
Total non-current liabilities	<u>2,177,117</u>	<u>2,171,001</u>
Total liabilities	<u>2,599,948</u>	<u>2,631,124</u>
Commitments and contingencies		

ECHOSTAR CORPORATION

The accompanying notes are an integral part of these Consolidated Financial Statements.

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

Stockholders' equity:		
Preferred stock, \$0.001 par value, 20,000,000 shares authorized, none issued and outstanding at both December 31, 2022 and 2021	—	—
Common stock, \$0.001 par value, 4,000,000,000 shares authorized:		
Class A common stock, \$0.001 par value, 1,600,000,000 shares authorized, 58,604,927 shares issued and 35,291,616 shares outstanding at December 31, 2022 and 58,059,622 shares issued and 38,726,923 shares outstanding at December 31, 2021	59	58
Class B convertible common stock, \$0.001 par value, 800,000,000 shares authorized, 47,687,039 shares issued and outstanding at both December 31, 2022 and 2021	48	48
Class C convertible common stock, \$0.001 par value, 800,000,000 shares authorized, none issued and outstanding at both December 31, 2022 and 2021	—	—
Class D common stock, \$0.001 par value, 800,000,000 shares authorized, none issued and outstanding at both December 31, 2022 and 2021	—	—
Additional paid-in capital	3,367,058	3,345,878
Accumulated other comprehensive income (loss)	(172,239)	(212,102)
Accumulated earnings (losses)	833,517	656,466
Treasury shares, at cost, 23,313,311 and 19,332,699 shares at December 31, 2022 and 2021, respectively	(525,824)	(436,521)
Total EchoStar Corporation stockholders' equity	3,502,619	3,353,827
Non-controlling interests	96,436	60,253
Total stockholders' equity	3,599,055	3,414,080
Total liabilities and stockholders' equity	\$ 6,199,003	\$ 6,045,204

The accompanying notes are an integral part of these Consolidated Financial Statements.

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

	For the years ended December 31,		
	2022	2021	2020
Revenue:			
Services and other revenue	\$ 1,623,931	\$ 1,715,287	\$ 1,682,304
Equipment revenue	374,162	270,433	205,603
Total revenue	1,998,093	1,985,720	1,887,907
Costs and expenses:			
Cost of sales - services and other (exclusive of depreciation and amortization)	569,755	551,679	577,943
Cost of sales - equipment (exclusive of depreciation and amortization)	292,318	231,975	166,435
Selling, general and administrative expenses	455,234	461,705	474,912
Research and development expenses	32,810	31,777	29,448
Depreciation and amortization	457,621	491,329	525,011
Impairment of long-lived assets	711	245	1,685
Total costs and expenses	1,808,449	1,768,710	1,775,434
Operating income (loss)	189,644	217,010	112,473
Other income (expense):			
Interest income, net	50,900	22,801	39,982
Interest expense, net of amounts capitalized	(57,170)	(95,512)	(147,927)
Gains (losses) on investments, net	47,107	69,531	(31,306)
Equity in earnings (losses) of unconsolidated affiliates, net	(5,703)	(5,170)	(7,267)
Foreign currency transaction gains (losses), net	5,235	(12,613)	6,015
Other-than-temporary impairment losses on equity method investments	—	(55,266)	—
Other, net	3,210	(12,434)	195
Total other income (expense), net	43,579	(88,663)	(140,308)
Income (loss) before income taxes	233,223	128,347	(27,835)
Income tax benefit (provision), net	(66,675)	(65,626)	(24,069)
Net income (loss)	166,548	62,721	(51,904)
Less: Net loss (income) attributable to non-controlling interests	10,503	10,154	11,754
Net income (loss) attributable to EchoStar Corporation common stock	\$ 177,051	\$ 72,875	\$ (40,150)
Earnings (losses) per share - Class A and B common stock:			
Basic	\$ 2.10	\$ 0.81	\$ (0.41)
Diluted	\$ 2.10	\$ 0.81	\$ (0.41)

The accompanying notes are an integral part of these Consolidated Financial Statements.

ECHOSTAR CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(Amounts in thousands)

	For the years ended December 31,		
	2022	2021	2020
Net income (loss)	\$ 166,548	\$ 62,721	\$ (51,904)
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustments	39,608	(24,061)	(83,736)
Unrealized gains (losses) on available-for-sale securities	(680)	463	(253)
Other	2,660	(5,005)	2,614
Amounts reclassified to net income (loss):			
Realized losses (gains) on available-for-sale debt securities	(18)	(12)	(2)
Total other comprehensive income (loss), net of tax	41,570	(28,615)	(81,377)
Comprehensive income (loss)	208,118	34,106	(133,281)
Less: Comprehensive loss (income) attributable to non-controlling interests	8,796	14,543	27,392
Comprehensive income (loss) attributable to EchoStar Corporation	\$ 216,914	\$ 48,649	\$ (105,889)

The accompanying notes are an integral part of these Consolidated Financial Statements.

ECHOSTAR CORPORATION
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
(Amounts in thousands)

	Common Stock	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Earnings (Losses)	Treasury Shares, at cost	Non-controlling Interests	Total
Balance, December 31, 2019	\$ 105	\$ 3,290,483	\$ (122,138)	\$ 632,809	\$ (131,454)	\$ 75,748	\$ 3,745,553
Cumulative effect of accounting changes	—	—	—	(9,068)	—	(240)	(9,308)
Balance, January 1, 2020	105	3,290,483	(122,138)	623,741	(131,454)	75,508	3,736,245
Issuances of Class A common stock:							
Exercise of stock options	—	855	—	—	—	—	855
Employee benefits	—	6,921	—	—	—	—	6,921
Employee Stock Purchase Plan	—	10,109	—	—	—	—	10,109
Stock-based compensation	—	8,887	—	—	—	—	8,887
Issuance of equity and contribution of assets pursuant to the Yahsat JV formation	—	4,338	—	—	—	(1,580)	2,758
Contribution by non-controlling interest holder	—	—	—	—	—	18,241	18,241
Other comprehensive income (loss)	—	—	(65,738)	—	—	(15,631)	(81,369)
Net income (loss)	—	—	—	(40,150)	—	(11,754)	(51,904)
Treasury share repurchase	—	—	—	—	(43,458)	—	(43,458)
Other, net	—	(167)	—	—	—	132	(35)
Balance, December 31, 2020	105	3,321,426	(187,876)	583,591	(174,912)	64,916	3,607,250
Issuances of Class A common stock:							
Exercise of stock options	—	408	—	—	—	—	408
Employee benefits	1	7,124	—	—	—	—	7,125
Employee Stock Purchase Plan	—	9,471	—	—	—	—	9,471
Stock-based compensation	—	7,699	—	—	—	—	7,699
Contribution by non-controlling interest holder	—	—	—	—	—	9,880	9,880
Other comprehensive income (loss)	—	—	(24,226)	—	—	(4,389)	(28,615)
Net income (loss)	—	—	—	72,875	—	(10,154)	62,721
Treasury share repurchase	—	—	—	—	(261,609)	—	(261,609)
Other	—	(250)	—	—	—	—	(250)
Balance, December 31, 2021	106	3,345,878	(212,102)	656,466	(436,521)	60,253	3,414,080
Issuances of Class A common stock:							
Employee benefits	—	7,041	—	—	—	—	7,041
Employee Stock Purchase Plan	1	9,306	—	—	—	—	9,307
Stock-based compensation	—	11,546	—	—	—	—	11,546
Issuance of equity and contribution of assets pursuant to the India JV formation	—	(14,237)	—	—	—	44,540	30,303
Other comprehensive income (loss)	—	—	39,863	—	—	1,707	41,570
Net income (loss)	—	—	—	177,051	—	(10,503)	166,548
Treasury share repurchase	—	—	—	—	(89,303)	—	(89,303)
Consideration received from DISH Network for R&D tax credits utilized	—	6,315	—	—	—	—	6,315
Other	—	1,209	—	—	—	439	1,648
Balance, December 31, 2022	\$ 107	\$ 3,367,058	\$ (172,239)	\$ 833,517	\$ (525,824)	\$ 96,436	\$ 3,599,055

The accompanying notes are an integral part of these Consolidated Financial Statements.

ECHOSTAR CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Amounts in thousands)

	For the years ended December 31,		
	2022	2021	2020
Cash flows from operating activities:			
Net income (loss)	\$ 166,548	\$ 62,721	\$ (51,904)
Adjustments to reconcile net income (loss) to cash flows provided by (used for) operating activities:			
Depreciation and amortization	457,621	491,329	525,011
Impairment of long-lived assets	711	245	1,685
Losses (gains) on investments, net	(47,107)	(69,531)	31,306
Equity in losses (earnings) of unconsolidated affiliates, net	5,703	5,170	7,267
Foreign currency transaction losses (gains), net	(5,235)	12,613	(6,015)
Deferred tax provision (benefit), net	21,430	37,664	18,147
Stock-based compensation	11,546	7,699	8,887
Amortization of debt issuance costs	783	2,381	4,324
Other-than-temporary impairment losses on equity method investments	—	55,266	—
Other, net	(3,711)	19,740	(12,501)
Changes in assets and liabilities, net:			
Trade accounts receivable and contract assets, net	(50,959)	(2,334)	2,237
Other current assets, net	(6,456)	(7,303)	(12,984)
Trade accounts payable	8,825	(15,599)	(12,339)
Contract liabilities	(19,604)	36,774	3,509
Accrued expenses and other current liabilities	(3,649)	(84,621)	42,822
Non-current assets and non-current liabilities, net	(6,841)	80,012	(15,064)
Net cash provided by (used for) operating activities	529,605	632,226	534,388
Cash flows from investing activities:			
Purchases of marketable investment securities	(1,067,461)	(1,651,608)	(2,799,838)
Sales and maturities of marketable investment securities	1,136,594	2,321,560	2,110,336
Expenditures for property and equipment	(325,891)	(438,430)	(408,798)
Expenditures for externally marketed software	(23,105)	(33,543)	(38,655)
India JV formation	(7,892)	—	—
Dividend received from unconsolidated affiliate	2,000	—	—
Sale of unconsolidated affiliate	7,500	—	—
Purchase of other investments	—	(50,000)	(5,500)
Sales of other investments	3,070	10,951	—
Net cash provided by (used for) investing activities	(275,185)	158,930	(1,142,455)

The accompanying notes are an integral part of these Consolidated Financial Statements.

ECHOSTAR CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Amounts in thousands)

Cash flows from financing activities:			
Repurchase and maturity of the 2021 Senior Unsecured Notes	—	(901,818)	—
Payment of finance lease obligations	(120)	(670)	(811)
Payment of in-orbit incentive obligations	(2,988)	(2,214)	(1,554)
Proceeds from Class A common stock options exercised	—	408	855
Proceeds from Class A common stock issued under the Employee Stock Purchase Plan	9,306	9,471	10,109
Treasury share repurchase	(89,303)	(261,436)	(43,458)
Contribution by non-controlling interest holder	—	9,880	18,241
Other, net	—	(966)	998
Net cash provided by (used for) financing activities	<u>(83,105)</u>	<u>(1,147,345)</u>	<u>(15,620)</u>
Effect of exchange rates on cash and cash equivalents	(2,306)	(3,749)	(1,390)
Net increase (decrease) in cash and cash equivalents	<u>169,009</u>	<u>(359,938)</u>	<u>(625,077)</u>
Cash and cash equivalents, including restricted amounts, beginning of period	536,874	896,812	1,521,889
Cash and cash equivalents, including restricted amounts, end of period	<u>\$ 705,883</u>	<u>\$ 536,874</u>	<u>\$ 896,812</u>

The accompanying notes are an integral part of these Consolidated Financial Statements.

EHOSTAR CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1. ORGANIZATION AND BUSINESS ACTIVITIES

Principal Business

EchoStar Corporation (which, together with its subsidiaries, is referred to as “EchoStar,” the “Company,” “we,” “us” and “our”) is a holding company that was organized in October 2007 as a corporation under the laws of the State of Nevada. Our Class A common stock is publicly traded on the NASDAQ Global Select Market (“NASDAQ”) under the symbol “SATS.”

We are an industry leader in both networking technologies and services, innovating to deliver the global solutions that power a connected future for people, enterprises and things everywhere. We provide internet services to consumer customers, which include home and small to medium-sized businesses, and satellite and multi-transport technologies and managed network services to enterprise customers, telecommunications providers, aeronautical service providers and government entities, including the U.S. Department of Defense. We operate in the following two business segments:

- **Hughes segment** — which provides broadband satellite technologies and broadband internet products and services to consumer customers. We provide broadband network technologies, managed services, equipment, hardware, satellite services and communications solutions to government and enterprise customers. We also design, provide and install gateway and terminal equipment to customers for other satellite systems. In addition, we design, develop, construct and provide telecommunication networks comprising satellite ground segment systems and terminals to mobile system operators and our enterprise customers.
- **Echostar Satellite Services segment (“ESS segment”)** — which provides satellite services on a full-time and/or occasional-use basis to U.S. government service providers, internet service providers, broadcast news organizations, content providers and private enterprise customers. We operate our ESS business using primarily the EchoStar IX satellite and the EchoStar 105/SES-11 satellite and related infrastructure. Revenue in our ESS segment depends largely on our ability to continuously make use of our available satellite capacity with existing customers and our ability to enter into commercial relationships with new customers.

Our operations also include various corporate functions (primarily Executive, Treasury, Strategic Development, Human Resources, Information Technology, Finance, Accounting, Real Estate and Legal) and other activities, such as costs incurred in certain satellite development programs and other business development activities, and gains or losses from certain of our investments, that have not been assigned to our business segments. These activities, costs and income, as well as eliminations of intersegment transactions, are accounted for in Corporate and Other segment in our segment reporting. We also divide our operations by primary geographic market as follows: (i) North America (the U.S. and its territories, Mexico, and Canada); (ii) South and Central America and (iii) Other (Asia, Africa, Australia, Europe, India, and the Middle East). Refer to *Note 22. Segment Reporting* for further detail.

NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Principles of Consolidation and Basis of Presentation

These Consolidated Financial Statements and the accompanying notes (collectively, the “Consolidated Financial Statements”) are prepared in conformity with U.S. generally accepted accounting principles (“GAAP”). We consolidate all entities in which we have a controlling financial interest. We are deemed to have a controlling financial interest in variable interest entities in which we are the primary beneficiary and in other entities in which we own more than 50% of the outstanding voting shares and other shareholders do not have substantive rights to participate in management. For entities we control but do not wholly own, we record a non-controlling interest within stockholders’ equity for the portion of the entity’s equity attributed to the non-controlling ownership interests. All significant intercompany balances and transactions have been eliminated in consolidation.

ECHOSTAR CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

All amounts presented in these Consolidated Financial Statements are expressed in thousands of U.S. dollars, except share and per share amounts and unless otherwise noted.

Use of Estimates

We are required to make certain estimates and assumptions that affect the amounts reported in these Consolidated Financial Statements. The most significant estimates and assumptions are used in determining: (i) inputs used to recognize revenue over time, including amortization periods for deferred contract acquisition costs; (ii) allowances for doubtful accounts; (iii) deferred taxes and related valuation allowances, including uncertain tax positions; (iv) loss contingencies; (v) fair value of financial instruments; (vi) fair value of assets and liabilities acquired in business combinations; and (vii) assets and goodwill impairment testing.

We base our estimates and assumptions on historical experience, observable market inputs and on various other factors that we believe to be relevant under the circumstances. Due to the inherent uncertainty involved in making estimates, actual results may differ from previously estimated amounts and such differences may be material to our financial statements. Additionally, changing economic conditions may increase the inherent uncertainty in the estimates and assumptions indicated above. We review our estimates and assumptions periodically and the effects of revisions thereto are reflected in the period they occur or prospectively if the revised estimate affects future periods.

Fair Value Measurements

We determine fair value based on the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants. Market or observable inputs are the preferred source of values, followed by unobservable inputs or assumptions based on hypothetical transactions in the absence of market inputs. We utilize the highest level of inputs available according to the following hierarchy in determining fair value:

- Level 1 - Defined as observable inputs being quoted prices in active markets for identical assets;
- Level 2 - Defined as observable inputs other than quoted prices included in Level 1, including quoted prices for similar assets and liabilities in active markets, quoted prices for identical or similar instruments in markets that are not active and model-derived valuations in which significant inputs and significant value drivers are observable in active markets; and
- Level 3 - Defined as unobservable inputs for which little or no market data exists, consistent with characteristics of the asset or liability that would be considered by market participants in a transaction to purchase or sell the asset or liability.

Fair values of our marketable investment securities are measured on a recurring basis based on a variety of observable market inputs. For our investments in publicly traded equity securities and U.S. government securities, fair value ordinarily is determined based on Level 1 measurements that reflect quoted prices for identical securities in active markets. Fair values of our investments in other marketable debt securities are generally based on Level 2 measurements as the markets for such debt securities are less active. We consider trades of identical debt securities on or near the measurement date as a strong indication of fair value and matrix pricing techniques that consider par value, coupon rate, credit quality, maturity and other relevant features may also be used to determine fair value of our investments in marketable debt securities. Fair values for our outstanding debt are based on quoted market prices in less active markets and are categorized as Level 2 measurements. Additionally, we use fair value measurements from time to time in connection with other investments, asset impairment testing and the assignment of purchase consideration to assets and liabilities of acquired companies. Those fair value measurements typically include significant unobservable inputs and are categorized within Level 3 of the fair value hierarchy.

Transfers between levels in the fair value hierarchy are considered to occur at the beginning of the quarterly accounting period. There were no transfers between levels during the years ended December 31, 2022 and 2021.

ECHOSTAR CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

As of December 31, 2022 and 2021, the carrying amounts of our cash and cash equivalents, trade accounts receivable and contract assets, net, trade accounts payable, and accrued expenses and other current liabilities were equal to or approximated their fair value due to their short-term nature or proximity to current market rates.

Revenue Recognition

Overview

Revenue is recognized upon transfer of control of the promised goods or our performance of the services to our customers in an amount that reflects the consideration we expect to receive in exchange for those goods or services. We enter into contracts that may include various combinations of products and services, which are generally distinct and accounted for as separate performance obligations.

We also recognize lease revenue which is derived from leases of property and equipment which, for operating leases, is reported in *Services and other revenue* in the Consolidated Statements of Operations and, for sales-type leases, is reported in *Equipment revenue* in the Consolidated Statements of Operations. Certain of our customer contracts contain embedded equipment leases, which we separate from non-lease components of the contract based on the relative standalone selling prices of the lease and non-lease components.

Hughes Segment

Our Hughes segment service contracts typically obligate us to provide substantially the same services on a recurring basis in exchange for fixed recurring fees over the term of the contract. We satisfy such performance obligations over time and recognize revenue ratably as services are rendered over the service period. Certain of our contracts with service obligations provide for fees based on usage, capacity or volume. We satisfy these performance obligations and recognize the related revenue at the point in time, or over the period, when the services are rendered. Our Hughes segment also sells and leases communications equipment to its customers. Revenue from equipment sales generally is recognized based upon shipment terms. Our equipment sales contracts typically include standard product warranties, but generally do not provide for returns or refunds. Revenue for extended warranties is recognized ratably over the extended warranty period. For contracts with multiple performance obligations, we typically allocate the contract's transaction price to each performance obligation based on their relative standalone selling prices. When the standalone selling price is not observable, our primary method used to estimate standalone selling price is the expected cost plus a margin. Our contracts generally require customer payments to be made at or shortly after the time we transfer control of goods or perform the services.

In addition to equipment and service offerings, our Hughes segment also enters into long-term contracts to design, develop, construct and install complex telecommunication networks for mobile system operators and enterprise customers. Revenue from such contracts is generally recognized over time as a measure of progress that depicts the transfer of control of the goods or services to the customer. Depending on the nature of the arrangement, we measure progress toward contract completion using an appropriate input method or output method. Under the input method, we recognize the transaction price as revenue based on the ratio of costs incurred to estimated total costs at completion. Under the output method, revenue and cost of sales are recognized as products are delivered based on the expected profit for the entire agreement. Profit margins on long-term contracts generally are based on estimates of revenue and costs at completion. We review and revise our estimates periodically and recognize related adjustments in the period in which the revisions are made. Estimated losses on contracts are recorded in the period in which they are identified. We generally receive interim payments as work progresses, although for some contracts, we may be entitled to receive an advance payment.

ESS Segment

Generally, our ESS segment service contracts with customers contain a single performance obligation and, therefore, there is no need to allocate the transaction price. We transfer control and recognize revenue for satellite services at the point in time or over the period when the services are rendered.

ECHOSTAR CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

Lease Revenue

We lease satellite capacity, communications equipment and real estate to certain of our customers. We identify and determine the classification of such leases as operating leases or sales-type leases. A lease is classified as a sales-type lease if it meets the criteria for a finance lease; otherwise it is classified as an operating lease. Some of our leases are embedded in contracts with customers that include non-lease performance obligations. For such contracts, except where we have elected otherwise, we allocate consideration in the contract between lease and non-lease components based on their relative standalone selling prices. We elected an accounting policy to not separate the lease of equipment from related services in our HughesNet satellite internet service (the "HughesNet service") contracts with customers and account for all revenue from such contracts as non-lease service revenue. Assets subject to operating leases remain in *Property and equipment, net* and continue to be depreciated. Assets subject to sales-type leases are derecognized from *Property and equipment, net* at lease commencement and a net investment in the lease asset is recognized in *Trade accounts receivable and contract assets, net* and *Other non-current assets, net*.

Operating lease revenue is generally recognized on a straight-line basis over the lease term. Sales-type lease revenue and a corresponding receivable generally are recognized at lease commencement based on the present value of the future lease payments and related interest income on the receivable is recognized over the lease term. Payments under sales-type leases are discounted using the interest rate implicit in the lease or our incremental borrowing rate if the interest rate implicit in the lease cannot be reasonably determined. We report revenue from sales-type leases at the commencement date in *Equipment revenue* and periodic interest income in *Services and other revenue*. We report operating lease revenue in *Services and other revenue*.

Other

Sales and Value Added Taxes, Universal Service Fees and other taxes that we collect concurrent with revenue producing activities are excluded from revenue and included in *Accrued expenses and other current liabilities* in the Consolidated Balance Sheets.

Shipping and handling costs associated with outbound freight are accounted for as a fulfillment cost after control over a product has transferred to the customer and are included in Cost of sales - equipment in the Consolidated Statements of Operations at the time of shipment.

Cost of Sales - Services and Other

Cost of sales - services and other in the Consolidated Statements of Operations primarily consists of costs of satellite capacity and services, hub infrastructure, customer care, wireline and wireless capacity and direct labor costs associated with the services provided and is generally charged to expense as incurred.

Cost of Sales - Equipment

Cost of sales - equipment in the Consolidated Statements of Operations primarily consists of inventory costs, including freight and royalties, and is generally recognized at the point in time control of the equipment is passed to the customer and related revenue is recognized.

Additionally, customer-related research and development costs are incurred in connection with the specific requirements of a customer's order; in such instances, the amounts for these customer funded development efforts are also included in *Cost of sales - equipment* in the Consolidated Statements of Operations.

Stock-based Compensation Expense

Stock-based compensation expense is recognized based on the fair value of stock awards ultimately expected to vest. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. Compensation expense for awards with service conditions only is recognized on a straight-line basis over the requisite service period for the entire award. Compensation expense

ECHOSTAR CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

for awards subject to performance conditions is recognized only when satisfaction of the performance condition is probable.

Advertising Costs

Advertising costs are expensed as incurred and are included in *Selling, general and administrative expenses* in the Consolidated Statements of Operations.

Research and Development

Research and development costs, not incurred in connection with customer requirements, are generally expensed when incurred.

Debt Issuance Costs

Costs of issuing debt generally are deferred and amortized utilizing the effective interest method, with amortization included in *Interest expense, net of amounts capitalized* in the Consolidated Statements of Operations. We report unamortized debt issuance costs as a reduction of the related long-term debt in the Consolidated Balance Sheets.

Foreign Currency

The functional currency for certain of our foreign operations is determined to be the local currency. Accordingly, we translate assets and liabilities of these foreign entities from their local currencies to U.S. dollars using period-end exchange rates and translate income and expense accounts at monthly average rates. The resulting translation adjustments are reported as *Foreign currency translation adjustments* in the Consolidated Statements of Comprehensive Income (Loss). Except in certain uncommon circumstances, we have not recorded deferred income taxes related to our foreign currency translation adjustments.

Gains and losses resulting from the re-measurement of transactions denominated in foreign currencies are recognized in *Foreign currency transaction gains (losses), net* in the Consolidated Statements of Operations.

Income Taxes

We recognize a provision or benefit for income taxes currently payable or receivable and for income tax amounts deferred to future periods. Deferred tax assets and liabilities reflect the effects of tax losses, credits, and the future income tax effects of temporary differences between GAAP carrying amounts of existing assets and liabilities and their respective tax bases and are measured using enacted tax rates that apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. Deferred tax assets are offset by valuation allowances when we determine it is more likely than not that such deferred tax assets will not be realized in the foreseeable future. We determine deferred tax assets and liabilities separately for each taxing jurisdiction and report the net amount for each jurisdiction as a non-current asset or liability in the Consolidated Balance Sheets.

From time to time, we engage in transactions where the income tax consequences are uncertain. We recognize tax benefits when, in management's judgment, a tax filing position is more likely than not to be sustained if challenged by the tax authorities. For tax positions that meet the more-likely-than-not threshold, we may not recognize a portion of a tax benefit depending on management's assessment of how the tax position will ultimately be settled. Unrecognized tax benefits generally are netted against the deferred tax assets associated with our net operating loss and tax credit carryforwards. We adjust our estimates periodically based on ongoing examinations by, and settlements with, various taxing authorities, as well as changes in tax laws, regulations and precedent. Estimates of our uncertain tax positions are made based upon prior experience and are updated in light of changes in facts and circumstances. However, due to the uncertain and complex application of tax regulations, it is possible that the ultimate resolution of audits may result in liabilities which could be materially different from these estimates. In such an event, we will record additional income tax provision or benefit in the period in which such resolution occurs. We classify interest and penalties, if any, associated with our unrecognized tax benefits as a component of income tax provision or benefit.

ECHOSTAR CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

Lessee Accounting

At the inception of a contract, we assess whether the contract is, or contains, a lease. The assessment is based on (i) whether the contract involves the use of a distinct identified asset, (ii) whether we obtain the right to substantially all the economic benefit from the use of the asset throughout the period, and (iii) whether we have the right to direct the use of the asset. Our operating leases consist primarily of leases for office space, data centers and satellite-related ground infrastructure.

A lease is classified as a finance lease when one or more of the following criteria are met: (i) the lease transfers ownership of the asset by the end of the lease term, (ii) the lease contains an option to purchase the asset that is reasonably certain to be exercised, (iii) the lease term is for a major part of the remaining useful life of the asset, (iv) the present value of the lease payments equals or exceeds substantially all of the fair value of the asset or (v) the asset is of a specialized nature and there is not expected to be an alternative use to the lessor at the end of the lease term. A lease is classified as an operating lease if it does not meet any of these criteria. Our finance leases consist primarily of leases for satellite capacity.

All significant lease arrangements are generally recognized at lease commencement. Operating lease right-of-use ("ROU") assets and lease liabilities are recognized at commencement. An ROU asset and corresponding lease liability are not recorded for leases with an initial term of 12 months or less (short-term leases), and we recognize lease expense for these leases as incurred over the lease term. ROU assets represent our right to use an underlying asset during the reasonably certain lease term, and lease liabilities represent our obligation to make lease payments arising from the lease. Our lease terms may include options to extend or terminate the lease when it is reasonably certain that we will exercise that option.

The ROU asset is initially measured at cost, which primarily comprises the initial amount of the lease liability, plus any prepayments to the lessor and initial direct costs such as brokerage commissions, less any lease incentives received. The lease liability is initially measured at the present value of the minimum lease payments, discounted using an estimate of our incremental borrowing rate for a collateralized loan with the same term as the underlying lease. The incremental borrowing rates used for the initial measurement of lease liabilities are based on the original lease terms. In determining our incremental borrowing rate, we consider the lease term, secured incremental borrowing rate, and for leases denominated in a currency different than U.S. dollar, the collateralized borrowing rate in the foreign currency using the U.S. dollar and foreign currency swap spread, when available.

We report operating lease ROU assets in *Operating lease right-of-use assets* and operating lease liabilities in *Accrued expenses and other current liabilities* and *Operating lease liabilities*. We report finance lease ROU assets in *Property and equipment, net* and finance lease liabilities in *Current portion of long-term debt, net* and *Long-term debt, net*.

Earnings Per Share

We present basic and diluted earnings or losses per share ("EPS") for our Class A and Class B common stock. Basic EPS for our Class A and Class B common stock excludes potential dilution and is computed by dividing *Net income (loss) attributable to EchoStar Corporation common stock* by the weighted-average number of common shares outstanding for the period. Diluted EPS reflects the potential dilution that could occur if shares of common stock were issued pursuant to our stock-based compensation awards. The potential dilution from common stock awards is computed using the treasury stock method based on the average market value of our Class A common stock during the period. The calculation of our diluted weighted-average common shares outstanding excluded options to purchase shares of our Class A common stock, the effect of which would be anti-dilutive.

Other Comprehensive Income (Loss)

The amounts reclassified to net income (loss) related to unrealized gain (loss) on available-for-sale securities are included in *Gains (losses) on investments, net* in the Consolidated Statements of Operations.

ECHOSTAR CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

Cash and Cash Equivalents

We consider all liquid investments purchased with an original maturity of less than 90 days to be cash equivalents. Cash equivalents as of December 31, 2022 and 2021 primarily consisted of commercial paper, government bonds, corporate notes and money market funds. The amortized cost of these investments approximates their fair value.

Marketable Investment Securities

Debt Securities

Our corporate bond portfolio includes debt instruments issued by individual corporations, primarily in the industrial and financial services industries. Our commercial paper portfolio includes instruments issued by individual corporations, primarily in the industrial, financial services and utilities industries. Our other debt securities portfolio includes investments in various debt instruments, including U.S. government bonds and mutual funds. We consider all liquid investments purchased with an original maturity of 90 days or less to be cash equivalents.

We account for our debt securities as available-for-sale or using the fair value option based on our investment strategy for the securities. For available-for-sale debt securities, we recognize periodic changes in the difference between fair value and amortized cost in *Unrealized gains (losses) on available-for-sale securities* in the Consolidated Statements of Comprehensive Income (Loss). Gains and losses realized upon sales of available-for-sale debt securities are reclassified from other comprehensive income (loss) and recognized on the trade date in *Gains (losses) on investments, net* in the Consolidated Statements of Operations. We use the first-in, first-out ("FIFO") method to determine the cost basis on sales of available-for-sale debt securities. Interest income from available-for-sale debt securities is reported in *Interest income, net* in the Consolidated Statements of Operations.

We periodically evaluate our available-for-sale debt securities portfolio to determine whether any declines in the fair value of these securities are other-than-temporary. Our evaluation considers, among other things, (i) the length of time and extent to which the fair value of such security has been lower than amortized cost, (ii) market and company-specific factors related to the security and (iii) our intent and ability to hold the investment to maturity or when it recovers its value. We generally consider a decline to be other-than-temporary when (i) we intend to sell the security, (ii) it is more likely than not that we will be required to sell the security before maturity or when it recovers its value or (iii) we do not expect to recover the amortized cost of the security at maturity. Declines in the fair value of available-for-sale debt securities that are determined to be other-than-temporary are reclassified from other comprehensive income (loss) and recognized in *Net income (loss)* in the Consolidated Statements of Operations, thus establishing a new cost basis for the investment.

From time to time we make strategic investments in marketable corporate debt securities. Generally, we elect to account for these debt securities using the fair value option because it results in consistency in accounting for unrealized gains and losses for all securities in our portfolio of strategic investments. When we elect the fair value option for investments in debt securities, we recognize periodic changes in fair value of these securities in *Gains (losses) on investments, net* in the Consolidated Statements of Operations. Interest income from these securities is reported in *Interest income, net* in the Consolidated Statements of Operations.

Equity Securities

We account for our equity securities with readily determinable fair values at fair value and recognize periodic changes in the fair value in *Gains (losses) on investments, net* in the Consolidated Statements of Operations. We recognize dividend income on equity securities on the ex-dividend date and report such income in *Other, net* in the Consolidated Statements of Operations.

Restricted Marketable Investment Securities

Restricted marketable investment securities that are pledged as collateral for our letters of credit and surety bonds are included in *Other non-current assets, net* in the Consolidated Balance Sheets. Restricted marketable securities are accounted for in the same manner as marketable securities that are not restricted, but are presented differently in the Consolidated Balance Sheets due to the restrictions.

ECHOSTAR CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

Trade Accounts Receivable

Trade accounts receivable includes amounts billed and currently due from customers and represents our unconditional rights to consideration arising from our performance under our customer contracts. Trade accounts receivable also includes amounts due from customers under our leasing arrangements. We make ongoing estimates relating to the collectability of our trade accounts receivable and maintain an allowance for estimated losses resulting from the inability of our customers to make the required payments. In determining the amount of the allowance, we consider historical levels of credit losses and make judgments about the creditworthiness of our customers based on ongoing credit evaluations. Past due trade accounts receivable balances are written off when our internal collection efforts have been unsuccessful. Bad debt expense related to our trade accounts receivable and other contract assets is included in *Selling, general and administrative expenses* in the Consolidated Statements of Operations.

Contract Assets

Contract assets represent revenue that we have recognized in advance of billing the customer and are included in *Trade accounts receivable and contract assets, net* or *Other non-current assets, net* in the Consolidated Balance Sheets based on the expected timing of customer payment. Our contract assets typically relate to our long-term contracts where we recognize revenue using the cost-based input method and the revenue recognized exceeds the amount billed to the customer. Our contract assets also include receivables related to sales-type leases recognized over the lease term as the customer is billed.

Contract Acquisition Costs

Our contract acquisition costs represent incremental direct costs of obtaining a contract and consist primarily of sales incentives paid to employees and third-party representatives. When we determine that our contract acquisition costs are recoverable, we defer and amortize the costs over the contract term, or over the estimated life of the customer relationship if anticipated renewals are expected and the incentives payable upon renewal are not commensurate with the initial incentive. We amortize contract acquisition costs in proportion to the revenue to which the costs relate. We expense sales incentives as incurred if the expected amortization period is one year or less. Unamortized contract acquisition costs are included in *Other non-current assets, net* in the Consolidated Balance Sheets and related amortization expense is included in *Selling, general and administrative expenses* in the Consolidated Statements of Operations.

Inventory

Inventory is stated at the lower of cost or net realizable value. Cost of inventory is determined using the FIFO method and consists primarily of materials, direct labor and indirect overhead incurred in the procurement and manufacturing of our products. We use standard costing methodologies in determining the cost of certain of our finished goods and work-in-process inventories. We determine net realizable value using our best estimates of future use or recovery, considering the aging and composition of inventory balances, the effects of technological and/or design changes, forecasted future product demand based on firm or near-firm customer orders and alternative means of disposition of excess or obsolete items. We recognize losses within *Cost of sales - equipment* in the Consolidated Statements of Operations when we determine that the cost of inventory and commitments to purchase inventory exceed net realizable value.

Property and Equipment

Satellites

Satellites are stated at cost, less accumulated depreciation. Depreciation is recorded on a straight-line basis over their estimated useful lives. The cost of our satellites includes construction costs, including the present value of in-orbit incentives payable to the satellite manufacturer, launch costs, capitalized interest and related insurance premiums. We depreciate our owned satellites on a straight-line basis over the estimated useful life of each satellite.

ECHOSTAR CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

We have satellites acquired under finance leases. The recorded costs of those satellites are the present values of all lease payments. We amortize our finance lease ROU satellites over their respective lease terms.

Our satellites may experience anomalies from time to time, some of which may have a significant adverse effect on their remaining useful lives, the commercial operation of the satellites or our operating results or financial position.

We evaluate our satellites for impairment and test for recoverability whenever events or changes in circumstances indicate that their carrying value may not be recoverable. Certain anomalies may be considered a significant adverse change in the physical condition of a particular satellite. However, based on redundancies designed within each satellite, certain of these anomalies may not be considered to be significant events requiring a test of recoverability.

We generally do not carry in-orbit insurance on our satellites and payloads because we have assessed that the cost of insurance is not economical relative to the risk of failures. Therefore, we generally bear the risk of any in-orbit failures. However, we may be required to carry insurance on specific satellites and payloads per the terms of certain agreements. We will continue to assess circumstances going forward and make insurance-related decisions on a case-by-case basis.

Other Property and Equipment

Other property and equipment are stated at cost, less accumulated depreciation. Depreciation is recorded on a straight-line basis over their estimated useful lives. Other property and equipment includes: land; buildings and improvements; furniture, fixtures, equipment and internal-use software; customer premises equipment; and construction in process. Costs related to the procurement and development of software for internal-use are capitalized and amortized using the straight-line method over the estimated useful life of the software, not in excess of five years. Repair and maintenance costs are charged to expense when incurred.

Goodwill

We account for acquired businesses using the acquisition method of accounting which requires that the assets acquired and liabilities assumed be recorded at the date of acquisition at their respective fair values. Any excess of the purchase price over the estimated fair values of the net assets acquired is recorded as goodwill. All of our goodwill is assigned to our Hughes segment.

We evaluate goodwill for impairment on an annual basis in our second fiscal quarter or whenever events and changes in circumstances indicate the carrying amounts may not be recoverable. Impairments may result from, among other things, deterioration in financial and operational performance, declines in stock price, increased attrition, adverse market conditions, adverse changes in applicable laws and/or regulations, deterioration of general macroeconomic conditions, fluctuations in foreign exchange rates, increased competitive markets in which we operate in, declining financial performance over a sustained period, changes in key personnel and/or strategy, and a variety of other factors. Our impairment assessment typically begins with a qualitative assessment to determine whether it is more likely than not the fair value of the reporting unit is less than its carrying amount. The qualitative assessment includes comparing the overall financial performance against the planned results. In the performance of the qualitative assessment, we analyze a variety of events or factors that may influence the fair value of the reporting unit, that could include, but are not limited to: macroeconomic conditions, industry and market considerations, cost factors, and other relevant entity-specific events which requires significant judgment. If we determine in the qualitative assessment that it is more likely than not that the fair value is less than its carrying value, then we perform a quantitative assessment to determine the estimated fair value of the indefinite lived asset or reporting unit. We could also choose the option to bypass the qualitative assessment for any reporting unit in any period and proceed directly to the quantitative impairment test. In the quantitative assessment, fair value is usually estimated using two valuation approaches: the discounted cash flows method and the market comparable method. In the performance of the quantitative assessment, we use a variety of inputs, some of which may require significant judgment, that influence the fair value of the reporting unit, that could include, but are not limited to: discount rate, revenue growth rate, amount and timing of future cash flows, guideline public company metrics, and comparable market transactions. In addition, we also perform a market capitalization reconciliation to compare the estimated fair value, determined using the discounted cash flows method and the market comparable method, to the

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

Company's market capitalization as of the date of the test. If the carrying value exceeds the estimated fair value, then an impairment is recognized for the difference.

There has been no impairment to date.

Regulatory Authorizations

Finite Lived

We have regulatory authorizations that are not related to the Federal Communications Commission ("FCC") and have determined that they have finite lives due to uncertainties about the ability to extend or renew their terms.

Finite lived regulatory authorizations are amortized over their estimated useful lives on a straight-line basis. Renewal costs are usually capitalized when they are incurred.

Indefinite Lived

We also have indefinite lived regulatory authorizations that primarily consist of FCC authorizations and certain other contractual or regulatory rights to use spectrum at specified orbital locations. We have determined that our FCC authorizations generally have indefinite useful lives based on the following:

- FCC authorizations are non-depleting assets;
- Renewal satellite applications generally are authorized by the FCC subject to certain conditions, without substantial cost under a stable regulatory, legislative and legal environment;
- Expenditures required to maintain the authorization are not significant; and
- We intend to use these authorizations indefinitely.

Costs incurred to maintain or renew indefinite-lived regulatory authorizations are expensed as incurred.

Other Intangible Assets

Our other intangible assets consist of customer relationships, patents, trademarks and licenses which are amortized using the straight-line method over their estimated useful lives. We evaluate the recoverability of intangible assets periodically by taking into account events or circumstances that indicate that the carrying amount of the assets may not be recoverable.

Impairment of Long-lived Assets

We review our long-lived assets for recoverability whenever events or changes in circumstances indicate that their carrying amounts may not be recoverable. The evaluation is performed at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities. For assets held and used in operations, the asset is not recoverable if the carrying amount of the asset exceeds its undiscounted estimated future net cash flows. When an asset is not recoverable, we adjust the carrying amount of such asset to its estimated fair value and recognize the impairment loss in *Impairment of long-lived assets* in the Consolidated Statements of Operations.

Other Investments

Equity Method Investments

We use the equity method to account for investments when we have the ability to exercise significant influence on the operating decisions of the affiliate. Such investments are initially recorded at cost and subsequently adjusted for our proportionate share of the net earnings or loss of the investee, which is reported in *Equity in earnings (losses) of unconsolidated affiliates, net* in the Consolidated Statements of Operations. Additionally, the carrying amount of such investments includes a component of goodwill when the cost of our investment exceeds the fair value of the

ECHOSTAR CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

underlying identifiable assets and liabilities of the affiliate. Lastly, dividends received from these affiliates reduces the carrying amount of our investment.

Other Equity Investments

We generally measure investments in non-publicly traded equity instruments without a readily determinable fair value at cost adjusted for observable price changes in orderly transactions for the identical or similar securities of the same issuer and changes resulting from impairments, if any. Other equity instruments are measured to determine their value based on observable market information. When we adjust the carrying amount of an investment to its estimated fair value, the gain or loss is recorded in *Gains (losses) on investments, net* in the Consolidated Statements of Operations.

Other Debt Investments

We generally record our investments in non-publicly traded debt instruments without a readily determinable fair value at amortized cost. We recognize any discounts over the term of the loan in *Interest income* in the Consolidated Statements of Operations. In addition, some of our debt instruments have interest income that is paid-in-kind, which is added to the principal balance to determine the then current interest income. When we adjust the carrying amount of an investment, the gain or loss is recorded in *Gains (losses) on investments, net* in the Consolidated Statements of Operations.

Impairment Considerations

We periodically evaluate all of our other investments to determine whether events or changes in circumstances have occurred that may have a significant adverse effect on the fair value of the investment. We consider information if provided to us by our investees such as current financial statements, business plans, investment documentation, capitalization tables, liquidation waterfalls, and board materials; and we may make additional inquiries of investee management.

Indicators of impairment may include, but are not limited to, unprofitable operations, material loss contingencies, changes in business strategy, changes in market trends or market conditions, changes in the investees' enterprise value and changes in the investees' investment pricing. When we determine that one of our other investments is impaired we reduce its carrying value to its estimated fair value and recognize the impairment loss in *Other-than-temporary impairment losses on equity method investments* or *Gains (losses) on investments, net* in the Consolidated Statements of Operations.

Contract Liabilities

Contract liabilities consist of advance payments and billings in excess of revenue recognized under customer contracts and are included in *Contract liabilities* or *Other non-current liabilities* in the Consolidated Balance Sheets based on the timing of when we expect to recognize revenue. We recognize contract liabilities as revenue after all revenue recognition criteria have been met.

Recently Adopted Accounting Pronouncements

Government Assistance

On January 1, 2022 we adopted Accounting Standards Update ("ASU") No. 2021-10 - *Government Assistance (Topic 832)*: Disclosures by Business Entities about Government Assistance, which requires business entities (except for not-for-profit entities and employee benefit plans) to disclose information about certain government assistance they receive. The Topic 832 disclosure requirements include: (i) the nature of the transactions and the related accounting policy used; (ii) the line items on the balance sheet and income statement that are affected and the amounts applicable to each financial statement line item; and (iii) significant terms and conditions of the transactions. Our adoption of this ASU did not have a material impact on our Consolidated Financial Statements.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

Income Taxes

On January 1, 2021, we adopted ASU No. 2019-12 - *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes* (“ASU 2019-12”). ASU 2019-12 is part of the Financial Accounting Standards Board (“FASB”) overall simplification initiative and seeks to simplify the accounting for income taxes by updating certain guidance and removing certain exceptions. Our adoption of this ASU did not have a material impact on our Consolidated Financial Statements.

Credit Losses

On January 1, 2020, we adopted ASU No. 2016-13 - *Financial Instruments - Credit Losses (Topic 326)*, as amended, and codified in Accounting Standards Codification Topic 326 (“ASC 326”). ASC 326 introduces a new approach to the periodic estimation of credit losses for certain financial assets based on expected losses instead of incurred losses. It also modifies the impairment model for available-for-sale debt securities and provides a simplified accounting model for purchased financial assets that have experienced credit deterioration since their original purchase. We have elected to apply the requirements of the new standard prospectively and we recognized a cumulative effect of adoption of \$9.1 million to *Accumulated earnings (losses)* as of January 1, 2020. Based on this election, we did not restate our comparative Consolidated Financial Statements and they continue to be reported under the accounting standards in effect for the periods before January 1, 2020.

Financial Impact of Adoption. The following table presents our adoption of this new standard resulting in adjustments to our Consolidated Balance Sheet effective January 1, 2020:

	Balance December 31, 2019	Adoption of ASC 326 Increase (Decrease)	Balance January 1, 2020
Trade accounts receivable and contract assets, net	\$ 196,629	\$ (13,672)	\$ 182,957
Other current assets, net	\$ 179,531	\$ 6,723	\$ 186,254
Other investments, net	\$ 325,405	\$ (7,381)	\$ 318,024
Other non-current assets, net	\$ 334,841	\$ 4,050	\$ 338,891
Total assets	\$ 7,154,298	\$ (10,280)	\$ 7,144,018
Deferred tax liabilities, net	\$ 351,692	\$ (972)	\$ 350,720
Accumulated earnings (losses)	\$ 632,809	\$ (9,068)	\$ 623,741
Non-controlling interests	\$ 75,748	\$ (240)	\$ 75,508
Total stockholders’ equity	\$ 3,745,553	\$ (9,308)	\$ 3,736,245
Total liabilities and stockholders’ equity	\$ 7,154,298	\$ (10,280)	\$ 7,144,018

The application of ASC 326 requirements did not materially affect our Consolidated Statements of Operations for the year ended December 31, 2020.

Recently Issued Accounting Pronouncements Not Yet Adopted

Business Combinations

In October 2021, the FASB issued ASU No. 2021-08 - *Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers*, which provides an exception to fair value measurement for contract assets and contract liabilities related to revenue contracts acquired in a business combination. The ASU requires an entity (acquirer) to recognize and measure contract assets and contract liabilities acquired in a business combination in accordance with Topic 606. At the acquisition date, an acquirer should account for the related revenue contracts in accordance with Topic 606 as if it had originated the contracts. The ASU is effective for the Company for annual and interim periods in fiscal years beginning after December 15, 2022. The ASU is applied to business combinations occurring on or after the effective date.

ECHOSTAR CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

Reference Rate Reform

In March 2020, the FASB issued ASU No. 2020-04 - *Reference Rate Reform (Topic 848)*, and all subsequent amendments to the initial guidance, codified as ASC 848 ("ASC 848"). The purpose of ASC 848 is to provide optional guidance to ease the potential effects on financial reporting of the market-wide migration away from Interbank Offered Rates to alternative reference rates. ASC 848 applies only to contracts, hedging relationships, and other transactions that reference a reference rate expected to be discontinued because of reference rate reform. The guidance may be applied upon issuance of ASC 848 through December 31, 2024. We expect to utilize the optional expedients provided by the guidance for contracts amended solely to use an alternative reference rate. We have evaluated the new guidance and we are in the process of implementing this ASU, and all subsequent amendments, and do not expect them to have a material impact on our Consolidated Financial Statements.

NOTE 3. REVENUE RECOGNITION

Contract Balances

The following table presents the components of our contract balances:

	As of December 31,	
	2022	2021
Trade accounts receivable and contract assets, net:		
Sales and services	\$ 170,466	\$ 154,676
Leasing	7,936	5,668
Total trade accounts receivable	178,402	160,344
Contract assets	73,435	36,307
Allowance for doubtful accounts	(15,358)	(14,588)
Total trade accounts receivable and contract assets, net	<u>\$ 236,479</u>	<u>\$ 182,063</u>
Contract liabilities:		
Current	\$ 121,739	\$ 141,343
Non-current	8,326	10,669
Total contract liabilities	<u>\$ 130,065</u>	<u>\$ 152,012</u>

The following table presents the revenue recognized in the Consolidated Statements of Operations that was previously included within contract liabilities:

	For the years ended December 31,		
	2022	2021	2020
Revenue	\$ 120,867	\$ 82,633	\$ 72,877

The following table presents the activity in our allowance for doubtful accounts:

	For the years ended December 31,		
	2022	2021	2020
Balance at beginning of period	\$ 14,588	\$ 15,386	\$ 23,777
Credit losses ⁽¹⁾	32,910	22,591	18,582
Deductions	(36,011)	(23,543)	(26,031)
Foreign currency translation	3,871	154	(942)
Balance at end of period	<u>\$ 15,358</u>	<u>\$ 14,588</u>	<u>\$ 15,386</u>

ECHOSTAR CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

⁽¹⁾ The impact of adopting ASC 326 on January 1, 2020 was a net decrease to our allowance for doubtful accounts largely driven by a \$13.4 million reclassification to *Other current assets, net* and *Other non-current assets, net*, offset by a \$2.9 million adjustment to *Accumulated earnings (losses)*.

Contract Acquisition Costs

The following table presents the activity in our contract acquisition costs, net:

	For the years ended December 31,		
	2022	2021	2020
Balance at beginning of period	\$ 82,986	\$ 99,837	\$ 113,592
Additions	57,627	72,503	91,143
Amortization expense	(76,760)	(88,178)	(101,278)
Foreign currency translation	594	(1,176)	(3,620)
Balance at end of period	<u>\$ 64,447</u>	<u>\$ 82,986</u>	<u>\$ 99,837</u>

Performance Obligations

As of December 31, 2022, the remaining performance obligations for our customer contracts with original expected durations of more than one year was \$1.1 billion. Performance obligations expected to be satisfied within one year and greater than one year are 34.0% and 66.0%, respectively. This amount and percentages exclude agreements with consumer customers in our Hughes segment, our leasing arrangements and agreements with certain customers under which collectability of all amounts due through the term of contracts is uncertain.

Disaggregation of Revenue

Geographic Information

The following tables present our revenue from customer contracts disaggregated by primary geographic market and by segment:

	Hughes	ESS	Corporate and Other	Consolidated Total
For the year ended December 31, 2022				
North America	\$ 1,576,773	\$ 20,533	\$ 10,958	\$ 1,608,264
South and Central America	171,318	—	—	171,318
Other	218,496	—	15	218,511
Total revenue	<u>\$ 1,966,587</u>	<u>\$ 20,533</u>	<u>\$ 10,973</u>	<u>\$ 1,998,093</u>

For the year ended December 31, 2021				
North America	\$ 1,617,229	\$ 17,679	\$ 11,782	\$ 1,646,690
South and Central America	176,515	—	—	176,515
Other	162,482	—	33	162,515
Total revenue	<u>\$ 1,956,226</u>	<u>\$ 17,679</u>	<u>\$ 11,815</u>	<u>\$ 1,985,720</u>

For the year ended December 31, 2020				
North America	\$ 1,556,961	\$ 17,398	\$ 9,443	\$ 1,583,802
South and Central America	151,194	—	232	151,426
Other	152,679	—	—	152,679
Total revenue	<u>\$ 1,860,834</u>	<u>\$ 17,398</u>	<u>\$ 9,675</u>	<u>\$ 1,887,907</u>

ECHOSTAR CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

Nature of Products and Services

The following tables present our revenue disaggregated by the nature of products and services and by segment:

	Hughes	ESS	Corporate and Other	Consolidated Total
For the year ended December 31, 2022				
Services and other revenue:				
Services	\$ 1,551,613	\$ 13,206	\$ 5,859	\$ 1,570,678
Lease revenue	40,825	7,327	5,101	53,253
Total services and other revenue	1,592,438	20,533	10,960	1,623,931
Equipment revenue:				
Equipment	119,107	—	13	119,120
Design, development and construction services	246,265	—	—	246,265
Lease revenue	8,777	—	—	8,777
Total equipment revenue	374,149	—	13	374,162
Total revenue	<u>\$ 1,966,587</u>	<u>\$ 20,533</u>	<u>\$ 10,973</u>	<u>\$ 1,998,093</u>
For the year ended December 31, 2021				
Services and other revenue:				
Services	\$ 1,646,778	\$ 11,961	\$ 5,691	\$ 1,664,430
Lease revenue	39,021	5,718	6,118	50,857
Total services and other revenue	1,685,799	17,679	11,809	1,715,287
Equipment revenue:				
Equipment	108,767	—	6	108,773
Design, development and construction services	152,934	—	—	152,934
Lease revenue	8,726	—	—	8,726
Total equipment revenue	270,427	—	6	270,433
Total revenue	<u>\$ 1,956,226</u>	<u>\$ 17,679</u>	<u>\$ 11,815</u>	<u>\$ 1,985,720</u>
For the year ended December 31, 2020				
Services and other revenue:				
Services	\$ 1,614,730	\$ 10,785	\$ 4,631	\$ 1,630,146
Lease revenue	40,503	6,613	5,042	52,158
Total services and other revenue	1,655,233	17,398	9,673	1,682,304
Equipment revenue:				
Equipment	110,108	—	2	110,110
Design, development and construction services	88,511	—	—	88,511
Lease revenue	6,982	—	—	6,982
Total equipment revenue	205,601	—	2	205,603
Total revenue	<u>\$ 1,860,834</u>	<u>\$ 17,398</u>	<u>\$ 9,675</u>	<u>\$ 1,887,907</u>

ECHOSTAR CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

Lease Revenue

The following table presents our lease revenue by type of lease:

	For the years ended December 31,		
	2022	2021	2020
Sales-type lease revenue:			
Revenue at lease commencement	\$ 7,557	\$ 7,998	\$ 6,982
Interest income	1,220	728	393
Total sales-type lease revenue	8,777	8,726	7,375
Operating lease revenue	53,253	50,857	51,765
Total lease revenue	<u>\$ 62,030</u>	<u>\$ 59,583</u>	<u>\$ 59,140</u>

Substantially all of our net investment in sales-type leases consisted of lease receivables totaling \$21.9 million and \$17.1 million as of December 31, 2022 and 2021, respectively.

The following table presents future operating lease payments to be received as of December 31, 2022:

	Amounts
December 31,	
2023	\$ 45,107
2024	40,485
2025	30,802
2026	28,828
2027	23,860
2028 and beyond	46,070
Total lease payments to be received	<u>\$ 215,152</u>

The following table presents amounts for assets subject to operating leases, which are included in *Property and equipment, net*:

	As of December 31,					
	2022			2021		
	Cost	Accumulated Depreciation	Net	Cost	Accumulated Depreciation	Net
Customer premises equipment	\$ 855,621	\$ (629,592)	\$ 226,029	\$ 1,778,061	\$ (1,485,525)	\$ 292,536
Satellites	104,620	(52,284)	52,336	104,620	(45,309)	59,311
Real estate	48,275	(19,034)	29,241	48,275	(18,064)	30,211
Total	<u>\$ 1,008,516</u>	<u>\$ (700,910)</u>	<u>\$ 307,606</u>	<u>\$ 1,930,956</u>	<u>\$ (1,548,898)</u>	<u>\$ 382,058</u>

During 2022, the Company identified fully depreciated assets that were no longer in use, mostly related to our customer premises equipment assets. Cost and accumulated depreciation were reduced by \$1.1 billion. There was no impact to *Other property and equipment, net*.

ECHOSTAR CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

The following table presents depreciation expense for assets subject to operating leases, which is included in *Depreciation and amortization*:

	For the years ended December 31,		
	2022	2021	2020
Customer premises equipment	\$ 208,704	\$ 230,609	\$ 230,079
Satellites	6,975	6,975	6,975
Real estate	970	970	942
Total	<u>\$ 216,649</u>	<u>\$ 238,554</u>	<u>\$ 237,996</u>

NOTE 4. LESSEE ACCOUNTING

The following table presents the amounts for ROU assets and lease liabilities:

	As of December 31,	
	2022	2021
Right-of-use assets:		
Operating	\$ 151,518	\$ 149,198
Finance	238,748	258,498
Total right-of-use assets	<u>\$ 390,266</u>	<u>\$ 407,696</u>
Lease liabilities:		
Current:		
Operating	\$ 17,854	\$ 16,781
Finance	—	123
Total current	<u>17,854</u>	<u>16,904</u>
Non-current:		
Operating	135,932	134,897
Finance	—	—
Total non-current	<u>135,932</u>	<u>134,897</u>
Total lease liabilities	<u>\$ 153,786</u>	<u>\$ 151,801</u>

As of December 31, 2022, we have prepaid our obligations regarding most of our finance ROU assets. Finance lease assets are reported net of accumulated amortization of \$121.9 million and \$95.7 million as of December 31, 2022 and 2021, respectively.

ECHOSTAR CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

The following table presents the components of lease cost and weighted-average lease terms and discount rates for operating and finance leases:

	For the years ended December 31,		
	2022	2021	2020
Lease cost:			
Operating lease cost	\$ 25,345	\$ 23,379	\$ 24,000
Finance lease cost:			
Amortization of right-of-use assets	29,906	29,270	27,611
Interest on lease liabilities	7	49	106
Total finance lease cost	29,913	29,319	27,717
Short-term lease cost	258	—	376
Variable lease cost	2,753	2,625	3,853
Total lease cost	\$ 58,269	\$ 55,323	\$ 55,946

	As of December 31,	
	2022	2021
Lease term and discount rate:		
Weighted-average remaining lease term:		
Finance leases	0.0 years	0.3 years
Operating leases	8.0 years	10.8 years
Weighted-average discount rate:		
Finance leases	— %	12.8 %
Operating leases	5.9 %	5.6 %

The following table presents the detailed cash flows from operating and finance leases:

	For the years ended December 31,		
	2022	2021	2020
Cash paid for amounts included in the measurement of lease liabilities:			
Operating cash flows from operating leases	\$ 24,769	\$ 21,861	\$ 21,834
Operating cash flows from finance leases	7	49	106
Financing cash flows from finance leases	124	430	499

We obtained ROU assets in exchange for lease liabilities of \$4.3 million, \$26.1 million and \$22.6 million upon commencement of operating leases during the year ended December 31, 2022, 2021 and 2020, respectively.

ECHOSTAR CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - CONTINUED

The following table presents future minimum lease payments of our lease liabilities as of December 31, 2022:

Year ending December 31,	Operating Leases
2023	\$ 25,101
2024	23,180
2025	19,578
2026	18,770
2027	17,256
2028 and beyond	97,738
Total future minimum lease payments	201,623
Less: Interest	(47,837)
Total lease liabilities	<u>\$ 153,786</u>

NOTE 5. BUSINESS COMBINATIONS

In May 2019, we entered into an agreement with Bharti Airtel Limited (“BAL”) and its subsidiary, Bharti Airtel Services Limited (together with BAL, “Bharti”), pursuant to which Bharti agreed to contribute its very small aperture terminal (“VSAT”) telecommunications services and hardware business in India to Hughes Communications India Private Limited (“HCIPL”) and its subsidiaries, our less than wholly owned Indian subsidiaries, that conduct our VSAT services and hardware business in India. On January 4, 2022, this joint venture was formed (the “India JV”) and subsequent to the formation of the India JV, we hold a 67% ownership interest and Bharti holds a 33% ownership interest in HCIPL. The India JV combines the VSAT businesses of both companies to offer flexible and scalable enterprise networking solutions using satellite connectivity for primary transport, back-up and hybrid implementation in India. The results of operations related to the India JV have been included in these Consolidated Financial Statements from the date of formation. The costs associated with the closing of the India JV were not material and were expensed as incurred.

The fair value of the consideration transferred was \$38.2 million. Net cash paid was \$7.9 million, inclusive of amounts paid for the acquisition of, or of HCIPL shares from, entities that were shareholders of HCIPL prior to closing the India JV.

All assets and liabilities acquired in the India JV formation have been recorded at fair value. The following table presents our allocation of the purchase price:

	Amounts
Assets:	
Trade accounts receivable and contract assets, net	\$ 6,160
Other current assets	2,085
Property and equipment	4,669
Goodwill	23,086
Other intangible assets	4,428
Total assets	<u>\$ 40,428</u>
Liabilities:	
Trade accounts payable	\$ 133
Accrued expenses and other current liabilities	986
Deferred tax liabilities	1,114
Total liabilities	<u>\$ 2,233</u>
Total purchase price	<u>\$ 38,195</u>

The valuation of assets acquired and liabilities assumed in the India JV were derived using primarily unobservable Level 3 inputs, which require significant management judgment and estimation, and resulted in a customer relationship intangible of \$4.4 million with an estimated life of 5 years and is reported in *Other intangible assets, net*.

Goodwill associated with the India JV is attributable to expected synergies, the projected long-term business growth in current and new markets and an assembled workforce. Goodwill has been allocated entirely to our Hughes segment.

NOTE 6. EARNINGS PER SHARE

The following table presents the calculation of basic and diluted EPS for our Class A and B common stock:

	For the years ended December 31,		
	2022	2021	2020
Net income (loss) attributable to EchoStar Corporation common stock	\$ 177,051	\$ 72,875	\$ (40,150)
Weighted-average common shares outstanding:			
Basic	84,098	89,908	97,920
Dilutive impact of stock awards outstanding	25	33	—
Diluted	84,123	89,941	97,920
Earnings (losses) per share:			
Basic	\$ 2.10	\$ 0.81	\$ (0.41)
Diluted	\$ 2.10	\$ 0.81	\$ (0.41)

The following table presents the number of anti-dilutive options to purchase shares of our Class A common stock which have been excluded from the calculation of our weighted-average common shares outstanding:

	For the years ended December 31,		
	2022	2021	2020
Number of shares	6,368	4,766	4,374

NOTE 7. OTHER COMPREHENSIVE INCOME (LOSS)

The following table presents the changes in the balances of *Accumulated other comprehensive income (loss)* by component:

	Cumulative Foreign Currency Translation Adjustments	Unrealized Gain (Loss) On Available- For-Sale Securities	Other	Accumulated Other Comprehensive Income (Loss)
Balance, December 31, 2020	\$ (190,273)	\$ 150	\$ 2,247	\$ (187,876)
Other comprehensive income (loss) before reclassifications	(19,672)	463	(5,005)	(24,214)
Amounts reclassified to net income (loss)	—	(12)	—	(12)
Other comprehensive income (loss)	(19,672)	451	(5,005)	(24,226)
Balance, December 31, 2021	(209,945)	601	(2,758)	(212,102)
Other comprehensive income (loss) before reclassifications	37,901	(680)	2,660	39,881
Amounts reclassified to net income (loss)	—	(18)	—	(18)
Other comprehensive income (loss)	37,901	(698)	2,660	39,863
Balance, December 31, 2022	\$ (172,044)	\$ (97)	\$ (98)	\$ (172,239)

NOTE 8. MARKETABLE INVESTMENT SECURITIES

The following table presents our *Marketable investment securities*:

	As of December 31,	
	2022	2021
Marketable investment securities:		
Available-for-sale debt securities:		
Corporate bonds	\$ 160,559	\$ 289,784
Commercial paper	687,927	498,358
Other debt securities	17,695	92,673
Total available-for-sale debt securities	866,181	880,815
Equity securities	118,790	142,943
Total marketable investment securities, including restricted amounts	984,971	1,023,758
Less: Restricted marketable investment securities	(11,056)	(13,262)
Total marketable investment securities	<u>\$ 973,915</u>	<u>\$ 1,010,496</u>

Debt Securities

Available-for-Sale

The following table presents the components of our available-for-sale debt securities:

	Amortized Cost	Unrealized		Estimated Fair Value
		Gains	Losses	
As of December 31, 2022				
Corporate bonds	\$ 160,494	\$ 125	\$ (60)	\$ 160,559
Commercial paper	687,956	—	(29)	687,927
Other debt securities	17,785	—	(90)	17,695
Total available-for-sale debt securities	<u>\$ 866,235</u>	<u>\$ 125</u>	<u>\$ (179)</u>	<u>\$ 866,181</u>
As of December 31, 2021				
Corporate bonds	\$ 290,169	\$ —	\$ (385)	\$ 289,784
Commercial paper	498,358	—	—	498,358
Other debt securities	92,742	—	(69)	92,673
Total available-for-sale debt securities	<u>\$ 881,269</u>	<u>\$ —</u>	<u>\$ (454)</u>	<u>\$ 880,815</u>

The following table presents the activity on our available-for-sale debt securities:

	For the years ended December 31,		
	2022	2021	2020
Proceeds from sales	<u>\$ 37,904</u>	<u>\$ 410,918</u>	<u>\$ 160,494</u>

As of December 31, 2022, we have \$847.3 million of available-for-sale debt securities with contractual maturities of one year or less and \$18.9 million with contractual maturities greater than one year.

Fair Value Option

The following table presents the activity on our fair value option corporate bonds:

	For the years ended December 31,		
	2022	2021	2020
Proceeds from sales	\$ —	\$ —	\$ 32,054
Gains (losses) on investments, net	\$ —	\$ —	\$ 14,980

Equity Securities

The following table presents the activity of our equity securities:

	For the years ended December 31,		
	2022	2021	2020
Proceeds from sales	\$ 63,294	\$ 832	\$ 14,401
Gains (losses) on investments, net	\$ 25,539	\$ 49,391	\$ (3,241)

Fair Value Measurements

The following table presents our marketable investment securities categorized by the fair value hierarchy, certain of which have historically experienced volatility:

	Level 1	Level 2	Total
As of December 31, 2022			
Cash equivalents (including restricted)	\$ 657	\$ 595,814	\$ 596,471
Available-for-sale debt securities:			
Corporate bonds	\$ —	\$ 160,559	\$ 160,559
Commercial paper	—	687,927	687,927
Other debt securities	15,968	1,727	17,695
Total available-for-sale debt securities	15,968	850,213	866,181
Equity securities	109,002	9,788	118,790
Total marketable investment securities, including restricted amounts	124,970	860,001	984,971
Less: Restricted marketable investment securities	(11,056)	—	(11,056)
Total marketable investment securities	\$ 113,914	\$ 860,001	\$ 973,915
As of December 31, 2021			
Cash equivalents (including restricted)	\$ 7,872	\$ 423,123	\$ 430,995
Available-for-sale debt securities:			
Corporate bonds	\$ —	\$ 289,784	\$ 289,784
Commercial paper	—	498,358	498,358
Other debt securities	14,274	78,399	92,673
Total available-for-sale debt securities	14,274	866,541	880,815
Equity securities	131,413	11,530	142,943
Total marketable investment securities, including restricted amounts	145,687	878,071	1,023,758
Less: Restricted marketable investment securities	(13,262)	—	(13,262)
Total marketable investment securities	\$ 132,425	\$ 878,071	\$ 1,010,496

As of December 31, 2022 and December 31, 2021, we did not have any investments that were categorized within Level 3 of the fair value hierarchy.

NOTE 9. PROPERTY AND EQUIPMENT

The following table presents the components of *Property and equipment, net*:

	As of December 31,	
	2022	2021
Property and equipment, net:		
Satellites, net	\$ 1,563,033	\$ 1,610,623
Other property and equipment, net	674,584	727,662
Total property and equipment, net	\$ 2,237,617	\$ 2,338,285

Satellites

As of December 31, 2022, our satellite fleet consisted of ten geosynchronous (“GEO”) satellites, seven of which are owned and three of which are leased. They are all in geosynchronous orbit, approximately 22,300 miles above the equator. Our owned S-band LEO nano-satellites are not included in the table below.

The following table presents our GEO satellite fleet as of December 31, 2022:

GEO Satellite	Segment	Launch Date	Nominal Degree Orbital Location (Longitude)	Depreciable Life (In Years)
Owned:				
SPACEWAY 3 ⁽¹⁾	Hughes	August 2007	95 W	10
EchoStar XVII	Hughes	July 2012	107 W	15
EchoStar XIX	Hughes	December 2016	97.1 W	15
Al Yah 3 ⁽²⁾	Hughes	January 2018	20 W	7
EchoStar IX ^{(3) (4)}	ESS	August 2003	121 W	12
EUTELSAT 10A (“W2A”) ⁽⁵⁾	Corporate and Other	April 2009	10 E	-
EchoStar XXI	Corporate and Other	June 2017	10.25 E	15

Finance leases:

Eutelsat 65 West A	Hughes	March 2016	65 W	15
Telesat T19V	Hughes	July 2018	63 W	15
EchoStar 105/SES-11	ESS	October 2017	105 W	15

(1) Depreciable life represents the remaining useful life as of June 8, 2011, the date EchoStar completed the acquisition of Hughes Communications, Inc. (“Hughes Communications”) and its subsidiaries in 2011 (the “Hughes Acquisition”).

(2) Upon consummation of our joint venture with Al Yah Satellite Communications Company Pr.JSC (“Yahsat”) in Brazil in November 2019, we acquired the Brazilian Ka-band payload on this satellite. Depreciable life represents the remaining useful life as of November 2019.

(3) We own the Ka-band and Ku-band payloads on this satellite.

(4) EchoStar IX is approaching its end of station-kept life. The Company placed the satellite in an inclined-orbit in the first quarter of 2023. Inclined-orbit will extend its life to enable further revenue generating opportunities.

(5) We acquired the S-band payload on this satellite in December 2013. Prior to acquisition, the S-band payload experienced an anomaly at the time of launch and, as a result, is not fully operational.

The following table presents the components of our satellites, net:

	Depreciable Life (In Years)	As of December 31,	
		2022	2021
Satellites, net:			
Satellites - owned	7 to 15	\$ 1,808,924	\$ 1,806,664
Satellites - acquired under finance leases	15	360,642	354,170
Construction in progress	—	608,773	541,422
Total satellites		2,778,339	2,702,256
Accumulated depreciation:			
Satellites - owned		(1,093,412)	(995,962)
Satellites - acquired under finance leases		(121,894)	(95,671)
Total accumulated depreciation		(1,215,306)	(1,091,633)
Total satellites, net		\$ 1,563,033	\$ 1,610,623

The following table presents the depreciation expense associated with our satellites, net:

	For the years ended December 31,		
	2022	2021	2020
Depreciation expense:			
Satellites - owned	\$ 96,816	\$ 105,819	\$ 128,404
Satellites - acquired under finance leases	24,127	23,740	27,611
Total depreciation expense	<u>\$ 120,943</u>	<u>\$ 129,559</u>	<u>\$ 156,015</u>

The following table presents capitalized interest associated with our satellites and satellite-related ground infrastructure:

	For the years ended December 31,		
	2022	2021	2020
Capitalized interest	<u>\$ 43,908</u>	<u>\$ 37,150</u>	<u>\$ 27,369</u>

Construction in Progress

In August 2017, we entered into a contract for the design and construction of the EchoStar XXIV satellite, a next-generation, high throughput geostationary satellite. The EchoStar XXIV satellite is primarily intended to provide additional capacity for our HughesNet service in North, Central and South America as well as enterprise broadband services. Capital expenditures associated with the construction and launch of the EchoStar XXIV satellite are included in Corporate and Other segment in our segment reporting.

Satellite-Related Commitments

As of December 31, 2022 and 2021, our satellite-related commitments were \$169.3 million and \$342.2 million, respectively. These include payments pursuant to: the EchoStar XXIV launch contract, regulatory authorizations, non-lease costs associated with our finance lease satellites, in-orbit incentives relating to certain satellites and commitments for satellite service arrangements.

In certain circumstances, the dates on which we are obligated to pay our contractual obligations could change.

Satellite Anomalies and Impairments

We are not aware of any anomalies with respect to our owned or leased satellites or payloads that have had any significant adverse effect on their remaining useful lives, the commercial operation of the satellites or payloads or our operating results or financial position as of and for the year ended December 31, 2022.

Satellite Insurance

We generally do not carry in-orbit insurance on our satellites or payloads because we have assessed that the cost of insurance is not economical relative to the risk of failures. Therefore, we generally bear the risk of any in-orbit failures. Pursuant to the terms of our joint venture agreement with Yahsat, we are required to maintain insurance for the Al Yah 3 Brazilian payload during the commercial in-orbit service of such payload, subject to certain limitations on coverage. We have obtained certain insurance for our EchoStar XXIV satellite covering launch plus the first year of operations. We will continue to assess circumstances going forward and make insurance-related decisions on a case-by-case basis.

Fair Value of In-Orbit Incentives

As of December 31, 2022 and 2021, the fair values of our in-orbit incentive obligations approximated their carrying amounts of \$50.2 million and \$53.2 million, respectively.

Other Property and Equipment, Net

The following table presents *Other property and equipment, net*.

	Depreciable Life (In Years)	As of December 31,	
		2022	2021
Other property and equipment, net:			
Land	—	\$ 29,125	\$ 28,938
Buildings and improvements	1 to 40	116,867	115,537
Furniture, fixtures, equipment and other	1 to 12	935,559	911,474
Customer premises equipment	2 to 4	855,621	1,778,061
Construction in progress		199,749	158,559
Total other property and equipment		2,136,921	2,992,569
Accumulated depreciation		(1,462,337)	(2,264,907)
Other property and equipment, net		\$ 674,584	\$ 727,662

During 2022, the Company identified fully depreciated assets that were no longer in use, mostly related to our customer premises equipment assets. Cost and accumulated depreciation were reduced by \$1.1 billion. There was no impact to *Other property and equipment, net*.

The following table presents the depreciation expense associated with our other property and equipment:

	For the years ended December 31,		
	2022	2021	2020
Other property and equipment depreciation expense:			
Buildings and improvements	\$ 4,780	\$ 6,036	\$ 5,394
Furniture, fixtures, equipment and other	85,777	90,895	94,389
Customer premises equipment	208,704	230,609	230,079
Total depreciation expense	\$ 299,261	\$ 327,540	\$ 329,862

NOTE 10. GOODWILL

All of our goodwill is assigned to our Hughes segment, as it was generated through: i) the Hughes Acquisition; ii) the agreement with Yahsat pursuant to which, in November 2019, Yahsat contributed its satellite communications services business in Brazil to one of our Brazilian subsidiaries in exchange for a 20% equity ownership interest in that subsidiary (the “Yahsat Brazil JV Transaction”); and iii) the India JV formation.

During the quarter ended December 31, 2022, we conducted a quantitative interim test of goodwill for all of our reporting units due to the sustained decline in our stock price during that period. We estimated the reporting unit's fair value using the discounted cash flow method and the market comparable method. The discounted cash flow method used the reporting unit's projections of estimated operating results and cash flows that were discounted using a weighted-average cost of capital based on a reasonable market participant's point of view. The main assumptions supporting the cash flow projections include, but are not limited to, revenue growth, margins, discount rate, and terminal growth rate. The financial projections reflect management's best estimate of economic and market conditions over the projected period, including forecasted revenue growth, margins, capital expenditures, depreciation, and amortization. Under the market comparable method, we used the guideline company method to develop valuation multiples and compare the single reporting unit to similar publicly traded companies. Additionally, we performed a reconciliation of our estimated fair value, determined using the discounted cash flows method and the market comparable method, to the Company's market capitalization. As a result of this interim test, no goodwill impairment was identified. The fair value of the Hughes reporting unit exceeded the carrying value by more than 20%. We concluded that there were no other indicators of impairment for the quarter ended December 31, 2022.

The following table presents our goodwill:

	For the years ended December 31,		
	2022	2021	2020
Balance at beginning of period	\$ 511,086	\$ 511,597	\$ 506,953
India JV formation	23,086	—	—
Foreign currency translation	(1,681)	(511)	4,644
Balance at end of period	<u>\$ 532,491</u>	<u>\$ 511,086</u>	<u>\$ 511,597</u>

NOTE 11. REGULATORY AUTHORIZATIONS

The following table presents our *Regulatory authorizations, net*:

	Finite lived			Indefinite lived	Total
	Cost	Accumulated Amortization	Total		
Balance, December 31, 2019	\$ 58,451	\$ (20,144)	\$ 38,307	\$ 440,291	\$ 478,598
Amortization expense	—	(4,483)	(4,483)	—	(4,483)
Currency translation adjustments	2,930	(2,012)	918	3,729	4,647
Balance, December 31, 2020	61,381	(26,639)	34,742	444,020	478,762
Amortization expense	—	(4,495)	(4,495)	—	(4,495)
Currency translation adjustments	(4,244)	2,046	(2,198)	(2,303)	(4,501)
Balance, December 31, 2021	57,137	(29,088)	28,049	441,717	469,766
Amortization expense	—	(4,150)	(4,150)	—	(4,150)
Currency translation adjustments	(1,821)	1,292	(529)	(2,556)	(3,085)
Balance, December 31, 2022	\$ 55,316	\$ (31,946)	\$ 23,370	\$ 439,161	\$ 462,531
Weighted-average useful life (in years)		13			

Future Amortization

The following table presents our estimated future amortization of our regulatory authorizations with finite lives as of December 31, 2022:

	Amount
For the years ending December 31,	
2023	\$ 4,208
2024	4,216
2025	4,208
2026	4,208
2027	2,092
2028 and beyond	4,438
Total	\$ 23,370

NOTE 12. OTHER INTANGIBLE ASSETS

The following table presents our other intangible assets:

	Customer Relationships	Patents	Trademarks and Licenses	Total
Cost:				
As of December 31, 2019	\$ 270,300	\$ 61,283	\$ 29,700	\$ 361,283
As of December 31, 2020	270,300	61,283	29,700	361,283
As of December 31, 2021	270,300	61,283	29,700	361,283
Additions	4,312	—	—	4,312
Foreign currency translation	(328)	—	—	(328)
Retirements	—	(9,883)	—	(9,883)
As of December 31, 2022	<u>\$ 274,284</u>	<u>\$ 51,400</u>	<u>\$ 29,700</u>	<u>\$ 355,384</u>
Accumulated amortization:				
As of December 31, 2019	\$ (257,933)	\$ (61,097)	\$ (12,746)	\$ (331,776)
Amortization expense	(9,496)	(93)	(1,485)	(11,074)
As of December 31, 2020	(267,429)	(61,190)	(14,231)	(342,850)
Amortization expense	(2,871)	(93)	(1,485)	(4,449)
As of December 31, 2021	(270,300)	(61,283)	(15,716)	(347,299)
Amortization expense	(785)	—	(1,485)	(2,270)
Retirements	—	9,883	—	9,883
As of December 31, 2022	<u>\$ (271,085)</u>	<u>\$ (51,400)</u>	<u>\$ (17,201)</u>	<u>\$ (339,686)</u>
Carrying amount:				
As of December 31, 2021	\$ —	\$ —	\$ 13,984	\$ 13,984
As of December 31, 2022	\$ 3,199	\$ —	\$ 12,499	\$ 15,698
Weighted-average useful life (in years)	<u>8</u>	<u>6</u>	<u>20</u>	

Future Amortization

The following table presents our estimated future amortization of other intangible assets as of December 31, 2022:

For the years ending December 31,	Amount
2023	\$ 2,282
2024	2,282
2025	2,282
2026	2,282
2027	1,496
2028 and beyond	5,074
Total	<u>\$ 15,698</u>

NOTE 13. OTHER INVESTMENTS

The following table presents our *Other investments, net*.

	As of December 31,	
	2022	2021
Other investments, net:		
Equity method investments	\$ 83,523	\$ 91,226
Other equity investments	141,307	91,636
Other debt investments, net	131,875	114,885
Total other investments, net	<u>\$ 356,705</u>	<u>\$ 297,747</u>

Equity Method Investments

Dish Mexico

During the fourth quarter of 2021, we concluded that our 49% investment in DISH Mexico, S. de R.L. de C.V. and its subsidiaries (“Dish Mexico”), was not recoverable. Subsequently, in August 2022, we effected our exit from this investment. Therefore, in the third quarter of 2022, in conjunction with our exit, we recognized a net loss of \$28.3 million, primarily due to the reclassification of accumulated foreign currency translation adjustment losses from *Accumulated Other Comprehensive Income (Loss)* to *Gains (losses) on investments, net* in the Statement of Operations.

Deluxe/EchoStar LLC

We own 50% of Deluxe/EchoStar LLC (“Deluxe”), a joint venture that we entered into in 2010 to build an advanced digital cinema satellite distribution network targeting delivery to digitally equipped theaters in the U.S. and Canada.

Broadband Connectivity Solutions (Restricted) Limited

We own 20% of Broadband Connectivity Solutions (Restricted) Limited (together with its subsidiaries, “BCS”), a joint venture that we entered into in 2018 to provide commercial Ka-band satellite broadband services across Africa, the Middle East and southwest Asia operating over Yahsat's Al Yah 2 and Al Yah 3 Ka-band satellites.

Financial Information for Our Equity Method Investments

The following table presents revenue recognized:

	For the years ended December 31,		
	2022	2021	2020
Deluxe	\$ 5,334	\$ 5,480	\$ 4,393
BCS	<u>\$ 7,933</u>	<u>\$ 8,278</u>	<u>\$ 9,080</u>

The following table presents trade accounts receivable:

	As of December 31,	
	2022	2021
Deluxe	\$ 3,026	\$ 934
BCS	<u>\$ 5,062</u>	<u>\$ 5,544</u>

We recorded cash distributions received from our investments of \$2.0 million for the year ended December 31, 2022 that was considered a return of investment and reported in *Net cash provided by (used for) investing activities* in the Consolidated Statements of Cash Flows. There were no returns of investment during the years ended December 31, 2021 and 2020.

Other Equity Investments

The following table presents the activity on our investments:

	For the years ended December 31,		
	2022	2021	2020
Gain (loss) on investments, net	\$ 49,888	\$ 21,256	\$ (29,833)

Other Debt Investments, Net

The following table presents our other debt investments, net:

	As of December 31,	
	2022	2021
Other debt investments, net:		
Cost basis	\$ 143,267	\$ 127,433
Discount	(8,010)	(9,602)
Allowance for credit losses	(3,382)	(2,946)
Total other debt investments, net	\$ 131,875	\$ 114,885

The following table presents the activity in our allowance for credit losses for these investments:

	For the years ended December 31,		
	2022	2021	2020
Balance at the beginning of the period	\$ 2,946	\$ 2,513	\$ —
Credit Losses ⁽¹⁾	436	433	2,513
Balance at end of period	\$ 3,382	\$ 2,946	\$ 2,513

⁽¹⁾ The impact of adopting ASC 326 on January 1, 2020 was a \$2.1 million adjustment to Accumulated earnings (losses).

The following table presents the interest income, net related to our debt investments, net:

	For the years ended December 31,		
	2022	2021	2020
Interest income, net			
Interest income	\$ 20,496	\$ 17,191	\$ 14,736
Credit losses	(436)	(433)	(367)
Total interest income, net	\$ 20,060	\$ 16,758	\$ 14,369

NOTE 14. LONG-TERM DEBT

The following table presents the carrying amount and fair values of our *Long-term debt, net*:

	Effective Interest Rate	As of December 31,			
		2022		2021	
		Carrying Amount	Fair Value	Carrying Amount	Fair Value
Senior Secured Notes:					
5 1/4% Senior Secured Notes due 2026	5.320%	\$ 750,000	\$ 727,763	\$ 750,000	\$ 825,555
Senior Unsecured Notes:					
6 5/8% Senior Unsecured Notes due 2026	6.688%	750,000	707,490	750,000	838,740
Less: Unamortized debt issuance costs		(3,223)	—	(4,006)	—
Total long-term debt, net		<u>\$1,496,777</u>	<u>\$1,435,253</u>	<u>\$1,495,994</u>	<u>\$1,664,295</u>

2026 Senior Secured Notes and 2026 Senior Unsecured Notes

On July 27, 2016, our subsidiary Hughes Satellite Systems Corporation (“HSSC”) issued \$750.0 million aggregate principal amount of 5 1/4% Senior Secured Notes due 2026 (the “2026 Senior Secured Notes”) at an issue price of 100.0%, pursuant to an indenture dated July 27, 2016 (the “2016 Secured Indenture”) and \$750.0 million aggregate principal amount of 6 5/8% Senior Unsecured Notes due 2026 (the “2026 Senior Unsecured Notes”) at an issue price of 100.0%, pursuant to an indenture dated July 27, 2016 (together with the 2016 Secured Indenture, the “Indentures”). The 2026 Senior Secured Notes and the 2026 Senior Unsecured Notes are referred to collectively as the “Notes” and individually as a series of the Notes. The Notes mature on August 1, 2026. Interest on the 2026 Senior Secured Notes accrues at an annual rate of 5 1/4% and interest on the 2026 Senior Unsecured Notes accrues at an annual rate of 6 5/8%. Interest on the Notes is payable semi-annually in cash, in arrears, on February 1 and August 1 of each year.

Additional Information Relating to the Notes

Each series of the Notes is redeemable, in whole or in part, at any time at a redemption price equal to 100.0% of the principal amount thereof plus a “make-whole” premium, as defined in the applicable Indenture, together with accrued and unpaid interest, if any, to the date of redemption.

The 2026 Senior Secured Notes are:

- secured obligations of HSSC;
- secured by security interests in substantially all existing and future tangible and intangible assets of HSSC and certain of its subsidiaries on a first priority basis, subject to certain exceptions;
- effectively junior to HSSC’s obligations that are secured by assets that are not part of the collateral that secures the 2026 Senior Secured Notes to the extent of the value of the collateral securing such obligations;
- effectively senior to HSSC’s existing and future unsecured obligations to the extent of the value of the collateral securing the 2026 Senior Secured Notes, after giving effect to permitted liens as provided in the 2016 Secured Indenture;
- senior in right of payment to all existing and future obligations of HSSC that are expressly subordinated to the 2026 Senior Secured Notes;
- structurally junior to any existing and future obligations of any of HSSC’s subsidiaries that do not guarantee the 2026 Senior Secured Notes; and
- unconditionally guaranteed, jointly and severally, on a general senior secured basis by certain of our HSSC’s subsidiaries, which guarantees rank equally with all of the guarantors’ existing and future unsubordinated indebtedness and effectively senior to such guarantors’ existing and future obligations to the extent of the value of the assets securing the 2026 Senior Secured Notes.

The 2026 Senior Unsecured Notes are:

- unsecured senior obligations of HSSC;
- ranked equally with all existing and future unsubordinated indebtedness and effectively junior to any secured indebtedness up to the value of the assets securing such indebtedness;
- effectively junior to HSSC's obligations that are secured to the extent of the value of the collateral securing such obligations;
- senior in right of payment to all existing and future obligations of HSSC that are expressly subordinated to the 2026 Senior Unsecured Notes;
- structurally junior to any existing and future obligations of any of HSSC's subsidiaries that do not guarantee the 2026 Senior Unsecured Notes; and
- unconditionally guaranteed, jointly and severally, on a general senior secured basis by certain of HSSC's subsidiaries, which guarantees rank equally with all of the guarantors' existing and future unsubordinated indebtedness, and effectively junior to any secured indebtedness of the guarantors up to the value of the assets securing such indebtedness.

Subject to certain exceptions, the Indentures contain restrictive covenants that, among other things, impose limitations on HSSC's ability and, in certain instances, the ability of certain of HSSC's subsidiaries to:

- incur additional debt;
- pay dividends or make distributions on HSSC's or their capital stock or repurchase HSSC's or their capital stock;
- make certain investments;
- create liens or enter into sale and leaseback transactions;
- enter into transactions with affiliates;
- merge or consolidate with another company;
- transfer and sell assets; and
- allow to exist certain restrictions on its or their ability to pay dividends, make distributions, make other payments, or transfer assets.

In the event of a Change of Control, as defined in the respective Indentures, HSSC would be required to make an offer to repurchase all or any part of a holder's Notes at a purchase price equal to 101.0% of the aggregate principal amount thereof, together with accrued and unpaid interest to the date of repurchase.

The Indentures provide for customary events of default for each series of the Notes, including, among other things, non-payment, breach of the covenants in the applicable Indentures, payment defaults or acceleration of other indebtedness, a failure to pay certain judgments and certain events of bankruptcy, insolvency and reorganization. If any event of default occurs and is continuing with respect to any series of the Notes, the trustee or the holders of at least 25.0% in principal amount of the then outstanding Notes of such series may declare all the Notes of such series to be due and payable immediately, together with any accrued and unpaid interest.

Debt Issuance Costs

For the years ended December 31, 2022, 2021 and 2020, we amortized \$0.8 million, \$2.4 million and \$4.3 million, respectively, of debt issuance costs incurred for all debt issuances, which are included in *Interest expense, net of amounts capitalized* in the Consolidated Statements of Operations.

NOTE 15. INCOME TAXES

The following table presents the components of *Income (loss) before income taxes* in the Consolidated Statements of Operations:

	For the years ended December 31,		
	2022	2021	2020
Domestic	\$ 354,234	\$ 269,400	\$ 108,078
Foreign	(121,011)	(141,053)	(135,913)
Income (loss) before income taxes	\$ 233,223	\$ 128,347	\$ (27,835)

The following table presents the components of *Income tax benefit (provision), net*, in the Consolidated Statements of Operations:

	For the years ended December 31,		
	2022	2021	2020
Current benefit (provision), net:			
Federal	\$ (29,703)	\$ (9,324)	\$ (2,750)
State	(11,017)	(15,171)	(4,868)
Foreign	(4,525)	(3,467)	(2,116)
Total current benefit (provision), net	\$ (45,245)	\$ (27,962)	\$ (9,734)
Deferred benefit (provision), net:			
Federal	\$ (17,509)	\$ (41,665)	\$ (9,707)
State	(7,051)	(2,155)	3,497
Foreign	3,130	6,156	(8,125)
Total deferred benefit (provision), net	(21,430)	(37,664)	(14,335)
Total income tax benefit (provision), net	\$ (66,675)	\$ (65,626)	\$ (24,069)

The following table presents our actual tax provisions reconciled to the amounts computed by applying the statutory federal tax rate to *Income (loss) before income taxes* in the Consolidated Statements of Operations:

	For the years ended December 31,		
	2022	2021	2020
Statutory rate	\$ (48,977)	\$ (26,953)	\$ 5,845
State income taxes, net of federal benefit (provision)	(15,754)	(14,140)	(349)
Permanent differences	(2,871)	(5,804)	(2,209)
Tax credits, including withholding tax	8,907	6,268	587
Valuation allowance	(18,012)	(40,743)	(44,212)
Rates different than statutory	17,404	18,137	17,180
Other	(7,372)	(2,391)	(911)
Total income tax benefit (provision), net	\$ (66,675)	\$ (65,626)	\$ (24,069)

The following table presents the components of our deferred tax assets and liabilities:

	As of December 31,	
	2022	2021
Deferred tax assets:		
Net operating losses, credit and other carryforwards	\$ 220,675	\$ 253,767
Other investments	3,556	44,651
Accrued expenses	54,076	31,996
Stock-based compensation	5,645	7,067
Other assets	10,495	19,776
Total deferred tax assets	294,447	357,257
Valuation allowance	(224,731)	(234,571)
Deferred tax assets after valuation allowance	\$ 69,716	\$ 122,686
Deferred tax liabilities:		
Property and equipment, regulatory authorizations, and other intangibles	\$ (467,486)	\$ (493,093)
Other liabilities	(18,840)	(27,860)
Total deferred tax liabilities	(486,326)	(520,953)
Total net deferred tax liabilities	\$ (416,610)	\$ (398,267)
Net deferred tax assets (liabilities) foreign jurisdiction	\$ (5,310)	\$ (7,242)
Net deferred tax assets (liabilities) domestic	(411,300)	(391,025)
Total net deferred tax assets (liabilities)	\$ (416,610)	\$ (398,267)

Overall, our net deferred tax assets were offset by a valuation allowance of \$224.7 million and \$234.6 million as of December 31, 2022 and 2021, respectively. The valuation allowance decreased due to the removal of the valuation allowance on a disposed investment and on the net operating loss carryforwards of a foreign subsidiary. The decrease was partially offset by an increase in the net operating loss carryforwards of certain foreign subsidiaries that management does not believe will be realized.

Tax benefits of net operating loss and tax credit carryforwards are evaluated on an ongoing basis, including a review of historical and projected future operating results, the eligible carryforward period, and other circumstances. As of December 31, 2022, we had net operating loss carryforwards of \$732.0 million, including \$721.2 million of foreign net operating loss carryforwards. The net operating loss carryforwards associated with India will begin to expire in 2027. As of December 31, 2022, we have tax credit carryforwards of \$75.7 million and \$83.2 million for federal and state income tax purposes, respectively. If not utilized, the federal tax credit carryforwards will begin to expire in 2035.

As of December 31, 2022, we had undistributed earnings attributable to foreign subsidiaries for which no provision for U.S. income taxes or foreign withholding taxes has been made because it is expected that such earnings will be reinvested outside the U.S. indefinitely. It is not practicable to determine the amount of the unrecognized deferred tax liability at this time. As of December 31, 2022 and 2021, we had net deferred tax assets related to our foreign subsidiaries of \$8.0 million and \$5.4 million, respectively, which were recorded in *Other non-current assets, net* in the Consolidated Balance Sheets.

Accounting for Uncertainty in Income Taxes

In addition to filing U.S. federal income tax returns, we file income tax returns in all states that impose an income tax. As of December 31, 2022, we are not currently under a U.S. federal income tax examination. However, the IRS could perform tax examinations on years as early as tax year 2008. We are also subject to frequent state income tax audits and have open state examinations on years as early as tax year 2008. We also file income tax returns in the United Kingdom, Germany, Brazil, India and a number of other foreign jurisdictions. We generally are open to income tax examination in these foreign jurisdictions for taxable years beginning in 2004. As of December 31, 2022, we are currently being audited by the Indian tax authorities for fiscal years 2004 through 2021 and the German tax authority for calendar years 2016 through 2019. We have no other on-going significant income tax examinations in process in our foreign jurisdictions.

The following table presents the reconciliation of the beginning and ending amount of unrecognized income tax benefits:

	For the years ended December 31,		
	2022	2021	2020
Unrecognized tax benefit balance as of beginning of period:	\$ 150,276	\$ 150,060	\$ 70,401
Additions based on tax positions related to the current year	1,407	193	3,349
Additions based on tax positions related to prior years	1,646	105	76,882
Reductions based on tax positions related to prior years	(14,441)	(82)	(572)
Reductions based on expirations of statute of limitations	(927)	—	—
Balance as of end of period	<u>\$ 137,961</u>	<u>\$ 150,276</u>	<u>\$ 150,060</u>

As of December 31, 2022 and 2021, we had \$138.0 million and \$150.3 million, respectively, of unrecognized income tax benefits, all of which, if recognized, would affect our effective tax rate. Additions based on tax positions related to prior years in 2020 include amounts in our deferred tax assets previously considered contingent liabilities related to combined state filings with DISH Network Corporation (“DISH”) and its subsidiaries (together with DISH, “Dish Network”). During 2020, we and DISH Network concluded that combined state filings were no longer required. The amounts on this schedule have been reduced by \$14.3 million without tax effect to reflect the change in filing status.

For the years ended December 31, 2022, 2021 and 2020, our income tax provision included an insignificant amount of interest and penalties.

NOTE 16. STOCKHOLDERS' EQUITY

Preferred Stock

Our board of directors is authorized to issue preferred stock and may divide such preferred stock into series and, with respect to each series, to determine the preferences and rights and the qualifications, limitations or restrictions of the series, including the dividend rights, conversion rights, voting rights, redemption rights and terms, liquidation preferences, sinking fund provisions, the number of shares constituting the series and the designation of such series. Our board of directors may, without stockholder approval, issue additional preferred stock of existing or new series with voting and other rights that could adversely affect the voting power of the holders of common stock and could have certain anti-takeover effects.

Common Stock

Our Class A, Class B, and Class C common stock are equivalent except for voting rights. Holders of Class A and Class C common stock are entitled to one vote per share and holders of Class B common stock are entitled to 10 votes per share. Upon a change in control of the Company, each holder of outstanding shares of Class C common stock is entitled to 10 votes for each share of Class C common stock held. Each share of Class B and Class C common stock is convertible, at the option of the holder, into one share of Class A common stock. Charles W. Ergen, our Chairman, and certain entities established for the benefit of his family beneficially own all outstanding Class B common stock. There are no shares of Class C common stock outstanding.

Any holder of Class D common stock is not entitled to a vote on any matter or to convert the shares of Class D common stock into any other class of common stock. There are no shares of Class D common stock outstanding.

Each share of common stock is entitled to receive its pro rata share, based upon the number of shares of common stock held, of dividends and distributions upon liquidation.

Common Stock Repurchase Program

Pursuant to a stock repurchase program approved by our board of directors, we were authorized to repurchase up to \$500.0 million of our Class A common stock through December 31, 2022. The following table presents information with respect to purchases made by the Company:

Period	Total Number of Shares (or Units) Purchased	Average Price Paid Per Share (or Unit)	Total Number of Shares (or Units) Purchased as Part of Publicly Disclosed Plans or Program	Maximum Number (or Approximate Dollar Value) of Shares (or Units) That May Yet Be Purchased under the Plans or Program (1)
Beginning Balance				\$ 500,000
Year ended December 31, 2020	1,905,906	\$ 22.79	1,905,906	456,542
Year ended December 31, 2021	10,941,872	23.90	10,941,872	194,933
Year ended December 31, 2022	3,980,612	22.42	3,980,612	410,736
Total	16,828,390	\$ 23.43	16,828,390	\$ 410,736

(1) On November 2, 2021, our Board of Directors authorized us to repurchase up to \$500.0 million of our Class A common stock commencing January 1, 2022 through and including December 31, 2022. In addition, on October 20, 2022, our Board of Directors authorized us to repurchase up to \$500.0 million of our Class A common stock commencing January 1, 2023 through and including December 31, 2023. All shares repurchased reflected in the table above have been converted to treasury shares.

NOTE 17. EMPLOYEE BENEFIT PLANS

Employee Stock Purchase Plan

We have an employee stock purchase plan (the “ESPP”), under which we are authorized to issue 5.0 million shares of Class A common stock. As of December 31, 2022, we had approximately 0.7 million shares of Class A common stock which remain available for issuance under the ESPP. Generally, all full-time employees who have been employed by EchoStar for at least one calendar quarter are eligible to participate in the ESPP. Employee stock purchases are made through payroll deductions. Under the terms of the ESPP, each employee’s deductions are limited so that the maximum they may purchase under the ESPP is \$25,000 in fair value of Class A common stock per year. Stock purchases are made on the last business day of each calendar quarter at 85.0% of the closing price of the Class A common stock on that date. For the years ended December 31, 2022, 2021 and 2020, employee purchases of Class A common stock through the ESPP totaled approximately 580,000 shares, 446,000 shares and 452,000 shares, respectively.

401(k) Employee Savings Plans

Under the EchoStar 401(k) Plan (“the Plan”), eligible employees are entitled to contribute up to 75.0% of their eligible compensation, on a pre-tax and/or after-tax basis, subject to the maximum contribution limit provided by the Internal Revenue Code of 1986, as amended (the “Code”). All employee contributions to the Plan are immediately vested. We match 50 cents on the dollar for the first 6.0% of each employee’s salary contributions to the Plan for a total of 3.0% match on a pre-tax basis up to a maximum of \$7,500 annually. Our match is calculated each pay period there is an employee contribution. In addition, we may make an annual discretionary contribution to the Plan to be made in cash or our stock. Our contributions under the Plan vest at 20.0% per year and are 100.0% vested after an eligible employee has completed five years of employment. Forfeitures of unvested participant balances may be used to fund matching and discretionary contributions.

The following table presents our matching contributions, discretionary contributions and shares:

	For the years ended December 31,		
	2022	2021	2020
Matching contributions	\$ 5,475	\$ 5,434	\$ 5,239
Fair value of discretionary contributions of our Class A common stock, net of forfeitures, under 401(k) plan	\$ 7,042	\$ 7,125	\$ 6,921
Approximate number of shares	267,000	336,000	160,000

NOTE 18. STOCK-BASED COMPENSATION

Stock Incentive Plans

We maintain stock incentive plans to attract and retain officers, directors, employees, consultants and advisors. Stock awards under these plans may include both performance-based and non-performance-based stock incentives. As of December 31, 2022, we had outstanding stock options to acquire approximately 6.4 million shares of our Class A common stock under these plans. Stock options granted prior to December 31, 2022 were granted with exercise prices equal to or greater than the market value of our Class A common stock at the date of grant or the last trading day prior to the date of grant (if the grant date is not a trading day) and generally with a maximum term of ten years for our officers and employees and five years for our non-employee directors. While we generally issue stock awards subject to vesting, typically over five years, some stock awards have been granted with immediate or longer vesting periods or that vest only upon the achievement of certain performance objectives. Under these plans, we grant to certain of our employees awards of fully vested shares of Class A common stock under our Employee Innovator Recognition Program, which is available to all of our eligible employees. As of December 31, 2022, we had approximately 4.2 million shares of our Class A common stock available for future grant under our stock incentive plans.

The following table presents our exercise prices for stock options outstanding and exercisable as of December 31, 2022:

Exercise Price Range	Options Outstanding			Options Exercisable		
	Number Outstanding as of December 31, 2022	Weighted-Average Remaining Contractual Term (In Years)	Weighted-Average Exercise Price	Number Exercisable as of December 31, 2022	Weighted-Average Remaining Contractual Term (In Years)	Weighted-Average Exercise Price
\$0.00 - \$20.00	42,500	7	\$ 18.80	25,000	5	\$ 19.61
\$20.01 - \$25.00	290,000	8	24.45	82,000	7	24.46
\$25.01 - \$30.00	2,651,867	8	25.88	400,267	0	29.58
\$30.01 - \$35.00	414,914	5	32.27	280,269	5	32.81
\$35.01 - \$40.00	1,274,771	6	38.78	885,056	5	38.73
\$40.01 - \$45.00	861,303	2	42.11	858,303	2	42.10
\$45.01 - \$50.00	814,925	4	48.67	786,110	4	48.77
\$50.01 - \$55.00	43,142	5	52.66	41,989	5	52.67
	<u>6,393,422</u>	6	34.03	<u>3,358,994</u>	3	40.04

Stock Award Activity

The following table presents our stock option activity:

	For the years ended December 31,					
	2022		2021		2020	
	Options	Weighted-Average Exercise Price	Options	Weighted-Average Exercise Price	Options	Weighted-Average Exercise Price
Total options outstanding, beginning of period	4,799,255	\$ 38.86	4,804,891	\$ 39.48	4,812,644	\$ 43.40
Granted	2,412,253	25.14	325,500	24.49	180,500	30.39
Exercised	—	—	(22,264)	18.32	(45,170)	18.93
Forfeited and canceled	(818,086)	36.29	(308,872)	34.79	(143,083)	41.58
Total options outstanding, end of period	<u>6,393,422</u>	34.03	<u>4,799,255</u>	38.86	<u>4,804,891</u>	39.48
Exercisable at end of period	<u>3,358,994</u>	40.04	<u>3,386,174</u>	39.99	<u>3,045,000</u>	39.42

The following table presents our additional share-based compensation disclosures:

	For the years ended December 31,		
	2022	2021	2020
Tax benefits from stock options exercised	\$ —	\$ 304	\$ 173
Aggregate intrinsic value of our stock options exercised	\$ —	\$ 238	\$ 603

Stock-Based Compensation

The following table presents our total non-cash, stock-based compensation expense:

	For the years ended December 31,		
	2022	2021	2020
Stock-based compensation expense:			
Research and development expenses	\$ 832	\$ 530	\$ 551
Selling, general and administrative expenses	10,714	7,169	8,327
Total stock-based compensation expense	<u>\$ 11,546</u>	<u>\$ 7,699</u>	<u>\$ 8,878</u>

The income tax benefits related to stock-based compensation expense was \$0.8 million, \$1.5 million and \$1.7 million for the years ended December 31, 2022, 2021 and 2020, respectively. As of December 31, 2022, total unrecognized stock-based compensation cost, net of estimated forfeitures, related to our unvested stock awards was \$27.9 million. This amount is based on an estimated future forfeiture rate of 2.0% per year and will be recognized over a weighted-average period of approximately two years.

Valuation of Stock Options

The fair value of each stock option granted for the years ended December 31, 2022, 2021 and 2020 was estimated at the date of the grant using a Black-Scholes option valuation model. The following table presents the estimated grant-date fair values and related assumptions:

	For the years ended December 31,		
	2022	2021	2020
Assumptions:			
Risk-free interest rate	1.35% - 4.02%	0.48% - 1.11%	0.25% - 1.72%
Volatility	32.67% - 34.84%	29.91% - 34.51%	24.32% - 30.07%
Expected term of options (in years)	4.1 - 6.0	4.0 - 5.9	4.0 - 5.9
Weighted-average grant-date fair value	\$5.97 - \$9.27	\$6.20 - \$8.32	\$6.56 - \$11.63

We do not currently intend to pay dividends on our common stock and accordingly, the dividend yield used in the Black-Scholes option valuation model was assumed to be zero for all periods. The Black-Scholes option valuation model was developed for use in estimating the fair value of traded stock options which have no vesting restrictions and are fully transferable. Consequently, our estimate of fair value may differ from that determined using other valuation models. Further, the Black-Scholes option valuation model requires the input of subjective assumptions. Changes in the subjective input assumptions can materially affect the fair value estimate.

Based on the closing market price of our Class A common stock on December 31, 2022, the aggregate intrinsic value of our stock options was \$0.0 million for options outstanding and \$0.0 million for options exercisable as of December 31, 2022.

NOTE 19. RELATED PARTY TRANSACTIONS - DISH NETWORK

Overview

EchoStar and DISH have operated as separate publicly-traded companies since 2008 (the "Spin-off"). A substantial majority of the voting power of the shares of each of EchoStar and DISH is owned beneficially by Charles W. Ergen, our Chairman, and by certain entities established for the benefit of his family.

In January 2017, we and certain of our subsidiaries entered into a share exchange agreement (the "Share Exchange Agreement") with DISH and certain of its subsidiaries pursuant to which, in February 2017, we received all of the shares of preferred tracking stock previously issued by us and one of our subsidiaries (the "Tracking Stock"), representing an 80% economic interest in the residential retail satellite broadband business of our Hughes

segment, in exchange for 100% of the equity interests of certain EchoStar subsidiaries that held substantially all of our EchoStar Technologies businesses and certain other assets (collectively, the “Share Exchange”). The Tracking Stock was retired in March 2017.

In September 2019, pursuant to a master transaction agreement (the “Master Transaction Agreement”) with DISH and a wholly-owned subsidiary of DISH (“Merger Sub”), (i) we transferred certain real property and the various businesses, products, licenses, technology, revenues, billings, operating activities, assets and liabilities primarily related to the former portion of our ESS segment that managed, marketed and provided (1) broadcast satellite services primarily to DISH Network and our former joint venture Dish Mexico, and (2) telemetry, tracking and control (“TT&C”) services for satellites owned by DISH Network and a portion of our other businesses (collectively, the “BSS Business”) to one of our former subsidiaries, EchoStar BSS Corporation (“BSS Corp.”), (ii) we distributed to each holder of shares of our Class A or Class B common stock entitled to receive consideration in the transaction an amount of shares of common stock of BSS Corp., par value \$0.001 per share (“BSS Common Stock”), equal to one share of BSS Common Stock for each share of our Class A or Class B common stock owned by such stockholder (the “Distribution”); and (iii) immediately after the Distribution, (1) Merger Sub merged with and into BSS Corp. (the “Merger”), such that BSS Corp. became a wholly-owned subsidiary of DISH and with DISH then owning and operating the BSS Business, and (2) each issued and outstanding share of BSS Common Stock owned by EchoStar stockholders was converted into the right to receive 0.23523769 shares of DISH Class A common stock, par value \$0.001 per share (“DISH Common Stock”) ((i) - (iii) collectively, the “BSS Transaction”).

In connection with and following the Spin-off, the Share Exchange and the BSS Transaction, we and DISH Network entered into certain agreements pursuant to which we obtain certain products, services and rights from DISH Network; DISH Network obtains certain products, services and rights from us; and we and DISH Network indemnify each other against certain liabilities arising from our respective businesses. Generally, the amounts we or DISH Network pay for products and services provided under the agreements are based on cost plus a fixed margin (unless noted differently below), which varies depending on the nature of the products and services provided. We may also enter into additional agreements with DISH Network in the future.

The following is a summary of the transactions and the terms of the underlying principal agreements that have had or may have an impact on our consolidated financial condition and results of operations.

Services and Other Revenue — DISH Network

The following table presents our *Services and other revenue - DISH Network*:

	For the years ended December 31,		
	2022	2021	2020
Services and other revenue - DISH Network	\$ 30,191	\$ 33,884	\$ 36,531

The following table presents the related trade accounts receivable:

	As of December 31,	
	2022	2021
Trade accounts receivable - DISH Network	\$ 3,492	\$ 4,244

Satellite Capacity Leased to DISH Network. Effective January 2008, DISH Network began leasing satellite capacity from us on the EchoStar IX satellite. We terminated the provision of this satellite capacity in December 2022.

Telesat Obligation Agreement. In September 2009, we entered into an agreement with Telesat Canada to lease satellite capacity from Telesat Canada on all 32 direct broadcast satellite (“DBS”) transponders on the Nimiq 5 satellite at the 72.7 degree west longitude orbital location (the “Telesat Transponder Agreement”). In September 2009, we entered into an agreement with DISH Network, pursuant to which DISH Network leased satellite capacity from us on all 32 of the DBS transponders covered by the Telesat Transponder Agreement (the “DISH Nimiq 5 Agreement”). Under the terms of the DISH Nimiq 5 Agreement, DISH Network made certain monthly payments to us that commenced in September 2009, when the Nimiq 5 satellite was placed into service. We transferred the Telesat Transponder Agreement to DISH Network in September 2019 as part of the BSS Transaction; however, we retained certain obligations related to DISH Network’s performance under that agreement and we entered into an agreement with DISH Network whereby DISH Network compensates us for retaining such obligations.

Real Estate Leases to DISH Network. We have entered into lease agreements pursuant to which DISH Network leases certain real estate from us. The rent on a per square foot basis for each of the leases is comparable to per square foot rental rates of similar commercial property in the same geographic area at the time of the leases or subsequent amendments. Additionally, DISH Network compensates us for its portion of the taxes, insurance, utilities and/or maintenance of the premises. The terms of each of the leases are set forth below:

- **100 Inverness Occupancy License Agreement** — In March 2017, we and DISH Network entered into a license agreement for DISH Network to use certain of our space at 100 Inverness Terrace East, Englewood, Colorado for an initial period ending in December 2020. We and DISH Network have amended this lease over time to, among other things, extend the term through December 2023. This agreement may be terminated by either party upon 180 days’ prior notice. In connection with the BSS Transaction, we transferred to DISH Network the Englewood Satellite Operations Center located at 100 Inverness Terrace East, including any and all equipment, hardware licenses, software, processes, software licenses, furniture and technical documentation associated with the satellites transferred in the BSS Transaction.
- **Meridian Lease Agreement** — The lease for all of 9601 S. Meridian Blvd., Englewood, Colorado was originally for a period ending in December 2016. We and DISH Network have amended this lease over time to, among other things, extend the term through December 2023.

TerreStar Agreement. In March 2012, DISH Network completed its acquisition of substantially all the assets of TerreStar Networks Inc. (“TerreStar”). Prior to DISH Network’s acquisition of substantially all the assets of TerreStar and our completion of the Hughes Acquisition, TerreStar and HNS entered into various agreements pursuant to which we provide, among other things, warranty, operations and maintenance and hosting services for TerreStar’s ground-based communications equipment (the “TerreStar Agreements”). In December 2017, we and DISH Network amended these agreements, effective as of January 1, 2018, to reduce certain pricing terms through December 31, 2023 and to modify certain termination provisions. DISH Network generally has the right to continue to receive warranty services from us for our products on a month-to-month basis unless terminated by DISH Network upon at least 21 days’ written notice to us. DISH Network generally has the right to continue to receive operations and maintenance services from us on a quarter-to-quarter basis unless these services are terminated by DISH Network upon at least 90 days’ written notice to us. In addition, DISH Network generally may terminate any and all services for convenience subject to providing us with prior notice and/or payment of termination charges. In March 2020, we entered into an agreement with DISH Network pursuant to which we perform certain work and provide certain credits to amounts owed to us under the TerreStar Agreements in exchange for DISH Network’s granting us rights to use certain satellite capacity under the Amended and Restated Professional Services Agreement (as defined below). As a result, we and DISH Network amended the TerreStar Agreements to suspend our provision of warranty services to DISH Network from April 2020 through December 2020. Following the expiration of this suspension, we have recommenced providing warranty services to DISH Network. In May 2022, we and DISH Network amended the agreement for the provision of hosting services to extend the term until May 2027.

Hughes Broadband Distribution Agreement. Effective October 2012, we and DISH Network entered into a distribution agreement (the “Distribution Agreement”) pursuant to which DISH Network has the right, but not the obligation, to market, sell and distribute our Gen 4 HughesNet service. DISH Network pays us a monthly per subscriber wholesale service fee for our Gen 4 HughesNet service based upon a subscriber’s service level and based upon certain volume subscription thresholds. The Distribution Agreement also provides that DISH Network has the right, but not the obligation, to purchase certain broadband equipment from us to support the sale of the Gen 4 HughesNet service. The Distribution Agreement had an initial term of five years with automatic renewal for successive one-year terms unless terminated by either party with a written notice at least 180 days’ before the expiration of the then-current term. In February 2014, we and DISH Network entered into an amendment to the Distribution Agreement which, among other things, extended the initial term of the Distribution Agreement until March 2024. Upon expiration or termination of the Distribution Agreement, we and DISH Network will continue to provide our Gen 4 HughesNet service to the then-current DISH Network subscribers pursuant to the terms and conditions of the Distribution Agreement.

DBSD North America Agreement. In March 2012, DISH Network completed its acquisition of all of the equity of DBSD North America, Inc. (“DBSD North America”). Prior to DISH Network’s acquisition of DBSD North America and our completion of the Hughes Acquisition, DBSD North America and HNS entered into various agreements pursuant to which we provide, among other things, warranty, operations and maintenance and hosting services of DBSD North America’s gateway and ground-based communications equipment. In December 2017, we and DBSD North America amended these agreements, effective as of January 1, 2018, to reduce certain pricing terms through December 31, 2023 and to modify certain termination provisions. DBSD North America has the right to continue to receive operations and maintenance services from us on a quarter-to-quarter basis, unless terminated by DBSD North America upon at least 120 days’ written notice to us. In February 2019, we further amended these agreements to provide DBSD North America with the right to continue to receive warranty services from us on a month-to-month basis until December 2023, unless terminated by DBSD North America upon at least 21 days’ written notice to us. The provision of hosting services will continue until February 2027 unless terminated by DBSD North America upon at least 180 days’ written notice to us. In addition, DBSD North America generally may terminate any and all such services for convenience, subject to providing us with prior notice and/or payment of termination charges.

Hughes Equipment and Services Agreement. In February 2019, we and DISH Network entered into an agreement pursuant to which we will sell to DISH Network our HughesNet Service and HughesNet equipment that has been modified to meet DISH Network’s internet-of-things specifications for the transfer of data to DISH Network’s network operations centers. This agreement has an initial term of five years expiring February 2024 with automatic renewal for successive one-year terms unless terminated by DISH Network with at least 180 days’ written notice to us or by us with at least 365 days’ written notice to DISH Network.

Operating Expenses — DISH Network

The following table presents our operating expenses related to DISH Network:

	For the years ended December 31,		
	2022	2021	2020
Operating expenses - DISH Network	\$ 5,533	\$ 5,935	\$ 5,793

The following table presents the related trade accounts payable:

	As of December 31,	
	2022	2021
Trade accounts payable - DISH Network	\$ 669	\$ 503

Amended and Restated Professional Services Agreement. In connection with the Spin-off, we entered into various agreements with DISH Network including a transition services agreement, satellite procurement agreement and services agreement, all of which expired in January 2010 and were replaced by a professional services agreement (the “Professional Services Agreement”). In January 2010, we and DISH Network agreed that we continue to have the right, but not the obligation, to receive the following services from DISH Network, among others, certain of which were previously provided under a transition services agreement: information technology, travel and event coordination, internal audit, legal, accounting and tax, benefits administration, program acquisition services and other support services. Additionally, we and DISH Network agreed that DISH Network would continue to have the right, but not the obligation, to engage us to manage the process of procuring new satellite capacity for DISH Network (previously provided under a satellite procurement agreement), receive logistics, procurement and quality assurance services from us (previously provided under a services agreement) and provide other support services. In connection with the consummation of the Share Exchange, we and DISH amended and restated the Professional Services Agreement (as amended to date, the “Amended and Restated Professional Services Agreement”) to provide that we and DISH Network shall have the right to receive additional services that either we or DISH Network may require as a result of the Share Exchange, including access to antennas owned by DISH Network for our use in performing TT&C services and maintenance and support services for our antennas (collectively, the “TT&C Antennas”). In September 2019, in connection with the BSS Transaction, we and DISH further amended the Amended and Restated Professional Services Agreement to provide that we and DISH Network shall have the right to receive additional services that either we or DISH Network may require as a result of the BSS Transaction and to remove our access to and the maintenance and support services for the TT&C Antennas. The term of the Amended and Restated Professional Services Agreement is through January 1, 2023 and renews automatically for successive one-year periods thereafter, unless the agreement is terminated earlier by either party upon at least 60 days’ notice. We or DISH Network may generally terminate the Amended and Restated Professional Services Agreement in part with respect to any particular service it receives for any reason upon at least 30 days’ notice, unless the statement of work for particular services states otherwise. Certain services provided under the Amended and Restated Professional Services Agreement may survive the termination of the agreement.

Real Estate Leases from DISH Network. Effective March 2017, we entered into a lease with DISH Network for certain space at 530 EchoStar Drive in Cheyenne, Wyoming for an initial period ending in February 2019. In August 2018, we exercised our option to renew this lease for a one-year period ending in February 2020. In connection with the BSS Transaction, we transferred the Cheyenne Satellite Operations Center, including any equipment, software licenses, and furniture located within, to DISH Network and amended this lease to reduce the space provided to us for the Cheyenne Satellite Access Center for a period ending in September 2021. In March 2021, we exercised our option to renew this lease for a one-year period ending September 2022 and amended the lease to provide us the option to renew this lease for up to three additional years. In November 2021, we exercised our option to renew this lease for a one-year period ending September 2023.

Collocation and Antenna Space Agreements. We and DISH Network entered into an agreement pursuant to which DISH Network provided us with collocation space in El Paso, Texas. This agreement was for an initial period ending in July 2015, and provided us with renewal options for four consecutive three-year terms. We exercised our first renewal option for a period commencing in August 2015 and ending in July 2018, in April 2018 we exercised our second renewal option for a period ending in July 2021, and in May 2021 we exercised our third renewal option for a period ending in July 2024. In connection with the Share Exchange, effective March 2017, we also entered into certain agreements pursuant to which DISH Network provides collocation and antenna space to EchoStar through February 2022 at the following locations: Cheyenne, Wyoming; Gilbert, Arizona; New Braunfels, Texas; Monee, Illinois; Spokane, Washington; and Englewood, Colorado. In October 2019, we provided a termination notice for our New Braunfels, Texas agreement effective May 2020. In November 2020, we provided a termination notice for one of our Englewood, Colorado agreements effective May 2021. In November 2021, we exercised our right to renew the collocation agreements at Gilbert, Arizona, Cheyenne, Wyoming, Spokane, Washington, Englewood, Colorado and Monee, Illinois for a period ending in February 2025. In August 2017, we and DISH Network also entered into certain other agreements pursuant to which DISH Network provides additional collocation and antenna space to us in Monee, Illinois and Spokane, Washington through August 2022. In May 2022, we exercised our right to renew such other agreements at Monee, Illinois and Spokane, Washington through August 2025. Generally, we may renew our collocation and antenna space agreements for three-year periods by providing DISH Network with prior written notice no more than 120 days but no less than 90 days prior to the end of the then-current term. We may terminate certain of these agreements with 180 days’ prior written notice. In September

2019, in connection with the BSS Transaction, we entered into an agreement pursuant to which DISH Network provided us with certain additional collocation space in Cheyenne, Wyoming for a period that ended in September 2020. The fees for the services provided under these agreements depend on the number of racks located at the location.

Also in connection with the BSS Transaction, in September 2019, we entered into an agreement pursuant to which DISH Network provides us with antenna space and power in Cheyenne, Wyoming for a period of five years commencing in August 2020, with four three-year renewal terms, with prior written notice of renewal required no more than 120 days but no less than 90 days prior to the end of the then-current term. In March 2021, we entered into additional agreements pursuant to which DISH Network provides us with antenna space and power in Cheyenne, Wyoming, and the right to use an antenna and certain space in Gilbert, Arizona. Both agreements are for a period of five years with four three-year renewal terms, with prior written notice of renewal required no more than 120 days but no less than 90 days prior to the end of the then-current term.

Hughes Broadband Master Services Agreement. In conjunction with the launch of our EchoStar XIX satellite, in March 2017, we and DISH Network entered into a master service agreement (the “Hughes Broadband MSA”) pursuant to which DISH Network, among other things: (i) has the right, but not the obligation, to market, promote and solicit orders and upgrades for our Gen 5 HughesNet service and related equipment and other telecommunication services and (ii) installs Gen 5 HughesNet service equipment with respect to activations generated by DISH Network. Under the Hughes Broadband MSA, we and DISH Network make certain payments to each other relating to sales, upgrades, purchases and installation services. The current term of the Hughes Broadband MSA is through March 2023 with automatic renewal for successive one-year terms. Either party has the ability to terminate the Hughes Broadband MSA, in whole or in part, for any reason upon at least 90 days’ notice to the other party. Upon expiration or termination of the Hughes Broadband MSA, we will continue to provide our Gen 5 HughesNet service to subscribers and make certain payments to DISH Network pursuant to the terms and conditions of the Hughes Broadband MSA. We incurred sales incentives and other costs under the Hughes Broadband MSA totaling \$6.8 million, \$8.4 million and \$16.6 million for the years ended December 31, 2022, 2021 and 2020, respectively.

2019 TT&C Agreement. In September 2019, in connection with the BSS Transaction, we entered into an agreement pursuant to which DISH Network provides TT&C services to us for a period ending in September 2021, with the option for us to renew for a one-year period upon written notice at least 90 days prior to the initial expiration (the “2019 TT&C Agreement”). In June 2021, we amended the 2019 TT&C Agreement to extend the term until September 2022 and added the option for us to renew the 2019 TT&C Agreement up to an additional three years. In September 2022, we exercised the option to renew the 2019 TT&C Agreement until September 2023. The fees for services provided under the 2019 TT&C Agreement are calculated at either: (i) a fixed fee or (ii) cost plus a fixed margin, which will vary depending on the nature of the services provided. Any party is able to terminate the 2019 TT&C Agreement for any reason upon 12 months’ notice.

Referral Marketing Agreement. In June 2021, we and DISH Network entered into an agreement pursuant to which we will pre-qualify prospects contacting Hughes call centers and transfer those prospects to DISH Network for introduction to DISH Network’s video services, for prospects that convert Hughes will receive a commission. This agreement has an indefinite term and may be terminated by either party upon 90 days’ prior written notice.

Whidbey Island 5G Network Test Bed Subcontract. In June 2022, we and DISH Wireless entered into a subcontract (“DISH Subcontract”) pursuant to which DISH will provide access and use of a DISH lab, technical support and integration and testing support for the 5G network test bed to be delivered by Hughes to its customer.

Other Receivables - DISH Network

The following table presents our other receivables owed from DISH Network:

	As of December 31,	
	2022	2021
Other receivables - DISH Network, current	\$ —	\$ 12,705
Other receivables - DISH Network, noncurrent	\$ 74,923	\$ 77,920

Tax Sharing Agreement. Effective December 2007, we and DISH Network entered into a tax sharing agreement (the “Tax Sharing Agreement”) in connection with the Spin-off. This agreement governs our and DISH Network’s respective rights, responsibilities and obligations after the Spin-off with respect to taxes for the periods ending on or before the Spin-off. Generally, all pre-Spin-off taxes, including any taxes that are incurred as a result of restructuring activities undertaken to implement the Spin-off, are borne by DISH Network and DISH Network indemnifies us for such taxes. However, DISH Network is not liable for and does not indemnify us for any taxes that are incurred as a result of the Spin-off or certain related transactions failing to qualify as tax-free distributions pursuant to any provision of Section 355 or Section 361 of the Internal Revenue Code of 1986, as amended (the “Code”), because of: (i) a direct or indirect acquisition of any of our stock, stock options or assets; (ii) any action that we take or fail to take or (iii) any action that we take that is inconsistent with the information and representations furnished to the IRS in connection with the request for the private letter ruling, or to counsel in connection with any opinion being delivered by counsel with respect to the Spin-off or certain related transactions. In such case, we will be solely liable for, and will indemnify DISH Network for any resulting taxes, as well as any losses, claims and expenses. The Tax Sharing Agreement will terminate after the later of the full period of all applicable statutes of limitations, including extensions, or once all rights and obligations are fully effectuated or performed.

In light of the Tax Sharing Agreement, among other things, and in connection with our consolidated federal income tax returns for certain tax years prior to and for the year of the Spin-off, in September 2013, we and DISH Network agreed upon a supplemental allocation of the tax benefits arising from certain tax items resolved in the course of the IRS’s examination of our consolidated tax returns. Prior to the agreement with DISH Network in 2013, the federal tax benefits were reflected as a deferred tax asset for depreciation and amortization, which was netted in our non-current deferred tax liabilities. Under the agreement with DISH Network from 2013, DISH Network is paying us the federal tax benefit it receives at such time as we would have otherwise been able to realize such tax benefit. We recorded a current receivable from DISH Network in Other receivables - DISH Network, current and a non-current receivable from DISH Network in Other receivables - DISH Network, noncurrent and a corresponding increase in our *Deferred tax liabilities, net* to reflect the effects of this agreement. In addition, in September 2013, we and DISH Network agreed upon a tax sharing arrangement for filing certain combined state income tax returns and a method of allocating the respective tax liabilities between us and DISH Network for such combined returns, through the taxable period ending on December 31, 2017 (the “State Tax Arrangement”).

In August 2018, we and DISH Network amended the Tax Sharing Agreement and the 2013 agreements (the “Tax Sharing Amendment”). Under the Tax Sharing Amendment, to the extent permitted by applicable tax law, DISH Network is entitled to apply the benefit of our 2009 net operating losses (the “SATS 2009 NOLs”) to DISH Network’s federal tax return for the year ended December 31, 2008, in exchange for DISH Network paying us over time the value of the net annual federal income taxes paid by us that would have been otherwise offset by the SATS 2009 NOLs. The Tax Sharing Amendment also requires us and DISH Network to pay the other for the benefits of certain past and future federal research and development tax credits that we or DISH Network receive or received as a result of being part of a controlled group under the Code, and requires DISH Network to compensate us for certain past tax losses utilized by DISH Network and for certain past and future excess California research and development tax credits generated by us and used by DISH Network. In addition, the Tax Sharing Amendment extends the term of the State Tax Arrangement to the earlier of termination of the Tax Sharing Agreement, a change in control of either us or DISH Network or, for any particular state, if we and DISH Network no longer file a combined tax return for such state.

We and DISH Network filed combined income tax returns in certain states from 2008 through 2019. We have earned and recognized tax benefits for certain state income tax credits that we would be unable to fully utilize currently if we had filed separately from DISH Network. We have charged *Additional paid-in capital* in prior periods when DISH Network has utilized such tax benefits. We expect to increase *Additional paid-in capital* upon receipt of any consideration that DISH Network pays to us in exchange for these tax credits. For the year ended December 31, 2022, we have recorded a decrease to *Additional paid-in capital* for \$6.3 million for payments received from DISH Network.

Other Agreements

Master Transaction Agreement. In May 2019, we and BSS Corp. entered into the Master Transaction Agreement with DISH and Merger Sub with respect to the BSS Transaction. Pursuant to the terms of the Master Transaction

Agreement, on September 10, 2019: (i) we transferred the BSS Business to BSS Corp.; (ii) we completed the Distribution; and (iii) immediately after the Distribution, (1) BSS Corp. became a wholly-owned subsidiary of DISH such that DISH owns and operates the BSS Business and (2) each issued and outstanding share of BSS Common Stock owned by EchoStar stockholders was converted into the right to receive 0.23523769 shares of DISH Common Stock. Following the consummation of the BSS Transaction, we no longer operate the BSS Business, which was a substantial portion of our ESS segment. The Master Transaction Agreement contained customary representations and warranties by us and DISH Network, including our representations relating to the assets, liabilities and financial condition of the BSS Business, and representations by DISH Network relating to its financial condition and liabilities. We and DISH Network have agreed to indemnify each other against certain losses with respect to breaches of certain representations and covenants and certain retained and assumed liabilities, respectively.

BSS Transaction Intellectual Property and Technology License Agreement. Effective September 2019, in connection with the BSS Transaction, we and DISH Network entered into an intellectual property and technology license agreement (the “BSS IPTLA”) pursuant to which we and DISH Network license to each other certain intellectual property and technology. The BSS IPTLA will continue in perpetuity, unless mutually terminated by the parties. Pursuant to the BSS IPTLA, we granted to DISH Network a license to our intellectual property and technology for use by DISH Network, among other things, in connection with its continued operation of the BSS Business acquired pursuant to the BSS Transaction, including a limited license to use the “ESS” and “ECHOSTAR SATELLITE SERVICES” trademarks during a transition period. EchoStar retains full ownership of the “ESS” and “ECHOSTAR SATELLITE SERVICES” trademarks. In addition, DISH Network granted a license back to us, among other things, for the continued use of all intellectual property and technology that is used in our retained businesses but the ownership of which was transferred to DISH Network pursuant to the BSS Transaction.

BSS Transaction Tax Matters Agreement. Effective September 2019, in connection with the BSS Transaction, we, BSS Corp. and DISH entered into a tax matters agreement. This agreement governs certain of our rights, responsibilities and obligations with respect to taxes of the BSS Business transferred pursuant to the BSS Transaction. Generally, we are responsible for all tax returns and tax liabilities for the BSS Business for periods prior to the BSS Transaction and DISH is responsible for all tax returns and tax liabilities for the BSS Business from and after the BSS Transaction. Both we and DISH made certain tax-related representations and are subject to various tax-related covenants after the consummation of the BSS Transaction. Both we and DISH Network have agreed to indemnify each other for certain losses if there is a breach of any the tax representations or violation of any of the tax covenants in the tax matters agreement and that breach or violation results in the failure of the BSS Transaction being treated as a transaction that is tax-free for EchoStar or its stockholders for U.S. federal income tax purposes. In addition, DISH Network has agreed to indemnify us if the BSS Business is acquired, either directly or indirectly (e.g., via an acquisition of DISH Network), by one or more persons, where either it took an action, or knowingly facilitated, consented to or assisted with an action by its stockholders, that resulted in the failure of the BSS Transaction being treated as a transaction that is tax-free for EchoStar and its stockholders for U.S. federal income tax purposes. This tax matters agreement supplements the Tax Sharing Agreement outlined above and the Share Exchange Tax Matters Agreement outlined below, both of which continue in full force and effect.

BSS Transaction Employee Matters Agreement. Effective September 2019, in connection with the BSS Transaction, we and DISH Network entered into an employee matters agreement that addressed the transfer of employees from us to DISH Network, including certain benefit and compensation matters and the allocation of responsibility for employee related liabilities relating to current and past employees of the BSS Business. DISH Network assumed employee-related liabilities relating to the BSS Business as part of the BSS Transaction, except that we are responsible for certain pre-BSS Transaction compensation and benefits for employees who transferred to DISH Network in connection with the BSS Transaction.

Share Exchange Agreement. In February 2017 we consummated the Share Exchange, following which we no longer operate the transferred EchoStar Technologies businesses and the Tracking Stock was retired and is no longer outstanding and all agreements, arrangements and policy statements with respect to such Tracking Stock terminated and are of no further effect. Pursuant to the Share Exchange Agreement, we transferred certain assets, investments in joint ventures, spectrum licenses and real estate properties and DISH Network assumed certain liabilities relating to the transferred assets and businesses. The Share Exchange Agreement contained customary representations and warranties by the parties, including representations by us related to the transferred assets,

assumed liabilities and the financial condition of the transferred businesses. We and DISH Network also agreed to customary indemnification provisions whereby each party indemnifies the other against certain losses with respect to breaches of representations, warranties or covenants and certain liabilities and if certain actions undertaken by us or DISH causes the transaction to be taxable to the other party after closing.

Share Exchange Intellectual Property and Technology License Agreement. Effective March 2017, in connection with the Share Exchange, we and DISH Network entered into an intellectual property and technology license agreement (“IPTLA”) pursuant to which we and DISH Network license to each other certain intellectual property and technology. The IPTLA will continue in perpetuity, unless mutually terminated by the parties. Pursuant to the IPTLA, we granted to DISH Network a license to our intellectual property and technology for use by DISH Network, among other things, in connection with its continued operation of the businesses acquired pursuant to the Share Exchange, including a limited license to use the “ECHOSTAR” trademark during a transition period. EchoStar retains full ownership of the “ECHOSTAR” trademark. In addition, DISH Network granted a license back to us, among other things, for the continued use of all intellectual property and technology that is used in our retained businesses but the ownership of which was transferred to DISH Network pursuant to the Share Exchange.

Share Exchange Tax Matters Agreement. Effective March 2017, in connection with the Share Exchange, we and DISH entered into a tax matters agreement. This agreement governs certain of our rights, responsibilities and obligations with respect to taxes of the transferred businesses pursuant to the Share Exchange. Generally, we are responsible for all tax returns and tax liabilities for the transferred businesses and assets for periods prior to the Share Exchange and DISH Network is responsible for all tax returns and tax liabilities for the transferred businesses and assets from and after the Share Exchange. Both we and DISH Network made certain tax-related representations and are subject to various tax-related covenants after the consummation of the Share Exchange. Both we and DISH Network have agreed to indemnify each other if there is a breach of any such tax representation or violation of any such tax covenant and that breach or violation results in the Share Exchange not qualifying for tax free treatment for the other party. In addition, DISH Network has agreed to indemnify us if the transferred businesses are acquired, either directly or indirectly (e.g., via an acquisition of DISH Network), by one or more persons and such acquisition results in the Share Exchange not qualifying for tax free treatment. The tax matters agreement supplements the Tax Sharing Agreement outlined above which continues in full force and effect.

Share Exchange Employee Matters Agreement. Effective March 2017, in connection with the Share Exchange, we and DISH Network entered into an employee matters agreement that addressed the transfer of employees from us to DISH Network, including certain benefit and compensation matters and the allocation of responsibility for employee related liabilities relating to current and past employees of the transferred businesses. DISH Network assumed employee-related liabilities relating to the transferred businesses as part of the Share Exchange, except that we are responsible for certain pre-Share Exchange employee related litigation, and compensation and benefits for employees who transferred to DISH Network in connection with the Share Exchange.

NOTE 20. RELATED PARTY TRANSACTIONS - OTHER

Hughes Systique Corporation

We contract with Hughes Systique Corporation (“Hughes Systique”) for software development services. In addition to our approximately 42% ownership in Hughes Systique, Mr. Pradman Kaul, the former President of our subsidiary Hughes Communications and Vice-Chair of our board of directors (effective January 1, 2023), and his brother, who is the Chief Executive Officer and President of Hughes Systique, own in the aggregate approximately 25%, on an undiluted basis, of Hughes Systique’s outstanding shares as of December 31, 2022. Furthermore, Mr. Pradman Kaul serves on the board of directors of Hughes Systique. Hughes Systique is a variable interest entity and we are considered the primary beneficiary of Hughes Systique due to, among other factors, our ability to direct the activities that most significantly impact the economic performance of Hughes Systique. As a result, we consolidate Hughes Systique’s financial statements in these Consolidated Financial Statements.

TerreStar Solutions

DISH Network owns more than 15% of TerreStar Solutions, Inc. (“TSI”). In May 2018, we and TSI entered into an equipment and services agreement pursuant to which we design, manufacture and install upgraded ground communications network equipment for TSI’s network and provide, among other things, warranty and support services. We recognized revenue of \$2.0 million, \$1.9 million and \$4.4 million for the years ended December 31, 2022, 2021 and 2020, respectively. As of December 31, 2022 we had \$0.5 million of trade accounts receivable from TSI.

NOTE 21. COMMITMENTS AND CONTINGENCIES

Commitments

The following table summarizes our contractual obligations as of December 31, 2022:

	Payments Due in the Years Ending December 31,						
	Total ⁽⁴⁾⁽⁵⁾	2023	2024	2025	2026	2027	Thereafter
Long-term debt ⁽¹⁾	\$1,500,000	\$ —	\$ —	\$ —	\$1,500,000	\$ —	\$ —
Interest on long-term debt	356,252	89,063	89,063	89,063	89,063	—	—
Satellite-related commitments ⁽²⁾	169,252	60,822	19,105	18,618	17,156	15,460	38,091
Operating lease obligations ⁽³⁾	201,625	25,101	23,180	19,578	18,770	17,256	97,740
Total	\$2,227,129	\$ 174,986	\$ 131,348	\$ 127,259	\$1,624,989	\$ 32,716	\$ 135,831

- (1) Assumes all long-term debt is outstanding until scheduled maturity.
- (2) Includes payments pursuant to: i) the EchoStar XXIV launch contract, ii) regulatory authorizations, iii) non-lease costs associated with our finance lease satellites, iv) in-orbit incentives relating to certain satellites and v) commitments for satellite service arrangements.
- (3) Operating leases consist primarily of leases for office space, data centers and satellite-related ground infrastructure.
- (4) The table excludes amounts related to deferred tax liabilities, unrecognized tax positions and certain other amounts recorded in our non-current liabilities as the timing of any payments is uncertain.
- (5) The table excludes long-term deferred revenue and other long-term liabilities that do not require future cash payments.

In certain circumstances, the dates on which we are obligated to pay our contractual obligations could change.

Contingencies

Patents and Intellectual Property

Many entities, including some of our competitors, have, or may have in the future, patents and other intellectual property rights that cover or affect products or services directly or indirectly related to those that we offer. We may not be aware of all patents and other intellectual property rights that our products and services may potentially infringe. Damages in patent infringement cases can be substantial, and in certain circumstances can be tripled. Further, we cannot estimate the extent to which we may be required in the future to obtain licenses with respect to intellectual property rights held by others and the availability and cost of any such licenses. Various parties have asserted patent and other intellectual property rights with respect to our products and services. We cannot be certain that these parties do not own the rights they claim, that these rights are not valid or that our products and services do not infringe on these rights. Further, we cannot be certain that we would be able to obtain licenses from these parties on commercially reasonable terms or, if we were unable to obtain such licenses, that we would be able to redesign our products and services to avoid infringement.

Certain Arrangements with DISH Network

In connection with our spin-off from DISH in 2008, we entered into a separation agreement with DISH Network that provides, among other things, for the division of certain liabilities, including liabilities resulting from litigation. Under the terms of the separation agreement, we assumed certain liabilities that relate to our business, including certain designated liabilities for acts or omissions that occurred prior to the Spin-off. Certain specific provisions govern intellectual property related claims under which we will generally only be liable for our acts or omissions following the Spin-off and DISH Network will indemnify us for any liabilities or damages resulting from intellectual property

claims relating to the period prior to the Spin-off as well as DISH Network's acts or omissions following the Spin-off. In connection with the Share Exchange and BSS Transaction, we entered into the Share Exchange Agreement and the Master Transaction Agreement, respectively, and other agreements which provide, among other things, for the division of certain liabilities, including liabilities relating to taxes, intellectual property and employees and liabilities resulting from litigation and the assumption of certain liabilities that relate to the transferred businesses and assets. These agreements also contain additional indemnification provisions between us and DISH Network for, in the case of the Share Exchange, certain pre-existing liabilities and legal proceedings and, in the case of the BSS Transaction, certain losses with respect to breaches of certain representations and covenants and certain liabilities.

Litigation

We are involved in a number of legal proceedings concerning matters arising in connection with the conduct of our business activities. Many of these proceedings are at preliminary stages and/or seek an indeterminate amount of damages. We regularly evaluate the status of the legal proceedings in which we are involved to assess whether a loss is probable and to determine if accruals are appropriate. We record an accrual for litigation and other loss contingencies when we determine that a loss is probable, and the amount of the loss can be reasonably estimated. If accruals are not appropriate, we further evaluate each legal proceeding to assess whether an estimate of possible loss or range of loss can be made. There can be no assurance that legal proceedings against us will be resolved in amounts that will not differ from the amounts of our recorded accruals. Legal fees and other costs of defending legal proceedings are charged to expense as incurred.

For certain proceedings, management is unable to predict with any degree of certainty the outcome or provide a meaningful estimate of the possible loss or range of possible loss because, among other reasons: (i) the proceedings are in various stages; (ii) damages have not been sought or specified; (iii) damages are unsupported, indeterminate and/or exaggerated in management's opinion; (iv) there is uncertainty as to the outcome of pending trials, appeals, motions or other proceedings; (v) there are significant factual issues to be resolved; and/or (vi) there are novel legal issues or unsettled legal theories to be presented or a large number of parties are involved (as with many patent-related cases). Except as described below, however, management does not believe, based on currently available information, that the outcomes of these proceedings will have a material effect on our financial condition, operating results or cash flows, though there is no assurance that the resolution and outcomes of these proceedings, individually or in the aggregate, will not be material to our financial condition, operating results or cash flows for any particular period, depending, in part, upon the operating results for such period.

We intend to vigorously defend the proceedings against us. In the event that a court, tribunal, other body or jury ultimately rules against us, we may be subject to adverse consequences, including, without limitation, substantial damages, which may include treble damages, fines, penalties, compensatory damages and/or other equitable or injunctive relief that could require us to materially modify our business operations or certain products or services that we offer to our consumers.

Shareholder Litigation

On July 2, 2019, the City of Hallandale Beach Police Officers' and Firefighters' Personnel Retirement Trust, purporting to sue on behalf of a class of EchoStar's stockholders, filed a complaint in the District Court of Clark County, Nevada against our directors, Charles W. Ergen, R. Stanton Dodge, Anthony M. Federico, Pradman P. Kaul, C. Michael Schroeder, Jeffrey R. Tarr, William D. Wade, and Michael T. Dugan; our chief financial officer, David J. Rayner; EchoStar; our subsidiary HSSC; our former subsidiary BSS Corp.; and DISH and its subsidiary Merger Sub. On September 5, 2019, the defendants filed motions to dismiss. On October 11, 2019, the plaintiffs filed an amended complaint removing Messrs. Dodge, Federico, Kaul, Schroeder, Tarr and Wade as defendants. The amended complaint alleges that Mr. Ergen, as our controlling stockholder, breached fiduciary duties to EchoStar's minority stockholders by structuring the BSS Transaction with inadequate consideration and improperly influencing our and HSSC's boards of directors to approve the BSS Transaction. The amended complaint also alleges that the other defendants aided and abetted such alleged breaches. The plaintiffs seek equitable and monetary relief, including the issuance of additional DISH Common Stock, and other costs and disbursements, including attorneys' fees on behalf of the purported class. On November 11, 2019, we and the other defendants filed separate motions to dismiss plaintiff's amended complaint and during a hearing on January 13, 2020 the court denied these motions. On February 10, 2020, we and the other defendants filed answers to the amended complaint. The Court certified plaintiff's class on January 11, 2021. On June 18, 2021, the parties executed a

settlement agreement to resolve all claims in this case. On the same day, the parties filed a joint motion for preliminary approval of the settlement agreement. The motion was granted by an order dated July 30, 2021. On December 9, 2021, the Court held a final settlement hearing. On December 10, 2021, the Court issued an Order granting final approval of the settlement agreement. In an order dated October 24, 2022, the Court granted plaintiff's unopposed motion to approve the class distribution plan.

License Fee Dispute with Government of India, Department of Telecommunications

In 1994, the Government of India promulgated a "National Telecommunications Policy" under which the government liberalized the telecommunications sector and required telecommunications service providers to pay fixed license fees. Pursuant to this policy, our subsidiary Hughes Communications India Private Limited ("HCIPL"), formerly known as Hughes Escorts Communications Limited, obtained a license to operate a data network over satellite using VSAT systems. In 2002, HCIPL's license was amended pursuant to a new government policy that was first established in 1999. The new policy eliminated the fixed license fees and instead required each telecommunications service provider to pay license fees based on its adjusted gross revenue ("AGR"). In March 2005, the Indian Department of Telecommunications ("DOT") notified HCIPL that, based on its review of HCIPL's audited accounts and AGR statements, HCIPL must pay additional license fees and penalties and interest on such fees and penalties. HCIPL responded that the DOT had improperly calculated its AGR by including revenue from licensed and unlicensed activities. The DOT rejected this explanation and in 2006, HCIPL filed a petition with an administrative tribunal (the "Tribunal"), challenging the DOT's calculation of its AGR. The DOT also issued license fee assessments to other telecommunications service providers and a number of similar petitions were filed by several other such providers with the Tribunal. These petitions were amended, consolidated, remanded and re-appealed several times. On April 23, 2015, the Tribunal issued a judgment affirming the DOT's calculation of AGR for the telecommunications service providers but reversing the DOT's imposition of interest, penalties and interest on such penalties as excessive. Over subsequent years, the DOT and HCIPL and other telecommunications service providers, respectively, filed several appeals of the Tribunal's ruling. On October 24, 2019, the Supreme Court of India ("Supreme Court") issued an order (the "October 2019 Order") affirming the license fee assessments imposed by the DOT, including its imposition of interest, penalties and interest on the penalties, but without indicating the amount HCIPL is required to pay the DOT, and ordering payment by January 23, 2020. On November 23, 2019, HCIPL and other telecommunication service providers filed a petition asking the Supreme Court to reconsider the October 2019 Order. The petition was denied on January 20, 2020. On January 22, 2020, HCIPL and other telecommunication service providers filed an application requesting that the Supreme Court modify the October 2019 Order to permit the DOT to calculate the final amount due and extend HCIPL's and the other telecommunication service providers' payment deadline. On February 14, 2020, the Supreme Court directed HCIPL and the other telecommunication service providers to explain why the Supreme Court should not initiate contempt proceedings for failure to pay the amounts due. During a hearing on March 18, 2020, the Supreme Court ordered that all amounts that were due before the October 2019 Order must be paid, including interest, penalties and interest on the penalties. The Supreme Court also ordered that the parties appear for a further hearing addressing, potentially among other things, a proposal by the DOT to allow for extended or deferred payments of amounts due. On June 11, 2020, the Supreme Court ordered HCIPL and the other telecommunication service providers to submit affidavits addressing the proposal made by the DOT to extend the time frame for payment of the amounts owed and for HCIPL and the other telecommunication providers to provide security for such payments. On September 1, 2020, the Supreme Court issued a judgment permitting a 10-year payment schedule. Under this payment schedule, HCIPL is required to make an annual payment every March 31, through 2031. Following the Supreme Court of India's October 2019 judgment, HCIPL made payments during the first quarter of 2020, and additional payments on March 31, 2021 and March 31, 2022.

The following table presents the components of the accrual:

	As of December 31,	
	2022	2021
Additional license fees	\$ 3,425	\$ 3,812
Penalties	3,516	3,912
Interest and interest on penalties	78,327	81,389
Less: Payments	(17,785)	(8,451)
Total accrual	67,483	80,662
Less: Current portion	10,191	11,178
Total long-term accrual	<u>\$ 57,292</u>	<u>\$ 69,484</u>

Any eventual payments made with respect to the ultimate outcome of this matter may be different from our accrual and such differences could be significant.

Other

In addition to the above actions, we are subject to various other legal proceedings and claims, which arise in the ordinary course of business. As part of our ongoing operations, we are subject to various inspections, audits, inquiries, investigations and similar actions by third parties, as well as by governmental/regulatory authorities responsible for enforcing the laws and regulations to which we may be subject. Further, under the federal False Claims Act, private parties have the right to bring qui tam, or “whistleblower,” suits against companies that submit false claims for payments to, or improperly retain overpayments from, the federal government. Some states have adopted similar state whistleblower and false claims provisions. In addition, we from time to time receive inquiries from federal, state and foreign agencies regarding compliance with various laws and regulations.

In our opinion, the amount of ultimate liability with respect to any of these other actions is unlikely to materially affect our financial position, results of operations or cash flows, though the resolutions and outcomes, individually or in the aggregate, could be material to our financial position, operating results or cash flows for any particular period, depending, in part, upon the operating results for such period.

We also indemnify our directors, officers and employees for certain liabilities that might arise from the performance of their responsibilities for us. Additionally, in the normal course of its business, we enter into contracts pursuant to which we may make a variety of representations and warranties and indemnify the counterparty for certain losses. Our possible exposure under these arrangements cannot be reasonably estimated as this involves the resolution of claims made, or future claims that may be made, against us or our officers, directors or employees, the outcomes of which are unknown and not currently predictable or estimable.

NOTE 22. SEGMENT REPORTING

Business segments are components of an enterprise for which separate financial information is available and regularly evaluated by our chief operating decision maker (“CODM”), who is our Chief Executive Officer. We operate in two business segments, Hughes segment and ESS segment.

The primary measure of segment profitability that is reported regularly to our CODM is earnings before interest, taxes, depreciation and amortization, and net income (loss) attributable to non-controlling interests (“EBITDA”).

Total assets by segment have not been reported herein because the information is not provided to our CODM on a regular basis.

The following table presents total revenue, capital expenditures and EBITDA for each of our business segments:

	Hughes	ESS	Corporate and Other	Consolidated Total
For the year ended December 31, 2022				
External revenue	\$ 1,966,587	\$ 19,132	\$ 12,374	\$ 1,998,093
Intersegment revenue	—	1,401	(1,401)	—
Total revenue	\$ 1,966,587	\$ 20,533	\$ 10,973	\$ 1,998,093
Capital expenditures	\$ 239,403	\$ —	\$ 86,488	\$ 325,891
EBITDA	\$ 732,929	\$ 14,416	\$ (39,728)	\$ 707,617
For the year ended December 31, 2021				
External revenue	\$ 1,956,226	\$ 17,295	\$ 12,199	\$ 1,985,720
Intersegment revenue	—	384	(384)	—
Total revenue	\$ 1,956,226	\$ 17,679	\$ 11,815	\$ 1,985,720
Capital expenditures	\$ 296,303	\$ —	\$ 142,127	\$ 438,430
EBITDA	\$ 781,824	\$ 9,185	\$ (88,468)	\$ 702,541
For the year ended December 31, 2020				
External revenue	\$ 1,860,834	\$ 16,237	\$ 10,836	\$ 1,887,907
Intersegment revenue	—	1,161	(1,161)	—
Total revenue	\$ 1,860,834	\$ 17,398	\$ 9,675	\$ 1,887,907
Capital expenditures	\$ 355,197	\$ 41	\$ 53,560	\$ 408,798
EBITDA	\$ 727,608	\$ 7,873	\$ (118,606)	\$ 616,875

The following table reconciles *Income (loss) before income taxes* in the Consolidated Statements of Operations to EBITDA:

	For the years ended December 31,		
	2022	2021	2020
Income (loss) before income taxes	\$ 233,223	\$ 128,347	\$ (27,835)
Interest income, net	(50,900)	(22,801)	(39,982)
Interest expense, net of amounts capitalized	57,170	95,512	147,927
Depreciation and amortization	457,621	491,329	525,011
Net loss (income) attributable to non-controlling interests	10,503	10,154	11,754
EBITDA	\$ 707,617	\$ 702,541	\$ 616,875

Geographic Information

The following table summarizes total long-lived assets attributed to the North America, South and Central America and other foreign locations:

	As of December 31,	
	2022	2021
Long-lived assets:		
North America	\$ 2,933,559	\$ 2,959,316
South and Central America	206,556	267,429
Other	108,222	106,376
Total long-lived assets	<u>\$ 3,248,337</u>	<u>\$ 3,333,121</u>

NOTE 23. SUPPLEMENTAL FINANCIAL INFORMATION

Research and Development

The following table presents the research and development costs incurred in connection with customers' orders:

	For the years ended December 31,		
	2022	2021	2020
Cost of sales - equipment	\$ 31,781	\$ 29,636	\$ 19,788
Research and development expenses	\$ 32,810	\$ 31,777	\$ 29,448

Advertising Costs

We incurred advertising expense of \$69.0 million, \$82.4 million and \$65.1 million for the years ended December 31, 2022, 2021 and 2020, respectively.

Cash and Cash Equivalents and Restricted Cash

The following table reconciles cash and cash equivalents and restricted cash, as presented in the Consolidated Balance Sheets to the total of the same as presented in the Consolidated Statements of Cash Flows:

	For the years ended December 31,		
	2022	2021	2020
Cash and cash equivalents, including restricted amounts, beginning of period:			
Cash and cash equivalents	\$ 535,894	\$ 896,005	\$ 1,519,431
Restricted cash	980	807	2,458
Total cash and cash equivalents, included restricted amounts, beginning of period	<u>\$ 536,874</u>	<u>\$ 896,812</u>	<u>\$ 1,521,889</u>
Cash and cash equivalents, including restricted amounts, end of period:			
Cash and cash equivalents	\$ 704,541	\$ 535,894	\$ 896,005
Restricted cash	1,342	980	807
Total cash and cash equivalents, included restricted amounts, end of period	<u>\$ 705,883</u>	<u>\$ 536,874</u>	<u>\$ 896,812</u>

Other Current Assets, Net and Other Non-current Assets, Net

The following table presents the components of *Other current assets, net* and *Other non-current assets, net*.

	As of December 31,	
	2022	2021
Other current assets, net:		
Inventory	\$ 123,606	\$ 103,084
Prepays and deposits	61,877	57,287
Trade accounts receivable - DISH Network	3,492	4,244
Other receivables - DISH Network	—	12,705
Other, net	21,471	21,124
Total other current assets	<u>\$ 210,446</u>	<u>\$ 198,444</u>
Other non-current assets, net:		
Capitalized software, net	\$ 116,841	\$ 124,701
Contract acquisition costs, net	64,447	82,986
Other receivables - DISH Network	74,923	77,920
Restricted marketable investment securities	11,056	13,262
Deferred tax assets, net	8,011	5,417
Restricted cash	1,342	980
Contract fulfillment costs, net	1,931	1,721
Other, net	38,511	31,254
Total other non-current assets, net	<u>\$ 317,062</u>	<u>\$ 338,241</u>

The following table presents the activity in our allowance for doubtful accounts, which is included within Other, net in each of Other current assets, net and Other non-current assets, net in the table above:

	For the years ended December 31,					
	2022		2021		2020	
	Other current assets, net	Other non-current assets, net	Other current assets, net	Other non-current assets, net	Other current assets, net	Other non-current assets, net
Balance at beginning of period	\$ —	\$ 16,709	\$ 1,747	\$ 12,869	\$ —	\$ —
Credit losses ⁽¹⁾	—	—	—	3,328	1,595	13,378
Foreign currency translation	—	—	(1,747)	1,159	152	(509)
Deductions	—	—	—	(647)	—	—
Balance at end of period	<u>\$ —</u>	<u>\$ 16,709</u>	<u>\$ —</u>	<u>\$ 16,709</u>	<u>\$ 1,747</u>	<u>\$ 12,869</u>

¹⁾ The impact of adopting ASC 326 on January 1, 2020 was a net increase to our allowance for doubtful accounts largely driven by a \$13.4 million reclassification from *Trade accounts receivables and contracts assets, net*.

Accrued Expenses and Other Current Liabilities and Other Non-Current Liabilities

The following table presents the components of *Accrued expenses and other current liabilities* and *Other non-current liabilities*:

	As of December 31,	
	2022	2021
Accrued expenses and other current liabilities:		
Accrued compensation	\$ 56,337	\$ 63,935
Operating lease obligation	17,854	16,781
Accrued interest	39,245	39,395
Accrued taxes	12,603	11,738
Accrual for license fee dispute	10,191	11,178
Trade accounts payable - DISH Network	669	503
Other	62,954	65,912
Total accrued expenses and other current liabilities	<u>\$ 199,853</u>	<u>\$ 209,442</u>
Other non-current liabilities:		
Accrual for license fee dispute	\$ 57,292	\$ 69,484
Contract liabilities	8,326	10,669
Other	54,169	56,273
Total other non-current liabilities	<u>\$ 119,787</u>	<u>\$ 136,426</u>

Inventory

The following table presents the components of inventory:

	As of December 31,	
	2022	2021
Raw materials	\$ 32,920	\$ 13,778
Work-in-process	16,408	11,705
Finished goods	74,278	77,601
Total inventory	<u>\$ 123,606</u>	<u>\$ 103,084</u>

Capitalized Software Costs

The following tables present the activity related to our capitalized software cost:

	As of December 31,	
	2022	2021
Net carrying amount of externally marketed software	<u>\$ 116,841</u>	<u>\$ 124,701</u>
Externally marketed software under development and not yet placed into service	<u>\$ 26,924</u>	<u>\$ 57,357</u>

	For the years ended December 31,		
	2022	2021	2020
Capitalized costs related to development of externally marketed software	\$ 23,105	\$ 33,543	\$ 38,655
Amortization expense relating to externally marketed software	\$ 30,965	\$ 25,288	\$ 23,780
Weighted-average useful life (in years)	4		

Supplemental and Non-cash Investing and Financing Activities

The following table presents the supplemental and non-cash investing and financing activities:

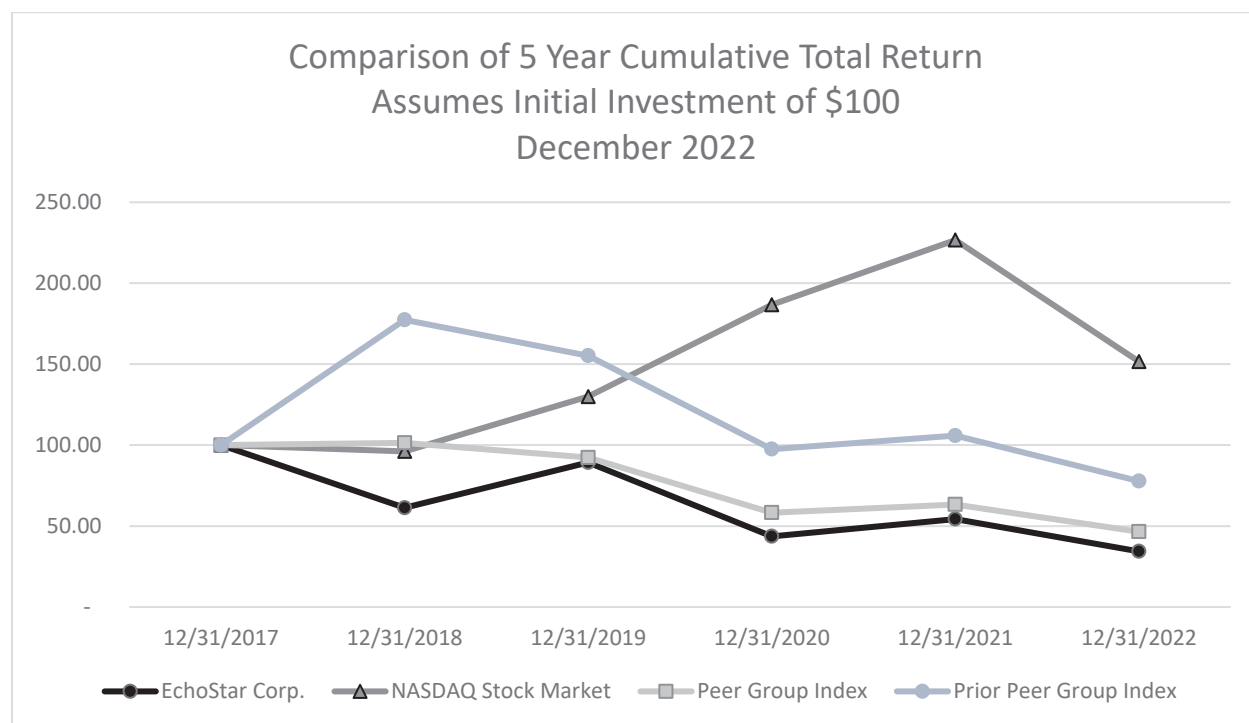
	For the years ended December 31,		
	2022	2021	2020
Supplemental disclosure of cash flow information:			
Cash paid for interest, net of amounts capitalized	\$ 56,731	\$ 87,901	\$ 139,280
Cash paid for income taxes	\$ 46,636	\$ 29,420	\$ 15,254
Non-cash investing and financing activities:			
Employee benefits paid in Class A common stock	\$ 7,041	\$ 7,125	\$ 6,921
Increase (decrease) in capital expenditures included in accounts payable, net	\$ 18,074	\$ 381	\$ (6,935)
Non-cash net assets received as part of the India JV formation	\$ 36,701	\$ —	\$ —

COMPARATIVE PERFORMANCE

The following graph sets forth the cumulative total stockholder return on EchoStar Corporation’s Class A Shares during the period from December 31, 2017 to December 31, 2022. The graph assumes the investment on December 31, 2017 of \$100 in (i) our Class A Shares, (ii) the NASDAQ Stock Market Index (US Companies), (iii) our chosen industry peer group for the year ended December 31, 2022 (the “Peer Group Index”) and (iv) our chosen industry peer group for the four years prior to December 31, 2022 (the “Prior Peer Group Index”). The graph reflects (i) reinvestment of dividends, (ii) market capitalization weighting and (iii) the spin-off in 2019 of the portion of our business that managed, marketed and provided (a) broadcast satellite services and (b) telemetry, tracking and control services and certain related assets and business operations, as though such spin-off occurred prior to the start of the period shown below.

The Peer Group Index is comprised of the following publicly traded companies: Gilat Satellite Networks Ltd., ViaSat, Inc., SES S.A., and Eutelsat Communications S.A. The Prior Peer Group Index is comprised of the companies in the Peer Group plus Intelsat S.A. Intelsat S.A. was removed from the Peer Group because it emerged from U.S. bankruptcy proceedings in February 2022 as a private company. Although the companies included in the Peer Group Indexes were selected because of similar industry characteristics, they are not entirely representative of our business.

Historical point-in-time daily foreign currency exchange rates were utilized for the calculations for foreign entities listed only on foreign exchanges included in the Peer Group Index. The stock price performance shown on this graph is not necessarily indicative of future price performance of our Class A Shares.



Total Return Analysis	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022
EchoStar Corp.	\$ 100.00	\$ 61.30	\$ 89.26	\$ 43.67	\$ 54.31	\$ 34.38
NASDAQ Stock Market	\$ 100.00	\$ 96.12	\$ 129.97	\$ 186.70	\$ 226.63	\$ 151.61
Peer Group Index	\$ 100.00	\$ 101.37	\$ 92.31	\$ 58.30	\$ 63.31	\$ 46.51
Prior Peer Group Index	\$ 100.00	\$ 177.37	\$ 155.19	\$ 97.48	\$ 105.86	\$ 77.78

CORPORATE PROFILE

BOARD OF DIRECTORS

Charles W. Ergen

Chairman of the Board

Pradman P. Kaul

Vice Chair

Michael T. Dugan

Director

R. Stanton Dodge

Director

Lisa W. Hershman

Director

C. Michael Schroeder

Director

Jeffrey R. Tarr

Director

William D. Wade

Director

TRANSFER AGENT

Computershare

Investor Services

P.O. Box 43006

Providence RI 02940-3078

ANNUAL MEETING

The 2023 Annual Meeting of Shareholders will be held on April 27, 2023.

For additional information, contact:

Investor Relations Department
EchoStar Corporation
100 Inverness Terrace East
Englewood, Colorado 80112
echostar.com

EXECUTIVE OFFICERS

Charles W. Ergen

Chairman

Hamid Akhavan

*Chief Executive Officer
and President*

Paul Gaske

Chief Operating Officer

Dean A. Manson

Chief Legal Officer and Secretary

Adrian Morris

Chief Technology Officer

Michelle Pearre

Chief Human Resources Officer

Ramesh Ramaswamy

Executive Vice President - International

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