
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

Form 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE FISCAL YEAR ENDED DECEMBER 31, 2019

OR

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

Commission file number: 333-31929

DISH DBS Corporation

(Exact name of registrant as specified in its charter)

Colorado

(State or other jurisdiction of incorporation or organization)

84-1328967

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

**9601 South Meridian Boulevard
Englewood, Colorado**
(Address of principal executive offices)

80112
(Zip Code)

Registrant's telephone number, including area code: **(303) 723-1000**

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

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 (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

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

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by check mark 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 Act). Yes No

The aggregate market value of the registrant's voting interests held by non-affiliates on June 30, 2019 was \$0.

As of February 24, 2020, the registrant's outstanding common stock consisted of 1,015 shares of common stock, \$0.01 par value per share.

The registrant meets the conditions set forth in General Instructions (I)(1)(a) and (b) of Form 10-K and is therefore filing this Annual Report on Form 10-K with the reduced disclosure format.

DOCUMENTS INCORPORATED BY REFERENCE

The following documents are incorporated into this Form 10-K by reference: **None**

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*This item has been omitted pursuant to the reduced disclosure format as set forth in General Instructions (I) (2) (a) and (c) of Form 10-K.

DISCLOSURE REGARDING FORWARD-LOOKING STATEMENTS

Unless otherwise required by the context, in this report, the words “DISH DBS,” the “Company,” “we,” “our” and “us” refer to DISH DBS Corporation and its subsidiaries, “DISH Network” refers to DISH Network Corporation, our parent company, and its subsidiaries, including us, and “EchoStar” refers to EchoStar Corporation and its subsidiaries.

This Annual Report on Form 10-K contains “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995, including, in particular, statements about our plans, objectives and strategies, growth opportunities in our industries and businesses, our expectations regarding future results, financial condition, liquidity and capital requirements, our estimates regarding the impact of regulatory developments and legal proceedings, and other trends and projections. Forward-looking statements are not historical facts and may be identified by words such as “future,” “anticipate,” “intend,” “plan,” “goal,” “seek,” “believe,” “estimate,” “expect,” “predict,” “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 Annual Report on Form 10-K and represent management’s current views and assumptions. Forward-looking statements are not guarantees of future performance, events or results and involve known and unknown risks, uncertainties and other factors, which may be beyond our control. 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, the following:

Competition and Economic Risks

- As the pay-TV industry has matured and bundled offers combining video, broadband and/or wireless services have become more prevalent and competitive, we face intense and increasing competition from providers of video, broadband and/or wireless services, which may require us to further increase subscriber acquisition and retention spending or accept lower subscriber activations and higher subscriber churn.
- Changing consumer behavior and competition from digital media companies that provide or facilitate the delivery of video content via the Internet may reduce our subscriber activations and may cause our subscribers to purchase fewer services from us or to cancel our services altogether, resulting in less revenue to us.
- Economic weakness and uncertainty may adversely affect our ability to grow or maintain our business.
- Our competitors may be able to leverage their relationships with programmers to reduce their programming costs and/or offer exclusive content that will place them at a competitive advantage to us.
- Our over-the-top (“OTT”) Sling TV Internet-based services face certain risks, including, among others, significant competition.
- If government regulations relating to the Internet change, we may need to alter the manner in which we conduct our Sling TV business, and/or incur greater operating expenses to comply with those regulations.
- Changes in how network operators handle and charge for access to data that travels across their networks could adversely impact our business.
- We face increasing competition from other distributors of unique programming services such as foreign language, sports programming and original content that may limit our ability to maintain subscribers that desire these unique programming services.

Operational and Service Delivery Risks

- If our operational performance and customer satisfaction were to deteriorate, our subscriber activations and our subscriber churn rate may be negatively impacted, which could in turn adversely affect our revenue.
- If our subscriber activations decrease, or if our subscriber churn rate, subscriber acquisition costs or retention costs increase, our financial performance will be adversely affected.
- Programming expenses are increasing and may adversely affect our future financial condition and results of operations.

- We depend on others to provide the programming that we offer to our subscribers and, if we fail to obtain or lose access to certain programming, our subscriber activations and our subscriber churn rate may be negatively impacted.
- We may not be able to obtain necessary retransmission consent agreements at acceptable rates, or at all, from local network stations.
- We may be required to make substantial additional investments to maintain competitive programming offerings.
- Any failure or inadequacy of our information technology infrastructure and communications systems or those of third parties that we use in our operations, including, without limitation, those caused by cyber-attacks or other malicious activities, could disrupt or harm our business.
- We currently depend on DISH Network to provide the vast majority of our satellite transponder capacity and other related services to us. Our business would be adversely affected if DISH Network ceases to provide these services to us and we are unable to obtain suitable replacement services from third parties.
- Technology in the pay-TV industry changes rapidly, and our success may depend in part on our timely introduction and implementation of, and effective investment in, new competitive products and services and our failure to do so could cause our products and services to become obsolete and could negatively impact our business.
- We rely on a single vendor or a limited number of vendors to provide certain key products or services to us such as information technology support, billing systems and security access devices, and the inability of these key vendors to meet our needs could have a material adverse effect on our business.
- We rely on a few suppliers and in some cases a single supplier for many components of our new set-top boxes, and any reduction or interruption in supplies or significant increase in the price of supplies could have a negative impact on our business.
- Our programming signals are subject to theft, and we are vulnerable to other forms of fraud that could require us to make significant expenditures to remedy.
- We depend on independent third parties to solicit orders for our DISH TV services that represent a meaningful percentage of our total gross new DISH TV subscriber activations.
- We have limited satellite capacity and failures or reduced capacity could adversely affect our DISH TV services.
- Our owned and leased satellites are subject to construction, launch, operational and environmental risks that could limit our ability to utilize these satellites.
- Satellite anomalies or technological failures could adversely affect the value of a particular satellite or result in a complete loss. Some of the satellites DISH Network acquired pursuant to the Master Transaction Agreement have experienced anomalies that may affect their useful lives or prohibit us from operating them to their currently expected capacity, and one or more of the satellites may suffer a technological failure, either of which could have an adverse effect on our business, financial condition and results of operations.
- We generally do not carry commercial in-orbit insurance on any of the satellites that we own and could face significant impairment charges if any of our owned satellites fail.
- We may have potential conflicts of interest with EchoStar due to our and DISH Network's common ownership and management.
- We rely on key personnel and the loss of their services may negatively affect our business.

Acquisition and Capital Structure Risks

- Our parent, DISH Network, has made substantial investments to acquire certain wireless spectrum licenses and other related assets. In addition, DISH Network has made substantial non-controlling investments in the Northstar Entities and the SNR Entities related to AWS-3 wireless spectrum licenses.

- Our parent, DISH Network, faces certain risks related to its non-controlling investments in the Northstar Entities and the SNR Entities.
- To the extent that our parent, DISH Network, commercializes its wireless spectrum licenses, it will face certain risks entering and competing in the wireless services industry and operating a wireless services business.
- We may pursue acquisitions and other strategic transactions to complement or expand our business that may not be successful, and we may lose up to the entire value of our investment in these acquisitions and transactions.
- We may need additional capital, which may not be available on acceptable terms or at all, to continue investing in our business and to finance acquisitions and other strategic transactions.
- We have substantial debt outstanding and may incur additional debt.
- Our parent, DISH Network, is controlled by one principal stockholder who is also our Chairman.

Legal and Regulatory Risks

- The rulings in the Telemarketing litigation requiring us to pay up to an aggregate amount of \$280 million and imposing certain injunctive relief against us, if upheld, would have a material adverse effect on our cash, cash equivalents and marketable investment securities balances and our business operations.
- Our business may be materially affected by the Tax Cuts and Jobs Act of 2017 (the “Tax Reform Act”). Negative or unexpected tax consequences could adversely affect our business, financial condition and results of operations.
- Our business depends on certain intellectual property rights and on not infringing the intellectual property rights of others.
- We are, and may become, party to various lawsuits which, if adversely decided, could have a significant adverse impact on our business, particularly lawsuits regarding intellectual property.
- Our ability to distribute video content via the Internet, including our Sling TV services, involves regulatory risk.
- Changes in the Cable Act of 1992 (“Cable Act”), and/or the rules of the Federal Communications Commission (“FCC”) that implement the Cable Act, may limit our ability to access programming from cable-affiliated programmers at nondiscriminatory rates.
- The injunction against our retransmission of distant networks, which is currently waived, may be reinstated.
- We are subject to significant regulatory oversight, and changes in applicable regulatory requirements, including any adoption or modification of laws or regulations relating to the Internet, could adversely affect our business.
- Our DISH TV services depend on FCC licenses that can expire or be revoked or modified and applications for FCC licenses that may not be granted.
- We are subject to digital high-definition (“HD”) “carry-one, carry-all” requirements that cause capacity constraints.
- Our business, investor confidence in our financial results and DISH Network’s stock price may be adversely affected if our internal controls are not effective.
- We may face other risks described from time to time in periodic and current reports we file with the Securities and Exchange Commission (“SEC”).

Other factors that could cause or contribute to such differences include, but are not limited to, those discussed under the caption “Risk Factors” in Part I, Item 1A in this Annual Report on Form 10-K, those discussed in “Management’s Narrative Analysis of Results of Operations” herein and those discussed in other documents we file with the SEC. All cautionary statements made or referred to herein should be read as being applicable to all forward-looking statements wherever they appear. Investors should consider the risks and uncertainties described or referred to herein and should not place undue reliance on any forward-looking statements. The forward-looking statements speak only as of the date made, and we expressly disclaim any obligation to update these forward-looking statements.

PART I

Item 1. BUSINESS

Brief Description of our Business

DISH DBS is a holding company and an indirect, wholly-owned subsidiary of DISH Network, a publicly traded company listed on the Nasdaq Global Select Market. DISH DBS was formed under Colorado law in January 1996. Our principal executive offices are located at 9601 South Meridian Boulevard, Englewood, Colorado 80112 and our telephone number is (303) 723-1000. We refer readers of this report to DISH Network's Annual Report on Form 10-K for the year ended December 31, 2019. Our subsidiaries operate one business segment.

Pay-TV

We offer pay-TV services under the DISH[®] brand and the Sling[®] brand (collectively "Pay-TV" services). The DISH branded pay-TV service consists of, among other things, FCC licenses authorizing us to use direct broadcast satellite ("DBS") and Fixed Satellite Service ("FSS") spectrum, our owned and leased satellites, receiver systems, broadcast operations, customer service facilities, a leased fiber optic network, in-home service and call center operations, and certain other assets utilized in our operations ("DISH TV"). We also design, develop and distribute receiver systems and provide digital broadcast operations, including satellite uplinking/downlinking, transmission and other services to third-party pay-TV providers. The Sling branded pay-TV services consist of, among other things, multichannel, live-linear streaming OTT Internet-based domestic, international and Latino video programming services ("Sling TV"). As of December 31, 2019, we had 11.986 million Pay-TV subscribers in the United States, including 9.394 million DISH TV subscribers and 2.592 million Sling TV subscribers.

Master Transaction Agreement

On May 19, 2019, DISH Network entered into a Master Transaction Agreement with EchoStar (the "Master Transaction Agreement") pursuant to which, on September 10, 2019, EchoStar transferred to DISH Network certain assets and liabilities of its EchoStar Satellite Services segment. As a result of the Master Transaction Agreement, certain agreements that we had with EchoStar have been transferred to DISH Network. See Note 1 "*Recent Developments*" in the Notes to DISH Network's Annual Report on Form 10-K for the year ended December 31, 2019 for further information on the Master Transaction Agreement.

Business Strategy

Our business strategy is to be the best provider of video services in the United States by providing products with the best technology, outstanding customer service, and great value. We promote our Pay-TV services as providing our subscribers with a better "price-to-value" relationship than those available from other subscription television service providers.

- *Products with the Best Technology.* We offer a wide selection of local and national HD programming and are a technology leader in our industry, offering award-winning DVRs (including our Hopper[®] whole-home HD DVR), multiple tuner receivers, 1080p and 4K video on demand and external hard drives. We offer several Sling TV services, including Sling Orange (our single-stream Sling domestic service), Sling Blue (our multi-stream Sling domestic service), Sling International, Sling Latino, among others, as well as add-on extras, pay-per-view events and a cloud based DVR service.
- *Outstanding Customer Service.* We strive to provide outstanding customer service by improving the quality of the initial installation of subscriber equipment, improving the reliability of our equipment, better educating our customers about our products and services, and resolving customer problems promptly and effectively when they arise.

- *Great Value.* We have historically been viewed as the low-cost provider in the pay-TV industry in the United States. However, today with Dish TV, we are focused on our brand promise “Tuned into You” and a message of Service, Value and Technology. For example, for certain new and qualifying customers, we guarantee our pricing for certain programming packages and equipment for a two-year commitment period. We also offer a differentiated customer experience with our award winning Hopper Platform that integrates voice control powered by Google Assistant, access to apps including Netflix, Prime Video and You Tube, and the ability to watch live, recorded and On Demand content anywhere with the Dish Anywhere mobile application. As another example, our Sling Orange service and our Sling Blue service are two of the lowest priced live-linear online streaming services in the industry.

Relationship with EchoStar

On January 1, 2008, DISH Network completed the distribution of its technology and set-top box business and certain infrastructure assets (the “Spin-off”) into a separate publicly-traded company, EchoStar. DISH Network and EchoStar operate as separate publicly-traded companies and neither entity has any ownership interest in the other. However, a substantial majority of the voting power of the shares of both DISH Network and EchoStar is owned beneficially by Charles W. Ergen, our Chairman, and by certain entities established by Mr. Ergen for the benefit of his family. Furthermore, we have an authorized representative arrangement with Hughes, a wholly owned subsidiary of EchoStar, under the MSA which offers satellite broadband Internet services to customers. See “*Item 1A. Risk Factors*” and Note 17 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

Share Exchange. On February 28, 2017, DISH Network and EchoStar and certain of their respective subsidiaries completed the transactions contemplated by the Share Exchange Agreement (the “Share Exchange Agreement”) that was previously entered into on January 31, 2017 (the “Share Exchange”). Pursuant to the Share Exchange Agreement, among other things, EchoStar transferred to us certain assets and liabilities of the EchoStar technologies and EchoStar broadcasting businesses, consisting primarily of the businesses that design, develop and distribute digital set-top boxes, provide satellite uplink services and develop and support streaming video technology, as well as certain investments in joint ventures, spectrum licenses, real estate properties and EchoStar’s ten percent non-voting interest in Sling TV Holding L.L.C. (the “Transferred Businesses”), and in exchange, we transferred to EchoStar the 6,290,499 shares of preferred tracking stock issued by EchoStar (the “EchoStar Tracking Stock”) and 81.128 shares of preferred tracking stock issued by Hughes Satellite Systems Corporation, a subsidiary of EchoStar (the “HSSC Tracking Stock,” and together with the EchoStar Tracking Stock, collectively, the “Tracking Stock”), that tracked the residential retail satellite broadband business of Hughes Network Systems, L.L.C. (“HNS”), a wholly-owned subsidiary of Hughes. In connection with the Share Exchange, DISH Network and EchoStar and certain of their respective subsidiaries entered into certain agreements covering, among other things, tax matters, employee matters, intellectual property matters and the provision of transitional services.

As the Share Exchange was a transaction between entities that are under common control, accounting rules require that our Consolidated Financial Statements include the results of the Transferred Businesses for all periods presented, including periods prior to the completion of the Share Exchange. See Note 17 to our Consolidated Financial Statements in this Annual Report on Form 10-K on our Related Party Transactions with EchoStar for further information.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the informational requirements of the Exchange Act and accordingly file our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and other information with the SEC. As an electronic filer, our public filings are also maintained on the SEC’s Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. The address of that website is <http://www.sec.gov>.

WEBSITE ACCESS

Our annual reports on 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 Exchange Act also may be accessed free of charge through the website of our parent company, DISH Network, as soon as reasonably practicable after we have electronically filed such material with, or furnished it to, the SEC. The address of that website is <http://www.dish.com>.

We have adopted a written code of ethics that applies to all of our directors, officers and employees, including our principal executive officer and senior financial officers, in accordance with Section 406 of the Sarbanes-Oxley Act of 2002 and the rules of the SEC promulgated thereunder. Our code of ethics is available on the website of our parent company, DISH Network, at <http://www.dish.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 DISH Network's website.

Item 1A. RISK FACTORS

The risks and uncertainties described below are not the only ones facing us. If any of the following events occur, our business, financial condition or results of operations could be materially and adversely affected.

Competition and Economic Risks

As the pay-TV industry has matured and bundled offers combining video, broadband and/or wireless services have become more prevalent and competitive, we face intense and increasing competition from providers of video, broadband and/or wireless services, which may require us to further increase subscriber acquisition and retention spending or accept lower subscriber activations and higher subscriber churn.

Our business has historically focused on providing pay-TV services and we have traditionally competed against satellite television providers and cable companies, many of whom have greater financial, marketing and other resources than we do. In recent years, industries have been converging as providers of video, broadband and wireless services compete to deliver the next generation of service offerings. The pay-TV industry has matured and bundled offers combining video, broadband and/or wireless services have become more prevalent and competitive. In some cases, certain competitors have been able to potentially subsidize the price of video services with the price of broadband and/or wireless services. These developments, among others, have contributed to intense and increasing competition, which we expect to continue.

With respect to our DISH TV services, we and our competitors increasingly must seek to attract a greater proportion of new subscribers from each other's existing subscriber bases rather than from first-time purchasers of pay-TV services. In addition, because other pay-TV providers may be seeking to attract a greater proportion of their new subscribers from our existing subscriber base, we are required to increase retention spending and/or provide greater discounts or credits to acquire and retain subscribers who may spend less on our services. If our Pay-TV average monthly revenue per subscriber ("Pay-TV ARPU") decreases or does not increase commensurate with increases in programming or other costs, our margins may be reduced and the long-term value of a subscriber would then decrease. In addition, our Sling TV subscribers on average purchase lower priced programming services than DISH TV subscribers. Accordingly, an increase in Sling TV subscribers has a negative impact on our Pay-TV ARPU.

This increasingly competitive environment may require us to increase subscriber acquisition and retention spending or accept lower subscriber activations and higher subscriber churn. Further, as a result of this increased competitive environment and the maturation of the pay-TV industry, future growth opportunities of our DISH TV business may be limited and our margins may be reduced, which could have a material adverse effect on our business, results of operations, financial condition and cash flow. Our gross new DISH TV subscriber activations continue to be negatively impacted by stricter customer acquisition policies (including a focus on attaining higher quality subscribers) and increased competitive pressures, including aggressive marketing, more aggressive retention efforts, bundled discount offers combining broadband, video and/or wireless services and other discounted promotional offers. There can be no assurance that our gross new DISH TV subscriber activations, net DISH TV subscriber additions, and DISH TV churn rate will not continue to be negatively impacted and that the pace of such negative impact will not accelerate.

In addition, MVPDs and other companies such as programmers are offering smaller packages of programming channels directly to customers, at prices lower than our video service package offerings. These offerings could adversely affect demand for our Pay-TV services or cause us to modify our programming packages, which may reduce our margins.

Moreover, mergers and acquisitions, joint ventures and alliances among cable television providers, telecommunications companies, programming providers and others may result in, among other things, greater scale and financial leverage and increase the availability of offerings from providers capable of bundling video, broadband and/or wireless services in competition with our services, and may exacerbate the risks described above. For example, in May 2016, Charter completed its acquisition of Time Warner Cable and Bright House Networks (collectively “New Charter”), which created the second largest cable television provider and third largest MVPD in the United States. This transaction created a duopoly, resulting in two broadband providers, New Charter and Comcast, controlling the geographic areas covering the vast majority of the high-speed broadband homes in the country. In addition, a significant proportion of New Charter’s high-speed broadband subscribers may lack access to alternative high-speed broadband options. Further, New Charter may be able to, among other things, foreclose or degrade our online video offerings at various points in the broadband pipe; impose data caps on consumers who access our online video offerings; and pressure third-party content owners and programmers to withhold online rights from us and raise our and other MVPDs’ third-party programming costs.

As a result of AT&T’s 2015 acquisition of DirecTV, our direct competitor and the largest satellite TV provider in the United States now has increased access to capital, access to AT&T’s nationwide platform for wireless mobile video, and the ability to more seamlessly bundle its video services with AT&T’s broadband Internet access and wireless services. AT&T also has an OTT service, AT&T TV Now, that distributes video directly to consumers over the Internet. The combined company may also be able to, among other things, utilize its increased leverage over third-party content owners and programmers to withhold online rights from us and reduce the price it pays for programming at the expense of other MVPDs, including us; thwart our entry into the wireless market, by, among other things, refusing to enter into data roaming agreements with us; underutilize key orbital spectrum resources that could be more efficiently used by us; foreclose or degrade our online video offerings at various points in the broadband pipe; and impose data caps on consumers who access our online video offerings.

In October 2016, AT&T announced its acquisition of Time Warner (which owns certain Turner, HBO and Cinemax channels), which was completed in June 2018. With the completion of this transaction, the risks discussed above posed by the AT&T and DirecTV merger will be further exacerbated, as the addition of Time Warner’s media holdings, which include content, such as HBO, TBS, TNT, CNN, and movies, would, among other things, provide the combined company increased scale and leverage in the converging video, mobile, and broadband industries and may make it more difficult for us to obtain access to Time Warner’s programming networks on nondiscriminatory and fair terms, or at all.

For example, in October 2018, AT&T removed its HBO and Cinemax channels from our DISH TV and Sling TV programming lineup, as we and AT&T have been unable to negotiate the terms and conditions of a new programming carriage contract. Furthermore, AT&T offers its programming, including its HBO and Cinemax channels, directly to consumers over the Internet and provides HBO for free to its subscribers under certain offers. In addition, AT&T’s current practice of offering wireless subscribers access to owned video content over the Internet without counting against a subscriber’s monthly data caps (“zero rating”) may give an unfair advantage to AT&T’s own video content, which currently includes, among others, DirecTV services, including “AT&T TV Now,” and AT&T’s “Watch TV” on mobile devices.

In July 2019, Fox Regional Sports Networks (“Fox RSNs”) also removed certain of its channels from our DISH TV and Sling TV programming lineup. In August 2019, Sinclair Broadcast Group acquired the Fox RSNs. There can be no assurance that channel removals, such as the removal of the channels discussed above or others, will not have a material adverse effect on our business, results of operations and financial condition or otherwise disrupt our business.

In September 2019, Nexstar Media Group (“Nexstar”) completed its acquisition of Tribune Media Company (“Tribune”). The combined company (“New Nexstar”) is now the nation’s largest broadcast conglomerate. New Nexstar may be able to use its scale to increase the leverage that it holds in retransmission consent negotiations which could, among other things, raise our programming costs and/or cause us to modify our programming packages as a result of programming interruptions.

In December 2019, Viacom Inc. (“Viacom”) (which owns certain Nickelodeon, MTV and Comedy Central channels) and CBS Corporation completed their merger to create ViacomCBS Inc. (“ViacomCBS”). ViacomCBS may be able to use its scale to increase the leverage that it holds in programming network and retransmission consent negotiations which could, among other things, raise our programming costs and/or cause us to modify our programming packages as a result of programming interruptions.

As the pay-TV industry is mature, our strategy has included an emphasis on acquiring and retaining higher quality subscribers, even if it means that we will acquire and retain fewer overall subscribers. We evaluate the quality of subscribers based upon a number of factors, including, among others, profitability. Our DISH TV subscriber base has been declining due to, among other things, this strategy and the factors described above. There can be no assurance that our DISH TV subscriber base will not continue to decline. In the event that our DISH TV subscriber base continues to decline, it could have a material adverse long-term effect on our business, results of operations, financial condition and cash flow.

Changing consumer behavior and competition from digital media companies that provide or facilitate the delivery of video content via the Internet may reduce our subscriber activations and may cause our subscribers to purchase fewer services from us or to cancel our services altogether, resulting in less revenue to us.

Our business has historically focused on providing pay-TV services, including our DISH TV and Sling TV services. We face competition from providers of video content distributed over the Internet including services with live-linear television programming, as well as single programmer offerings and offerings of large libraries of on-demand content, including in certain cases original content. These providers include, among others, Netflix, Hulu, Apple, Amazon, Alphabet, Disney, Verizon, AT&T, ViacomCBS, STARZ, Fubo and Philo. Many of these companies have larger customer bases, stronger brand recognition and greater financial, marketing and other resources than we do. In addition, traditional providers of video entertainment, including broadcasters, cable channels and MVPDs, are increasing their Internet-based video offerings. Some of these services charge nominal or no fees for access to their content, which could adversely affect demand for our Pay-TV services. Moreover, new technologies have been, and will likely continue to be, developed that further increase the number of competitors we face with respect to video services, including competition from piracy-based video offerings.

These products and services are also driving rapid changes in consumer behavior as consumers seek more control over when, where and how they consume content and access communications services. In particular, through technological advancements and with the large increase in the number of consumers with broadband service, a significant amount of video content has become available through online content providers for users to stream and view on their personal computers, televisions, phones, tablets, videogame consoles, and other devices, some without charging a fee to access the content. Similarly, while our customers can use their traditional video subscription to access mobile programming, an increasing number of customers are also using mobile devices as the sole means of viewing video, and an increasing number of non-traditional video providers are developing content and technologies to satisfy that demand. These technological advancements, changes in consumer behavior, and the increasing number of choices available to consumers with regard to the means by which consumers obtain video content may cause DISH TV subscribers to disconnect our services (“cord cutting”), downgrade to smaller, less expensive programming packages (“cord shaving”) or elect to purchase through online content providers a certain portion of the services that they would have historically purchased from us, such as pay per view movies, resulting in less revenue to us. There can be no assurance that our DISH TV services will be able to compete with these other providers of digital media. Therefore, these technological advancements and changes in consumer behavior could reduce our gross new DISH TV subscriber activations and could have a material adverse effect on our business, results of operations and financial condition or otherwise disrupt our business.

Our failure to effectively anticipate or adapt to competition or changes in consumer behavior, including with respect to younger consumers, could have a material adverse effect on our business, results of operations and financial condition or otherwise disrupt our business.

Economic weakness and uncertainty may adversely affect our ability to grow or maintain our business.

A substantial majority of our revenue comes from residential customers whose spending patterns may be affected by economic weakness and uncertainty. Our ability to grow or maintain our business may be adversely affected by economic weakness and uncertainty and other factors that may adversely affect the pay-TV industry. In particular, economic weakness and uncertainty could result in the following:

- ***Fewer subscriber activations and increased subscriber churn rate.*** We could face fewer subscriber activations and increased subscriber churn rate due to, among other things: (i) certain economic factors that impact consumers, including, among others, rising interest rates, a potential downturn in the housing market in the United States (including a decline in housing starts) and higher unemployment, which could lead to a lack of consumer confidence and lower discretionary spending; (ii) increased price competition for our products and services; and (iii) the potential loss of independent third-party retailers, who generate a meaningful percentage of our gross new DISH TV subscriber activations, because many of them are small businesses that are more susceptible to the negative effects of economic weakness. In particular, our DISH TV churn rate may increase with respect to subscribers who purchase our lower tier programming packages and who may be more sensitive to economic weakness, including, among others, our pay-in-advance subscribers.
- ***Lower Pay-TV ARPU.*** Our subscribers may disconnect our services and a growing share of pay-TV customers are cord shaving to downgrade to smaller, less expensive programming packages or electing to purchase through online content providers a certain portion of the services that they would have historically purchased from us, such as pay per view movies. Cord cutting and/or cord shaving by our subscribers could negatively impact our Pay-TV ARPU. In addition, Sling TV subscribers on average purchase lower priced programming services than DISH TV subscribers, and therefore, as Sling TV subscribers increase, it will have a negative impact on Pay-TV ARPU.
- ***Higher subscriber acquisition and retention costs.*** Our profits may be adversely affected by increased subscriber acquisition and retention costs necessary to attract and retain subscribers during a period of economic weakness.

Our competitors may be able to leverage their relationships with programmers to reduce their programming costs and/or offer exclusive content that will place them at a competitive advantage to us.

The cost of programming represents the largest percentage of our overall costs. Certain of our competitors own directly or are affiliated with companies that own programming content that may enable them to obtain lower programming costs or offer exclusive programming that may be attractive to prospective subscribers. Unlike our larger cable and satellite competitors, some of which also provide IPTV services, we have not made significant investments in programming providers. For example, in January 2011, the FCC and the Department of Justice approved a transaction between Comcast and General Electric pursuant to which they joined their programming properties, including NBC, Bravo and many others that are available in the majority of our programming packages, in a venture, NBCUniversal, controlled by Comcast. In March 2013, Comcast completed the acquisition of substantially all of General Electric's remaining interest in NBCUniversal. This transaction may affect us adversely by, among other things, making it more difficult for us to obtain access to NBCUniversal's programming networks on nondiscriminatory and fair terms, or at all. The FCC conditioned its approval on, among other things, Comcast complying with the terms of the FCC's order on network neutrality, even if that order is vacated by judicial or legislative action, and Comcast licensing its affiliated content to us, other traditional pay-TV providers and certain providers of video services over the Internet on fair and nondiscriminatory terms and conditions, including, among others, price. However, in January 2018, the prohibition on exclusivity expired, and we can no longer rely on these protections.

In October 2016, AT&T announced its acquisition of Time Warner (which owns certain Turner, HBO and Cinemax channels), which was completed in June 2018. This transaction joined DirecTV, which was acquired by AT&T in 2015, with Time Warner's media holdings, which include content such as HBO, TBS, TNT, CNN, and movies. This transaction may affect us adversely by, among other things, making it more difficult for us to obtain access to Time Warner programming networks on nondiscriminatory and fair terms, or at all. For example, in October 2018, AT&T removed its HBO and Cinemax channels from our DISH TV and Sling TV programming lineup, as we and AT&T have been unable to negotiate the terms and conditions of a new programming carriage contract. Furthermore, AT&T offers its programming, including its HBO and Cinemax channels, directly to consumers over the Internet and provides HBO for free to its subscribers under certain offers.

Our OTT Sling TV Internet-based services face certain risks, including, among others, significant competition.

Our Sling TV services face a number of risks, including, among others, the following, which may have a material adverse effect on our business, results of operations and financial condition or otherwise disrupt our business:

- We face increasingly robust competition from providers of video content distributed over the Internet including services with live-linear television programming, as well as single programmer offerings and offerings of large libraries of on-demand content, including in certain cases original content. These providers include, among others, Netflix, Hulu, Apple, Amazon, Alphabet, Disney, Verizon, AT&T, ViacomCBS, STARZ, Fubo and Philo. Many of these companies have larger customer bases, stronger brand recognition and greater financial, marketing and other resources. Some of these services charge nominal or no fees for access to their content. For example, AT&T offers its programming, including its HBO and Cinemax channels, directly to consumers over the Internet and provides HBO for free to its subscribers under certain offers. In addition, some services, such as Disney+ and Netflix, provide content for free to subscribers of certain wireless services. We also face competition from piracy based video offerings;
- We offer a limited amount of programming content, and there can be no assurances that we will be able to maintain or increase the amount or type of programming content that we may offer to keep pace with, or to differentiate our Sling TV services from, other providers of online video content;
- We rely on streaming-capable devices to deliver our Sling TV services, and if we are not successful in maintaining existing, and creating new, relationships, or if we encounter technological, content licensing or other impediments to our streaming content, we may not be able to grow and maintain our Sling TV services, we may incur additional expense or our business could otherwise be adversely impacted;
- We may incur significant expenses to market our Sling TV services and build brand awareness, which could have a negative impact on the profitability of our Sling TV services;
- We may not be able to timely scale our technology, systems and operational practices related to our Sling TV services to effectively and reliably handle growth in subscribers and features related to our services; and
- The adoption or modification of laws and regulations relating to the Internet could limit or otherwise adversely affect the manner in which we conduct our Sling TV services and could cause us to incur additional expenses or alter our business model.

If government regulations relating to the Internet change, we may need to alter the manner in which we conduct our Sling TV business, and/or incur greater operating expenses to comply with those regulations.

The adoption or modification of laws or regulations relating to the Internet could limit or otherwise adversely affect the manner in which we currently conduct our Sling TV business. Changes in laws or regulations that adversely affect the growth, popularity or use of the Internet, including Open Internet rules, could decrease the demand for our Sling TV services and increase our cost of providing our Sling TV services. Given the lack of laws in the United States to prevent network operators from discriminating against the legal traffic that crosses their networks, coupled with potentially significant political and economic power of local network operators, we could experience discriminatory or anti-competitive practices that could impede our growth, cause us to incur additional expense or otherwise negatively affect our business.

We cannot predict with any certainty the impact to our Sling TV business that may result from changes in laws or regulations that adversely affect the growth, popularity or use of the Internet, including Open Internet rules.

Changes in how network operators handle and charge for access to data that travels across their networks could adversely impact our business.

We rely upon the ability of consumers to access our Sling TV services through the Internet. If network operators block, restrict or otherwise impair access to our Sling TV services over their networks, our Sling TV business could be negatively affected. To the extent that network operators implement usage based pricing, including meaningful bandwidth caps, or otherwise try to monetize access to their networks by data providers, we could incur greater operating expenses and our Sling TV subscriber count could be negatively impacted. Furthermore, to the extent network operators create tiers of Internet access service and either charge us for or prohibit us from being available through these tiers, our Sling TV business could be negatively impacted.

In addition, many network operators that provide consumers with broadband service also provide these consumers with video programming, and these network operators may have an incentive to use their network infrastructure in a manner adverse to our continued growth and success. For example, as a result of AT&T's acquisition of DirecTV and the completion of the New Charter merger, these risks may be exacerbated to the extent these and other network operators are able to provide preferential treatment to their data. Furthermore, AT&T's current zero rating practice may give an unfair advantage to AT&T's own video services, which currently include, among others, DirecTV services, including "AT&T TV Now" and AT&T's "Watch TV."

We cannot predict with any certainty the impact to our Sling TV business that may result from changes in how network operators handle and charge for access to data that travels across their networks.

We face increasing competition from other distributors of unique programming services such as foreign language, sports programming and original content that may limit our ability to maintain subscribers that desire these unique programming services.

We face increasing competition from other distributors of unique programming services such as foreign language, sports programming and original content including programming distributed over the Internet. There can be no assurance that we will maintain subscribers that desire these unique programming services. For example, the increasing availability of foreign language programming from our competitors, which in certain cases has resulted from our inability to renew programming agreements on an exclusive basis or at all, as well as competition from piracy-based video offerings, could contribute to an increase in our subscriber churn rate. Our agreements with distributors of foreign language programming have varying expiration dates, and some agreements are on a month-to-month basis. There can be no assurance that we will be able to grow or maintain subscribers that desire these unique programming services such as foreign language and sports programming.

Operational and Service Delivery Risks

If our operational performance and customer satisfaction were to deteriorate, our subscriber activations and our subscriber churn rate may be negatively impacted, which could in turn adversely affect our revenue.

If our operational performance and customer satisfaction were to deteriorate, we may experience a decrease in subscriber activations and an increase in our subscriber churn rate, which could have a material adverse effect on our business, financial condition and results of operations. To improve our operational performance, we continue to make investments in staffing, training, information systems, and other initiatives, primarily in our call center and in-home service operations. These investments are intended to help combat inefficiencies introduced by the increasing complexity of our business, improve customer satisfaction, reduce subscriber churn, increase productivity, and allow us to scale better over the long run. We cannot, however, be certain that our spending will ultimately be successful in improving our operational performance, and if unsuccessful, we may have to incur higher costs to improve our operational performance. While we believe that such costs will be outweighed by longer-term benefits, there can be no assurance when or if we will realize these benefits at all. If we are unable to combat the deterioration of our operational performance, our future subscriber activations and existing subscriber churn rate may be negatively impacted, which could in turn adversely affect our revenue growth and results of operations.

If our subscriber activations decrease, or if our subscriber churn rate, subscriber acquisition costs or retention costs increase, our financial performance will be adversely affected.

We may incur increased costs to acquire new subscribers and retain existing subscribers. Our gross new DISH TV subscriber activations, net DISH TV subscriber additions, and DISH TV churn rate continue to be negatively impacted by stricter customer acquisition and retention policies for our DISH TV subscribers, including an emphasis on acquiring and retaining higher quality subscribers. In addition, our subscriber acquisition costs could increase as a result of increased spending for advertising and, with respect to our DISH TV services, the installation of more DVR receivers, which are generally more expensive than other receivers. Retention costs with respect to our DISH TV services may be driven higher by increased upgrades of existing subscribers' equipment to HD and DVR receivers. Although we expect to continue to incur expenses, such as providing retention credits and other subscriber acquisition and retention expenses, to attract and retain subscribers, there can be no assurance that our efforts will generate new subscribers or result in a lower churn rate. Additionally, certain of our promotions, including, among others, pay-in-advance, continue to allow consumers with relatively lower credit scores to become subscribers. These subscribers typically churn at a higher rate.

Our subscriber acquisition costs and our subscriber retention costs can vary significantly from period to period and can cause material variability to our net income (loss) and free cash flow. Any material increase in subscriber acquisition or retention costs from current levels could have a material adverse effect on our business, financial condition and results of operations.

Programming expenses are increasing and may adversely affect our future financial condition and results of operations.

Our programming costs currently represent the largest component of our total expense and we expect these costs to continue to increase on a per subscriber basis. The pay-TV industry has continued to experience an increase in the cost of programming, especially local broadcast channels and sports programming. In addition, certain programming costs are rising at a much faster rate than wages or inflation. These factors may be exacerbated by the increasing trend of consolidation in the media industry, which may further increase our programming expenses. Our ability to compete successfully will depend, among other things, on our ability to continue to obtain desirable programming and deliver it to our subscribers at competitive prices.

When offering new programming, or upon expiration of existing contracts, programming suppliers have historically attempted to increase the rates that they charge us for programming. We expect this practice to continue, which, if successful, would increase our programming costs. In addition, our programming expenses may also increase as we add programming to our video services or distribute existing programming to our customers through additional delivery services, such as Sling TV. As a result, our margins may face further pressure if we are unable to renew our long-term programming contracts on acceptable pricing and other economic terms. Alternatively, to attempt to mitigate the effect of price increases or for other reasons, we may elect not to carry or may be unable to carry certain channels, which could adversely affect our subscriber growth or result in higher churn.

In addition, increases in programming costs cause us to increase the rates that we charge our Pay-TV subscribers, which could in turn cause our existing Pay-TV subscribers to disconnect our service or cause potential new Pay-TV subscribers to choose not to subscribe to our service. Therefore, we may be unable to pass increased programming costs on to our customers, which could have a material adverse effect on our business, financial condition and results of operations.

We depend on others to provide the programming that we offer to our subscribers and, if we fail to obtain or lose access to certain programming, our subscriber activations and our subscriber churn rate may be negatively impacted.

We depend on third parties to provide us with programming services. Our programming agreements have remaining terms ranging from less than one to up to several years and contain various renewal, expiration and/or termination provisions. We may not be able to renew these agreements on acceptable terms or at all, and these agreements may be terminated prior to expiration of their original term. In recent years, negotiations over programming carriage contracts generally remain contentious, and certain programmers have, in the past, limited our access to their programming in connection with those negotiations and the scheduled expiration of their programming carriage contracts with us. As national and local programming interruptions and threatened programming interruptions have become more frequent in recent years, our net Pay-TV subscriber additions, gross new DISH TV subscriber activations, and DISH TV churn rate have been negatively impacted as a result of programming interruptions and threatened programming interruptions in connection with the scheduled expiration of programming carriage contracts with content providers. We cannot predict with any certainty the impact to our net Pay-TV subscriber additions, gross new DISH TV subscriber activations, and DISH TV churn rate resulting from programming interruptions or threatened programming interruptions that may occur in the future. As a result, we may at times suffer from periods of lower net Pay-TV subscriber additions or higher net Pay-TV subscriber losses.

We typically have a few programming contracts with major content providers up for renewal each year and if we are unable to renew any of these agreements or the other parties terminate the agreements, there can be no assurance that we would be able to obtain substitute programming, or that such substitute programming would be comparable in quality or cost to our existing programming. In addition, failure to obtain access to certain programming or loss of access to programming, particularly programming provided by major content providers and/or programming popular with our subscribers, could have a material adverse effect on our business, financial condition and results of operations, including, among other things, our net Pay-TV subscriber additions, gross new DISH TV subscriber activations, and DISH TV churn rate.

We may not be able to obtain necessary retransmission consent agreements at acceptable rates, or at all, from local network stations.

The Copyright Act generally gives satellite companies a statutory copyright license to retransmit local broadcast channels by satellite back into the market from which they originated, subject to obtaining the retransmission consent of local network stations that do not elect “must carry” status, as required by the Communications Act. If we fail to reach retransmission consent agreements with such broadcasters, we cannot carry their signals. This could have an adverse effect on our strategy to compete with cable and other satellite companies that provide local signals. While we have been able to reach retransmission consent agreements with most of these local network stations, from time to time there are stations with which we have not been able to reach an agreement. For example, currently certain local network stations, including, among others, Mission Broadcasting, Inc., Marshall Broadcasting Group and Northwest Broadcast Stations have removed their channels from our DISH TV lineup, as we have been unable to negotiate the terms and conditions of a new programming carriage contract. We cannot be sure that we will secure these agreements or that we will secure new agreements on acceptable terms, or at all, upon the expiration of our current retransmission consent agreements, some of which are short-term. In recent years, national broadcasters have used their ownership of certain local broadcast stations to require us to carry additional cable programming in exchange for retransmission consent of their local broadcast stations. These requirements may place constraints on available capacity on our satellites for other programming. Furthermore, the rates we are charged for retransmitting local channels have been increasing substantially and may exceed our ability to increase our prices to our customers, which could have a material adverse effect on our business, financial condition and results of operations.

We may be required to make substantial additional investments to maintain competitive programming offerings.

We believe that the availability and extent of programming and other value-added services such as access to video via mobile devices continue to be significant factors in consumers' choice among pay-TV providers. Other pay-TV providers may have more successfully marketed and promoted their programming packages and value-added services and may also be better equipped and have greater resources to increase their programming offerings and value-added services to respond to increasing consumer demand. We may be required to make substantial additional investments in infrastructure to respond to competitive pressure to deliver enhanced programming, and other value-added services, and there can be no assurance that we will be able to compete effectively with offerings from other pay-TV providers.

Any failure or inadequacy of our information technology infrastructure and communications systems or those of third parties that we use in our operations, including, without limitation, those caused by cyber-attacks or other malicious activities, could disrupt or harm our business.

The capacity, reliability and security of our information technology hardware and software infrastructure (including our billing systems) and communications systems, or those of third parties that we use in our operations, are important to the operation of our current business, which would suffer in the event of system failures or cyber-attacks. Likewise, our ability to expand and update our information technology infrastructure in response to our growth and changing needs is important to the continued implementation of our new service offering initiatives. Our inability to expand or upgrade our technology infrastructure could have adverse consequences, which could include, among other things, the delayed implementation of new service offerings, service or billing interruptions, and the diversion of development resources. We rely on third parties for developing key components of our information technology and communications systems and ongoing service. Some of our key systems and operations, including those supplied by third-party providers, are not fully redundant, and our disaster recovery planning cannot account for all eventualities. Interruption and/or failure of any of these systems could disrupt our operations, interrupt our services, result in significant financial expenditures and damage our reputation, thus adversely impacting our ability to provide our services, retain our current subscribers and attract new subscribers.

In addition, although we take protective measures designed to secure our information technology systems and endeavor to modify such protective measures as circumstances warrant, our information technology hardware and software infrastructure and communications systems, or those of third parties that we use in our operations, may be vulnerable to a variety of interruptions, including, without limitation, natural disasters, terrorist attacks, telecommunications failures, cyber-attacks and other malicious activities such as unauthorized access, physical or electronic break-ins, misuse, computer viruses or other malicious code, computer denial of service attacks and other events that could disrupt or harm our business. These protective measures may not be sufficient for all eventualities and may themselves be vulnerable to hacking, malfeasance, system error or other irregularities. For example, certain parties may attempt to fraudulently induce employees or customers into disclosing usernames, passwords or other sensitive information, which may in turn be used to access our information technology systems.

In addition, third-party providers of some of our key systems may also experience interruptions to their information technology hardware and software infrastructure and communications systems that could adversely impact us and over which we may have limited or no control. We may obtain certain confidential, proprietary and personal information about our customers, personnel and vendors, and may provide this information to third parties in connection with our business. If one or more of such interruptions or failures occur to us or our third-party providers, it potentially could jeopardize such information and other information processed and stored in, and transmitted through, our or our third-party providers' information technology hardware and software infrastructure and communications systems, or otherwise cause interruptions or malfunctions in our operations, which could result in lawsuits, government claims, investigations or proceedings, significant losses or reputational damage. Due to the fast-moving pace of technology, it may be difficult to detect, contain and remediate every such event. We may be required to expend significant additional resources to modify our protective measures or to investigate and remediate vulnerabilities or other exposures, and we may be subject to financial losses. Furthermore, the amount and scope of insurance we maintain may not cover all expenses related to such activities or all types of claims that may arise.

As a result of the increasing awareness concerning the importance of safeguarding personal information, the potential misuse of such information and legislation that has been adopted or is being considered regarding the protection, privacy and security of personal information, the potential liability associated with information-related risks is increasing, particularly for businesses like ours that handle personal customer data. The occurrence of any such network or information system related events or security breaches could have a material adverse effect on our reputation, business, financial condition and results of operations. Significant incidents could result in a disruption of our operations, customer dissatisfaction, damage to our reputation or a loss of customers and revenues.

We currently depend on DISH Network to provide the vast majority of our satellite transponder capacity and other related services to us. Our business would be adversely affected if DISH Network ceases to provide these services to us and we are unable to obtain suitable replacement services from third parties.

We lease the vast majority of our satellite transponder capacity from DISH Network and DISH Network is a key supplier of other related services to us. Satellite transponder leasing costs may increase beyond our current expectations. Our inability to obtain satellite transponder capacity and other related services from third parties could adversely affect our subscriber activations and subscriber churn rate and cause related revenue to decline. See Note 17 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information on our Related Party Transactions with DISH Network.

Technology in the pay-TV industry changes rapidly, and our success may depend in part on our timely introduction and implementation of, and effective investment in, new competitive products and services, and our failure to do so could cause our products and services to become obsolete and could negatively impact our business.

Technology in the pay-TV industry changes rapidly as new technologies are developed, which could cause our products and services to become obsolete. We and our suppliers may not be able to keep pace with technological developments. Our operating results are dependent to a significant extent upon our ability to continue to introduce new products and services, to upgrade existing products and services on a timely basis, and to reduce costs of our existing products and services. We may not be able to successfully identify new product or service opportunities or develop and market these opportunities in a timely or cost-effective manner. The research and development of new, technologically advanced products is a complex and uncertain process requiring high levels of innovation and investment. The success of new product and service development depends on many factors, including among others, the following:

- difficulties and delays in the development, production, timely completion, testing and marketing of products and services;
- the cost of the products and services;
- proper identification of customer need and customer acceptance of products and services;
- the development of, approval of and compliance with industry standards;
- the amount of resources we must devote to the development of new technologies; and
- the ability to differentiate our products and services and compete with other companies in the same markets.

If the new technologies on which we focus our research and development investments fail to achieve acceptance in the marketplace, our competitive position could be negatively impacted, causing a reduction in our revenues and earnings. For example, our competitors could use proprietary technologies that are perceived by the market as being superior. Further, after we have incurred substantial costs, one or more of the products or services under our development, or under development by one or more of our strategic partners, could become obsolete prior to it being widely adopted.

In addition, our competitive position depends in part on our ability to offer new DISH TV subscribers and upgrade existing subscribers receivers with DVR and streaming capabilities and by otherwise making additional infrastructure investments, such as those related to our information technology and call centers. We may also be at a competitive disadvantage in developing and introducing complex new products and services for our DISH TV services because of the substantial costs we may incur in making these products or services available across our installed base of subscribers. We may not be able to pass on to our subscribers the entire cost of these upgrades and infrastructure investments.

New technologies could also create new competitors for us. For instance, we face increasing consumer demand for the delivery of digital video services via the Internet. We expect to continue to face increased competition from companies who use the Internet to deliver digital video services as the speed and quality of broadband and wireless networks continues to improve.

Technological innovation is important to our success and depends, to a significant degree, on the work of technically skilled employees. If we are unable to attract and retain appropriately technically skilled employees, our competitive position could be materially and adversely affected. In addition, delays in the delivery of components or other unforeseen problems associated with our technology may occur that could materially and adversely affect our ability to generate revenue, offer new products and services and remain competitive.

If our products and services, including, without limitation, our DISH TV and Sling TV products and services, are not competitive, our business could suffer and our financial performance could be negatively impacted. Our products and services may also experience quality problems, including outages and service slowdowns, from time to time. If the quality of our products and services do not meet our customers' expectations, then our business, and ultimately our reputation, could be negatively impacted.

We rely on a single vendor or a limited number of vendors to provide certain key products or services to us such as information technology support, billing systems, and security access devices, and the inability of these key vendors to meet our needs could have a material adverse effect on our business.

Historically, we have contracted with and rely on a single vendor or a limited number of vendors to provide certain key products or services to us such as information technology support, billing systems, and security access devices. If these vendors are unable to meet our needs because they fail to perform adequately, are no longer in business, are experiencing shortages or discontinue a certain product or service we need, our business, financial condition and results of operations may be adversely affected. While alternative sources for these products and services exist, we may not be able to develop these alternative sources quickly and cost-effectively, which could materially impair our ability to timely deliver our products to our subscribers or operate our business. Furthermore, our vendors may request changes in pricing, payment terms or other contractual obligations between the parties, which could cause us to make substantial additional investments.

We rely on a few suppliers and in some cases a single supplier for many components of our new set-top boxes, and any reduction or interruption in supplies or significant increase in the price of supplies could have a negative impact on our business.

We rely on a few suppliers and in some cases a single supplier, for many components of our new set-top boxes that we provide to subscribers in order to deliver our digital television services. Our ability to meet customer demand depends, in part, on our ability to obtain timely and adequate delivery of quality materials, parts and components from suppliers. In the event of an interruption of supply or a significant price increase from these suppliers, we may not be able to diversify sources of supply in a timely manner, which could have a negative impact on our business. Further, due to increased demand for products, electronic manufacturers may experience shortages for certain components, from time to time. Additionally, supply of and/or costs of raw materials may be negatively impacted by trade protection policies, such as tariffs and or/escalating trade tensions, particularly with countries in Asia. We have experienced in the past and may continue to experience shortages driven by raw material availability, manufacturing capacity, labor shortages, industry allocations, natural disasters, logistical delays, health epidemics and significant changes in the financial or business conditions of its suppliers that negatively impact our operations. For example, the recent COVID-19 outbreak has prompted closures of certain travel and business in various regions of the world. It is unknown whether and how global supply chains may be affected if these closures persist for an extended period of time. Any such delays or constraints could have a material adverse effect on our business, financial condition and results of operations, including, among other things, our subscriber activations.

Our programming signals are subject to theft, and we are vulnerable to other forms of fraud that could require us to make significant expenditures to remedy.

Increases in theft of our signal or our competitors' signals could, in addition to reducing subscriber activations, also cause our subscriber churn rate to increase. For our DISH TV services, in order to combat signal theft and improve the security of our broadcast system, we use microchips embedded in credit card sized access cards, called "smart cards," or security chips in our DBS receiver systems to control access to authorized programming content ("Security Access Devices"). Furthermore, for our Sling TV services, we encrypt programming content and use digital rights management software to, among other things, prevent unauthorized access to our programming content.

Our signal encryption has been compromised in the past and may be compromised in the future even though we continue to respond with significant investment in security measures, such as Security Access Device replacement programs and updates in security software, that are intended to make signal theft more difficult. It has been our prior experience that security measures may only be effective for short periods of time or not at all and that we remain susceptible to additional signal theft. We expect that future replacements of these Security Access Devices may be necessary to keep our system secure. We cannot ensure that we will be successful in reducing or controlling theft of our programming content and we may incur additional costs in the future if our system's security is compromised.

We are also vulnerable to other forms of fraud. While we are addressing certain fraud through a number of actions, including terminating independent third-party retailers that we believe violated our business rules, there can be no assurance that we will not continue to experience fraud, which could impact our subscriber activations and subscriber churn rate. Economic weakness may create greater incentive for signal theft, piracy and other forms of fraud, which could lead to higher subscriber churn rate and reduced revenue.

We depend on independent third parties to solicit orders for our DISH TV services that represent a meaningful percentage of our total gross new DISH TV subscriber activations.

While we offer products and services through direct sales channels, a meaningful percentage of our total gross new DISH TV subscriber activations are generated through independent third parties such as small satellite retailers, direct marketing groups, local and regional consumer electronics stores, nationwide retailers, and telecommunications companies. Most of our independent third-party retailers are not exclusive to us and some of our independent third-party retailers may favor our competitors' products and services over ours based on the relative financial arrangements associated with marketing our products and services and those of our competitors. Furthermore, most of these independent third-party retailers are significantly smaller than we are and may be more susceptible to economic weaknesses that make it more difficult for them to operate profitably. Because our independent third-party retailers receive most of their incentive value at activation and not over an extended period of time, our interests may not always be aligned with our independent third-party retailers. It may be difficult to better align our interests with our independent third-party retailers because of their capital and liquidity constraints. Loss of these relationships could have an adverse effect on our subscriber base and certain of our other key operating metrics because we may not be able to develop comparable alternative distribution channels.

We have limited satellite capacity and failures or reduced capacity could adversely affect our DISH TV services.

Operation of our DISH TV services requires that we have adequate satellite transmission capacity for the programming we offer. While we generally have had in-orbit satellite capacity sufficient to transmit our existing channels and some backup capacity to recover the transmission of certain critical programming, our backup capacity is limited.

Our ability to earn revenue from our DISH TV services depends on the usefulness of our owned and leased satellites, each of which has a limited useful life. A number of factors affect the useful lives of the satellites, including, among other things, the quality of their construction, the durability of their component parts, the ability to continue to maintain proper orbit and control over the satellite's functions, the efficiency of the launch vehicle used, and the remaining on-board fuel following orbit insertion. Generally, the minimum design life of each of our owned and leased satellites ranges from 12 to 15 years. We can provide no assurance, however, as to the actual useful lives of any of these satellites. Our operating results could be adversely affected if the useful life of any of our owned or leased satellites were significantly shorter than the minimum design life.

In the event of a failure or loss of any of our owned or leased satellites, we may need to acquire or lease additional satellite capacity or relocate one of our other owned or leased satellites and use it as a replacement for the failed or lost satellite, any of which could have a material adverse effect on our business, financial condition and results of operations. Such a failure could result in a prolonged loss of critical programming. A relocation would require FCC approval and, among other things, may require a showing to the FCC that the replacement satellite would not cause additional interference compared to the failed or lost satellite. We cannot be certain that we could obtain such FCC approval. If we choose to use a satellite in this manner, this use could adversely affect our ability to satisfy certain operational conditions associated with our authorizations. Failure to satisfy those conditions could result in the loss of such authorizations, which would have an adverse effect on our ability to generate revenues.

Our owned and leased satellites are subject to construction, launch, operational and environmental risks that could limit our ability to utilize these satellites.

Construction and launch risks. Operation of our DISH TV services requires that we have adequate satellite transmission capacity for the programming we offer. To accomplish this goal, from time to time, new satellites need to be built and launched. Satellite construction and launch is subject to significant risks, including construction and launch delays, launch failure and incorrect orbital placement. Certain launch vehicles that we may use have either unproven track records or have experienced launch failures in the recent past. The risks of launch delay and failure are usually greater when the launch vehicle does not have a track record of previous successful flights. Launch failures result in significant delays in the deployment of satellites because of the need both to construct replacement satellites, which can take more than three years, and to obtain other launch opportunities. Significant construction or launch delays could materially and adversely affect our ability to generate revenues. If we were unable to obtain launch insurance, or obtain launch insurance at rates we deem commercially reasonable, and a significant launch failure were to occur, it could impact our ability to fund future satellite procurement and launch opportunities.

In addition, the occurrence of future launch failures for other operators may delay the deployment of our satellites and materially and adversely affect our ability to insure the launch of our satellites at commercially reasonable premiums, if at all. See “*We generally do not carry commercial in-orbit insurance on any of the satellites that we own, and could face significant impairment charges if any of our owned satellites fail*” below for further information.

Operational risks. Satellites are subject to significant operational risks while in orbit. These risks include malfunctions, commonly referred to as anomalies that have occurred in our satellites and the satellites of other operators as a result of various factors, such as manufacturing defects, problems with the power systems or control systems of the satellites and general failures resulting from operating satellites in the harsh environment of space. See “*Satellite anomalies or technological failures could adversely affect the value of a particular satellite or result in a complete loss. Some of the satellites DISH Network acquired pursuant to the Master Transaction Agreement have experienced anomalies that may affect their useful lives or prohibit us from operating them to their currently expected capacity, and one or more of the satellites may suffer a technological failure, either of which could have an adverse effect on our business, financial condition and results of operations.*” below.

Although we work closely with the satellite manufacturers to determine and eliminate the cause of anomalies in new satellites and provide for redundancies of many critical components in the satellites, we may experience anomalies in the future, whether of the types described above or arising from the failure of other systems or components.

Any single anomaly or series of anomalies could materially and adversely affect our operations and revenues and our relationship with current customers, as well as our ability to attract new customers for our DISH TV services. In particular, future anomalies may result in the loss of individual transponders on a satellite, a group of transponders on that satellite or the entire satellite, depending on the nature of the anomaly. Anomalies may also reduce the expected useful life of a satellite, thereby reducing the channels that could be offered using that satellite, or create additional expenses due to the need to provide replacement or back-up satellites.

Environmental risks. Meteoroid events pose a potential threat to all in-orbit satellites. The probability that meteoroids will damage those satellites increases significantly when the Earth passes through the particulate stream left behind by comets. Occasionally, increased solar activity also poses a potential threat to all in-orbit satellites. Some decommissioned satellites are in uncontrolled orbits that pass through the geostationary belt at various points, and present hazards to operational satellites, including our 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. The loss, damage or destruction of any of our satellites as a result of an electrostatic storm, collision with space debris, malfunction or other event could have a material adverse effect on our business, financial condition and results of operations.

Satellite anomalies or technological failures could adversely affect the value of a particular satellite or result in a complete loss. Some of the satellites DISH Network acquired pursuant to the Master Transaction Agreement have experienced anomalies that may affect their useful lives or prohibit us from operating them to their currently expected capacity, and one or more of the satellites may suffer a technological failure, either of which could have an adverse effect on our business, financial condition and results of operations.

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. Some of the satellites DISH Network acquired pursuant to the Master Transaction Agreement have had anomalies in the past that have caused losses at EchoStar. For instance, the EchoStar X satellite experienced anomalies in the past which affected seven solar array circuits. In December 2017, the satellite experienced anomalies which affected one additional solar array circuit reducing the number of functional solar array circuits to 16. As a result of these anomalies, EchoStar experienced a reduction in revenue. There can be no assurance, however, that there will be no further anomalies with this or any other satellite, and any such anomalies could have adverse operational or financial effects 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. Further, technological failures in any of the satellites may drastically reduce the useful life of that satellite to be significantly shorter than the minimum design life or immediately end the useful life.

We generally do not carry commercial in-orbit insurance on any of the satellites that we own and could face significant impairment charges if any of our owned satellites fail.

Generally, we do not carry commercial in-orbit insurance on any of the satellites we own, other than certain limited circumstances, and generally do not use commercial insurance to mitigate the potential financial impact of in-orbit failures because we believe that the cost of insurance premiums is uneconomical relative to the risk of such failures. Following DISH Network's completion of the Master Transaction Agreement, we lease the vast majority of our satellite transponder capacity from DISH Network and still lease a portion of our satellite capacity from third parties. While we generally have had in-orbit satellite capacity sufficient to transmit our existing channels and some backup capacity to recover the transmission of certain critical programming, our backup capacity is limited. In the event of a failure or loss of any of our owned or leased satellites, we may need to acquire or lease additional satellite capacity or relocate one of our other owned or leased satellites and use it as a replacement for the failed or lost satellite. If one or more of our owned in-orbit satellites fail, we could be required to record significant impairment charges.

We may have potential conflicts of interest with EchoStar due to our and DISH Network's common ownership and management.

We are an indirect, wholly-owned subsidiary of DISH Network, which controls all of our voting power and the appointment of all of our officers and directors. As a result of DISH Network's control over us, questions relating to conflicts of interest may arise between EchoStar and us in a number of areas relating to our past and ongoing relationships between DISH Network and EchoStar. Areas in which conflicts of interest between EchoStar and us, as a result of our relationship with DISH Network, could arise include, but are not limited to, the following:

- *Cross officerships, directorships and stock ownership.* We and DISH Network have certain overlap in directors and executive officers with EchoStar. These individuals may have actual or apparent conflicts of interest with respect to matters involving or affecting each company. Currently, our and DISH Network's Board of Directors and executive officers includes Charles W. Ergen, who serves as the Chairman of EchoStar and DISH Network and our Chairman. Mr. Ergen also has fiduciary duties to EchoStar's shareholders. For example, there is the potential for a conflict of interest when DISH Network and/or us, on the one hand, or EchoStar, on the other hand, look at acquisitions and other business opportunities that may be suitable for both companies. In addition, certain of DISH Network's and our directors and officers own EchoStar stock. Mr. Ergen beneficially owns approximately 51.2% of EchoStar's total equity securities (assuming conversion of all Class B Common Stock into Class A Common Stock) and controls approximately 90.9% of the voting power of EchoStar. 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 DISH Network and/or us, on the one hand, and EchoStar, on the other hand. Furthermore, Mr. Ergen is employed by both us and EchoStar.
- *Intercompany agreements with EchoStar.* In connection with and following the Spin-off and Share Exchange Agreement, DISH Network and EchoStar have entered into certain agreements pursuant to which DISH Network and we obtain certain products, services and rights from EchoStar, EchoStar obtains certain products, services and rights from DISH Network and us, and DISH Network and EchoStar have indemnified each other against certain liabilities arising from our respective businesses. See Note 17 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information on our Related Party Transactions with EchoStar. The terms of certain of these agreements were established while EchoStar was a wholly-owned subsidiary of DISH Network and us and were not the result of arm's length negotiations. The allocation of assets, liabilities, rights, indemnifications and other obligations between EchoStar and DISH Network under the separation and other intercompany agreements DISH Network entered into with EchoStar, in connection with the Spin-off, may have been different if agreed to by two unaffiliated parties. Had these agreements been negotiated with unaffiliated third parties, their terms may have been more favorable, or less favorable, to DISH Network. In addition, conflicts could arise between DISH Network and/or us, on the one hand, and EchoStar, on the other hand, in the interpretation or any extension or renegotiation of these existing agreements.
- *Additional intercompany transactions.* EchoStar and its subsidiaries have and may continue to enter into transactions with DISH Network and its subsidiaries. Although the terms of any such transactions will be established based upon negotiations between EchoStar and DISH Network and, when appropriate, subject to the approval of a committee of the 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 DISH Network or its subsidiaries or affiliates as may otherwise be obtained between unaffiliated parties.
- *Business opportunities.* DISH Network has historically retained, and in the future may acquire, 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 EchoStar. DISH Network and we may also compete with EchoStar when it or we participate in auctions for spectrum or orbital slots for our satellites.

Neither we nor DISH Network may be able to resolve any potential conflicts of interest with EchoStar, and, even if either we or DISH Network do so, the resolution may be less favorable than if either we or DISH Network were dealing with an unaffiliated party.

We do not have agreements with EchoStar that would prevent either company from competing with the other.

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

We believe that our future success will depend to a significant extent upon the performance of Charles W. Ergen, our Chairman, and certain other executives. The loss of Mr. Ergen or of certain other key executives could have a material adverse effect on our business, financial condition and results of operations. Although all of our executives have executed agreements limiting their ability to work for or consult with competitors if they leave us, we do not have employment agreements with any of them. Mr. Ergen also serves as the Chairman of EchoStar. To the extent our officers are performing services for EchoStar, this may divert their time and attention away from our business and may therefore adversely affect our business.

Acquisition and Capital Structure Risks

Our parent, DISH Network, has made substantial investments to acquire certain wireless spectrum licenses and other related assets. In addition, DISH Network has made substantial non-controlling investments in the Northstar Entities and the SNR Entities related to AWS-3 wireless spectrum licenses.

Since 2008, DISH Network has directly invested over \$11 billion to acquire certain wireless spectrum licenses and related assets and made over \$10 billion in non-controlling investments in certain entities, for a total of over \$21 billion, as described further below.

DISH Network Spectrum

DISH Network has directly invested over \$11 billion to acquire certain wireless spectrum licenses and related assets. These wireless spectrum licenses are subject to certain interim and final build-out requirements, as well as certain renewal requirements. In March 2017, DISH Network notified the FCC that it planned to deploy a narrowband IoT network on certain of these wireless licenses, which was to be the first phase of its network deployment (“First Phase”). DISH Network expected to complete the First Phase by March 2020, with subsequent phases to be completed thereafter. DISH Network has entered into vendor contracts with multiple parties for, among other things, base stations, chipsets, modules, tower leases, the core network, Radio Frequency (“RF”) design, and deployment services for the First Phase. Among other things, initial RF design in connection with the First Phase was complete, DISH Network had secured certain tower sites, and they were in the process of identifying and securing additional tower sites. The core network had been installed and commissioned. DISH Network installed the first base stations on sites in 2018 and were in the process of deploying the remaining base stations. During October 2019, DISH Network paused work on its narrowband IoT deployment due to its March 2020 build-out deadlines being tolled as discussed above. In addition, DISH Network has issued RFI/Ps to various vendors in the wireless industry as it moves forward with its 5G broadband network deployment (“5G Network Deployment”). DISH Network currently expects expenditures for its wireless projects to be between \$250 million and \$500 million during 2020, excluding capitalized interest. DISH Network currently expects expenditures for its 5G Network Deployment to be approximately \$10 billion, excluding capitalized interest.

DISH Network will need to make significant additional investments or partner with others to, among other things, commercialize, build-out, and integrate these licenses and related assets, and any additional acquired licenses and related assets; and comply with regulations applicable to such licenses. Depending on the nature and scope of such commercialization, build-out, integration efforts, and regulatory compliance, any such investments or partnerships could vary significantly. In addition, as DISH Network considers its options for the commercialization of its wireless spectrum, it will incur significant additional expenses and will have to make significant investments related to, among other things, research and development, wireless testing and wireless network infrastructure. DISH Network may also determine that additional wireless spectrum licenses may be required to commercialize its wireless business and to compete with other wireless service providers.

Beginning on November 5, 2019, and while the approval of the Sprint-TMUS merger is pending, the March 7, 2020 build-out deadline for both the AWS-4 and Lower 700 MHz E Block spectrum bands is tolled; however, if the Sprint-TMUS merger is not consummated, the original deadlines would be reinstated with extensions equal to the length of time the deadline was tolled. During October 2019, DISH Network paused work on its narrowband Internet of Things (“IoT”) deployment due to its March 2020 build-out deadlines being tolled. DISH Network has issued requests for information and proposals (“RFI/Ps”) to various vendors in the wireless industry as it moves forward with its 5G Network Deployment.

In connection with the development of DISH Network's wireless business, including, without limitation, the efforts described above, we have made cash distributions to partially finance these efforts to date and may make additional cash distributions to finance, in whole or in part, DISH Network's future efforts. There can be no assurance that DISH Network will be able to develop and implement a business model that will realize a return on these wireless spectrum licenses or that DISH Network will be able to profitably deploy the assets represented by these wireless spectrum licenses.

MVDDS Licenses. We had multichannel video distribution and data service ("MVDDS") licenses in 82 out of 214 geographical license areas, including Los Angeles, New York City, Chicago and several other major metropolitan areas. By August 2014, we were required to meet certain FCC build-out requirements related to our MVDDS licenses, and we were subject to certain FCC service rules applicable to these licenses. In January 2015, the FCC granted our application to extend the build-out requirements related to our MVDDS licenses. We had until the third quarter 2019 to provide "substantial service" on our MVDDS licenses. On May 14, 2019, we and DISH Orbital II L.L.C. ("DOLLC II"), an indirect wholly-owned subsidiary of DISH Network, entered into an agreement to sell our interests in the Local Multipoint Distribution Service ("LMDS") and MVDDS licenses in exchange for the EchoStar XVIII satellite, including its related in-orbit incentive obligations. On July 22, 2019, DISH Network filed certifications with the FCC for all 82 MVDDS licenses demonstrating that it is providing "substantial service" with respect to each such license. The FCC will review DISH Network's certifications and could, among other things, accept them, deny them, or seek additional information about DISH Network's build-out. DISH Network cannot be certain about the timing for such FCC action. DISH Network's MVDDS licenses may be terminated if the FCC finds it did not meet the substantial service build-out requirement. These wireless spectrum licenses expire in August 2024 unless they are renewed by the FCC. There can be no assurances that the FCC will renew these wireless spectrum licenses.

In 2016, the MVDDS 5G Coalition, of which DISH Network is a member, filed a petition for rulemaking requesting the FCC to consider updating the rules to allow DISH Network to provide two-way 5G services using its MVDDS licenses. We cannot predict when or if the FCC will grant the petition and proceed with a rulemaking. If the FCC adopts rules that would allow DISH Network to provide two-way 5G services using its MVDDS licenses, the requests of OneWeb and others for authority to use the band for service from NGSO satellite systems may hinder our ability to provide 5G services using our MVDDS licenses.

LMDS Licenses. As a result of the completion of the Share Exchange on February 28, 2017, we acquired from EchoStar certain LMDS licenses in four markets: Cheyenne, Kansas City, Phoenix, and San Diego. The "substantial service" milestone has been met with respect to each of the licenses. In addition, through the FCC's Spectrum Frontiers proceeding, a portion of each of our LMDS licenses were reassigned to the Upper Microwave Flexible Use Service band (27.5-28.35 GHz), which will allow for a more flexible use of the licenses, including, among other things, 5G mobile operations. These wireless spectrum licenses have been renewed by the FCC through September 2028. There can be no assurances that the FCC will renew these wireless spectrum licenses. On May 14, 2019, we and DOLLC II entered into an agreement to sell our interests in the LMDS and MVDDS licenses in exchange for the EchoStar XVIII satellite.

DISH Network Non-Controlling Investments in the Northstar Entities and the SNR Entities Related to AWS-3 Wireless Spectrum Licenses

During 2015, through its wholly-owned subsidiaries American AWS-3 Wireless II L.L.C. (“American II”) and American AWS-3 Wireless III L.L.C. (“American III”), DISH Network initially made over \$10 billion in certain non-controlling investments in Northstar Spectrum, LLC (“Northstar Spectrum”), the parent company of Northstar Wireless, LLC (“Northstar Wireless,” and collectively with Northstar Spectrum, the “Northstar Entities”), and in SNR Wireless HoldCo, LLC (“SNR HoldCo”), the parent company of SNR Wireless LicenseCo, LLC (“SNR Wireless,” and collectively with SNR HoldCo, the “SNR Entities”), respectively. On October 27, 2015, the FCC granted certain AWS-3 wireless spectrum licenses (the “AWS-3 Licenses”) to Northstar Wireless (the “Northstar Licenses”) and to SNR Wireless (the “SNR Licenses”), respectively. The Northstar Entities and/or the SNR Entities may need to raise significant additional capital in the future, which may be obtained from third party sources or from DISH Network, so that the Northstar Entities and the SNR Entities may commercialize, build-out and integrate these AWS-3 Licenses, comply with regulations applicable to such AWS-3 Licenses, and make any potential payments related to the re-auction of AWS-3 licenses retained by the FCC. Depending upon the nature and scope of such commercialization, build-out, integration efforts, regulatory compliance, and potential re-auction payments, any such loans, equity contributions or partnerships could vary significantly. For further information regarding the potential re-auction of AWS-3 licenses retained by the FCC, see Note 15 “*Commitments and Contingencies – Commitments – DISH Network Non-Controlling Investments in the Northstar Entities and the SNR Entities Related to AWS-3 Wireless Spectrum Licenses*” in the Notes to DISH Network’s Annual Report on Form 10-K for the year ended December 31, 2019.

In connection with certain funding obligations related to the investments by American II and American III discussed above, in February 2015, we paid a dividend of \$8.250 billion to DOC for, among other things, general corporate purposes, which included such funding obligations, and to fund other DISH Network cash needs. We may make additional cash distributions to finance, in whole or in part, loans that DISH Network may make to the Northstar Entities and the SNR Entities in the future related to DISH Network’s non-controlling investments in these entities. There can be no assurance that DISH Network will be able to obtain a profitable return on its non-controlling investments in the Northstar Entities and the SNR Entities.

We may need to raise significant additional capital in the future, which may not be available on acceptable terms or at all, to among other things, make additional cash distributions to DISH Network, continue investing in our business and to pursue acquisitions and other strategic transactions.

See “*Item 1A. Risk Factors – Acquisition and Capital Structure Risks – We have made substantial investments to acquire certain wireless spectrum licenses and other related assets. In addition, we have made substantial non-controlling investments in the Northstar Entities and the SNR Entities related to AWS-3 wireless spectrum licenses*” in DISH Network’s Annual Report on Form 10-K for the year ended December 31, 2019 for further information.

Our parent, DISH Network, faces certain risks related to its non-controlling investments in the Northstar Entities and the SNR Entities.

In addition to the risks described in “*Item 1A. Risk Factors – Acquisition and Capital Structure Risks – We have made substantial investments to acquire certain wireless spectrum licenses and other related assets. In addition, we have made substantial non-controlling investments in the Northstar Entities and the SNR Entities related to AWS-3 wireless spectrum licenses*” in DISH Network’s Annual Report on Form 10-K for the year ended December 31, 2019, DISH Network faces certain other risks related to its non-controlling investments in the Northstar Entities and the SNR Entities, including, among others, the risks described below.

On October 27, 2015, the FCC granted the Northstar Licenses to Northstar Wireless and the SNR Licenses to SNR Wireless, respectively. DISH Network does not own or control the Northstar Licenses or the SNR Licenses nor does it control the Northstar Entities or the SNR Entities. DISH Network does not have a right to require Northstar Manager, LLC (“Northstar Manager”), which owns a 15% controlling interest in, and is the sole manager of, Northstar Spectrum, or SNR Wireless Management, LLC (“SNR Management”), which owns a 15% controlling interest in, and is the sole manager of, SNR HoldCo, to sell their respective ownership interests in Northstar Spectrum and SNR HoldCo to DISH Network. Northstar Manager, as the sole manager of Northstar Spectrum, and SNR Management, as the sole manager of SNR HoldCo, will have the exclusive right and power to manage, operate and control Northstar Spectrum and SNR HoldCo, respectively, subject to certain limited protective provisions for the benefit of American II and American III, respectively. Northstar Manager and SNR Management will have the ability, but not the obligation, to require Northstar Spectrum and SNR HoldCo, respectively, to purchase Northstar Manager’s and SNR Management’s ownership interests in those respective entities after the fifth and sixth anniversaries of the grant date of the Northstar Licenses and the SNR Licenses (and in certain circumstances prior to the fifth anniversary of the grant date of the Northstar Licenses and the SNR Licenses). Thus, DISH Network cannot be certain that the Northstar Licenses or the SNR Licenses will be developed in a manner fully consistent with its current or future business plans.

Each of Northstar Wireless and SNR Wireless applied to receive bidding credits of 25% as designated entities under applicable FCC rules. The FCC implemented rules and policies governing the designated entity program that are intended to ensure that qualifying designated entities are not controlled by operators or investors that do not meet certain qualification tests. Qualification is also subject to challenge in *qui tam* lawsuits filed by private parties alleging that participants have defrauded the government in which the person bringing the suit may share in any recovery by the government. Furthermore, litigation surrounding designated entity structures, increased regulatory scrutiny or third party or government lawsuits with respect to DISH Network’s non-controlling investments in the Northstar Entities and the SNR Entities could result in fines, and in certain cases, license revocation and/or criminal penalties.

On August 18, 2015, the FCC released a *Memorandum Opinion and Order*, FCC 15-104 (the “Order”) in which the FCC determined, among other things, that DISH Network has a controlling interest in, and is an affiliate of, Northstar Wireless and SNR Wireless, and therefore DISH Network’s revenues should be attributed to them, which in turn makes Northstar Wireless and SNR Wireless ineligible to receive the Bidding Credit Amounts (approximately \$1.961 billion for Northstar Wireless and \$1.370 billion for SNR Wireless). Each of Northstar Wireless and SNR Wireless has filed a notice of appeal and petition for review of the Order with the D.C. Circuit, challenging, among other things, the FCC’s determination that they are ineligible to receive the Bidding Credit Amounts. Oral arguments were presented to the Court on September 26, 2016. On August 29, 2017, the D.C. Circuit issued its opinion, holding that: (i) the FCC reasonably applied its precedent to determine that DISH Network exercised a disqualifying degree of de facto control over Northstar Wireless and SNR Wireless (rendering them ineligible to claim the Bidding Credit Amounts), but (ii) the FCC did not give Northstar Wireless and SNR Wireless adequate notice that, if their relationships with DISH Network cost them the Bidding Credit Amounts, the FCC would also deny them an opportunity to cure. The case was remanded to the FCC to give Northstar Wireless and SNR Wireless an opportunity to seek to negotiate a cure for the de facto control the FCC found that DISH Network exercises over them. On January 24, 2018, the FCC released an Order on Remand, DA 18-70 (the “Order on Remand”) purporting to establish a procedure to afford Northstar Wireless and SNR Wireless the opportunity to implement a Cure pursuant to the Appellate Decision. The Order on Remand provided that Northstar Wireless and SNR Wireless each had until April 24, 2018 to file the necessary documentation to demonstrate that, in light of such changes, each of Northstar Wireless and SNR Wireless qualifies for the very small business bidding credit that it sought in the AWS-3 Auction. Additionally, the Order on Remand provides that if either Northstar Wireless or SNR Wireless needs additional time to negotiate new or amended agreements, it may request to extend the deadline for such negotiations for an additional 45 days (extending the deadline to June 8, 2018). On April 16, 2018, the FCC approved Northstar Wireless’ and SNR Wireless’ requests to extend the deadline for such negotiations for an additional 45 days to June 8, 2018.

On June 8, 2018, Northstar Wireless and SNR Wireless each filed amended agreements to demonstrate that, in light of such changes, each of Northstar Wireless and SNR Wireless qualifies for the very small business bidding credit that it sought in the AWS-3 Auction. The Order on Remand also provided, among other things, until July 23, 2018 for certain third-parties to file comments about any changes to the agreements proposed by Northstar Wireless and SNR Wireless and several third-parties filed comments (with one opposition). On October 22, 2018, Northstar Wireless and SNR Wireless filed a response to the third-party comments. DISH Network cannot predict with any degree of certainty the timing or outcome of these proceedings.

See “*Item 1A. Risk Factors – Acquisition and Capital Structure Risks – We have made substantial investments to acquire certain wireless spectrum licenses and other related assets. In addition, we have made substantial non-controlling investments in the Northstar Entities and the SNR Entities related to AWS-3 wireless spectrum licenses*” in DISH Network’s Annual Report on Form 10-K for the year ended December 31, 2019 for further information.

In addition, on September 23, 2016, the United States District Court for the District of Columbia unsealed a qui tam complaint that was filed by Vermont National Telephone Company against DISH Network; its wholly-owned subsidiaries, American AWS-3 Wireless I L.L.C., American II, American III, and DISH Wireless Holding L.L.C.; Charles W. Ergen (our Chairman) and Cantey M. Ergen (a member of DISH Network’s board of directors); Northstar Wireless; Northstar Spectrum; Northstar Manager; SNR Wireless; SNR HoldCo; SNR Management; and certain other parties. See “*Commitments and Contingencies – Contingencies – Litigation – Vermont National Telephone Company*” in Note 12 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

DISH Network may need to make significant additional loans to the Northstar Entities and the SNR Entities, or they may need to partner with others, so that the Northstar Entities and the SNR Entities may commercialize, build-out and integrate the Northstar Licenses and the SNR Licenses, comply with regulations applicable to the Northstar Licenses and the SNR Licenses, and make any potential payments related to the re-auction of the AWS-3 licenses retained by the FCC. Depending upon the nature and scope of such commercialization, build-out, integration efforts, regulatory compliance, and potential Northstar Re-Auction Payment and SNR Re-Auction Payment, any such loans or partnerships could vary significantly. DISH Network may need to raise significant additional capital in the future, which may not be available on acceptable terms or at all, to make further investments in the Northstar Entities and the SNR Entities. There can be no assurance that DISH Network will be able to obtain a profitable return on its non-controlling investments in the Northstar Entities and the SNR Entities.

In connection with certain funding obligations related to the investments by American II and American III discussed above, in February 2015, we paid a dividend of \$8.250 billion to DOC for, among other things, general corporate purposes, which included such funding obligations, and to fund other DISH Network cash needs. We may make additional cash distributions to finance, in whole or in part, loans that DISH Network may make to the Northstar Entities and the SNR Entities in the future related to DISH Network’s non-controlling investments in these entities. We may need to raise significant additional capital in the future, which may not be available on acceptable terms or at all, to among other things, make additional cash distributions to DISH Network, continue investing in our business and to pursue acquisitions and other strategic transactions.

To the extent that our parent, DISH Network, commercializes its wireless spectrum licenses, it will face certain risks entering and competing in the wireless services industry and operating a wireless services business.

DISH Network has made substantial investments to acquire certain wireless spectrum licenses and related assets. These wireless spectrum licenses are subject to certain interim and final build-out requirements, as well as certain renewal requirements. DISH Network will need to make significant additional investments or partner with others to, among other things, commercialize, build-out, and integrate these licenses and related assets, and any additional acquired licenses and related assets; and comply with regulations applicable to such licenses. Depending on the nature and scope of such commercialization, build-out, integration efforts, and regulatory compliance, any such investments or partnerships could vary significantly. In connection with the development of DISH Network’s wireless business, including, without limitation, the efforts described above, we have made cash distributions to partially finance these efforts to date and may make additional cash distributions to finance, in whole or in part, DISH Network’s future efforts. DISH Network may also determine that additional wireless spectrum licenses may be required to commercialize its wireless business and to compete with other wireless service providers. See “*Our parent, DISH Network, has made substantial investments to acquire certain wireless spectrum licenses and other related assets. In addition, DISH Network has made substantial non-controlling investments in the Northstar Entities and the SNR Entities related to AWS-3 wireless spectrum licenses*” above for further information. We may need to raise significant additional capital in the future to fund the efforts described above, which may not be available on acceptable terms or at all. There can be no assurance that DISH Network will be able to develop and implement a business model that will realize a return on these wireless spectrum licenses or that it will be able to profitably deploy the assets represented by these wireless spectrum licenses.

To the extent DISH Network commercializes its wireless spectrum licenses and enters the wireless services industry, a wireless services business presents certain risks.

- **The wireless services industry is competitive.** DISH Network has limited experience in the wireless services industry, which is a competitive industry with increasing customer demands for data services that require increasing capital resources to maintain a robust network. The wireless services industry has incumbent and established competitors such as Verizon Communications, Inc. (“Verizon”), AT&T, T-Mobile USA Inc. (“T-Mobile”) and Sprint Corporation (“Sprint”), with substantial market share. Some of these companies have greater financial, marketing and other resources than DISH Network, and have existing cost and operational advantages that DISH Network lacks. Market saturation is expected to continue to cause the wireless services industry’s customer growth rate to moderate in comparison to historical growth rates, leading to increased competition for customers. As the industry matures, competitors increasingly must seek to attract a greater proportion of new subscribers from each other’s existing subscriber bases rather than from first-time purchasers of wireless services. Furthermore, the cost of attracting a new customer is generally higher than the cost associated with retaining an existing customer. In addition, DISH Network may face increasing competition from wireless telecommunications providers who offer mobile video offerings. Wireless mobile video offerings have become more prevalent in the marketplace as wireless telecommunications providers have expanded the fourth generation of wireless communications.

In July 2015, AT&T completed its acquisition of DirecTV, our direct competitor and the largest satellite TV provider in the United States, which has an OTT service, AT&T TV Now, that competes directly with our Sling TV services. As a result of this acquisition, DirecTV, among other things, has increased access to capital, access to AT&T’s nationwide platform for wireless mobile video, and the ability to more seamlessly bundle its video services with AT&T’s broadband Internet access and wireless services. The combined company may be able to, among other things, pressure third-party content owners and programmers to withhold online rights from us; utilize its increased leverage over third-party content owners and programmers to reduce the price it pays for programming at the expense of other MVPDs, including us; thwart DISH Network’s entry into the wireless market, by, among other things, refusing to enter into data roaming agreements with DISH Network; foreclose or degrade our online video offerings at various points in the broadband pipe; and impose data caps on consumers who access our online video offerings. In addition, in October 2016, AT&T announced its acquisition of Time Warner (which owns certain Turner, HBO and Cinemax channels), which was completed in June 2018. The addition of Time Warner’s media holdings, which include content, such as HBO, TBS, TNT, CNN, and movies, would, among other things, provide the combined company increased scale and leverage in the converging video, mobile, and broadband industries.

Also, in December 2017, Walt Disney Company announced its acquisition of certain assets of Twenty-First Century Fox, Inc., which was completed in March 2019. These transactions may affect us adversely by, among other things, making it more difficult for us to obtain access to certain programming networks on nondiscriminatory and fair terms, or at all. For example, in connection with AT&T’s acquisition of Time Warner, Turner sent all of its distributors written, irrevocable offers to submit disputes over the price and other terms of Turner programming to binding arbitration and to guarantee continued access to that programming while any arbitration is pending.

However, in October 2018, AT&T removed its HBO and Cinemax channels, which are not part of Turner, from our DISH TV and Sling TV programming lineup, as we and AT&T have been unable to negotiate the terms and conditions of a new programming carriage contract. Furthermore, AT&T offers its programming, including its HBO and Cinemax channels, directly to consumers over the Internet and provides HBO for free to its subscribers under certain offers. In addition, AT&T’s current zero rating practice may give an unfair advantage to AT&T’s own video content, which currently includes, among others, DirecTV services, including “AT&T TV Now,” and AT&T’s “Watch TV” on mobile devices.

- ***DISH Network's ability to compete effectively would be dependent on a number of factors.*** DISH Network's ability to compete effectively would depend on, among other things, DISH Network's network quality, capacity and coverage; the pricing of DISH Network's products and services; the quality of customer service; DISH Network's development of new and enhanced products and services; the reach and quality of DISH Network's sales and distribution channels; our ability to predict and adapt to future changes in technologies and changes in consumer demands; and capital resources. It would also depend on how successfully DISH Network anticipates and responds to various competitive factors affecting the industry, including, among others, new technologies and business models, products and services that may be introduced by competitors, changes in consumer preferences, the demand for and usage of data, video and other voice and non-voice services, demographic trends, economic conditions, and discount pricing and other strategies that may be implemented by competitors. It may be difficult for DISH Network to differentiate its products and services from other competitors in the industry, which may limit DISH Network's ability to attract customers. DISH Network's success also may depend on its ability to access and deploy adequate spectrum, deploy new technologies and offer attractive services to customers. For example, DISH Network may not be able to obtain and offer certain technologies or features that are subject to competitor patents or other exclusive arrangements.
- ***DISH Network would depend on third parties to provide it with infrastructure and products and services.*** DISH Network would depend on various key suppliers and vendors to provide it, directly or through other suppliers, with infrastructure, equipment and services, such as switch and network equipment, handsets and other devices and equipment that DISH Network would need in order to operate a wireless services business and provide products and services to its customers. For example, handset and other device suppliers often rely on one vendor for the manufacture and supply of critical components, such as chipsets, used in their devices. If these suppliers or vendors fail to provide equipment or services on a timely basis or fail to meet performance expectations, DISH Network may be unable to provide products and services as and when expected by its customers. Any difficulties experienced with these suppliers and vendors could result in additional expense and/or delays in introducing DISH Network's wireless services. DISH Network's efforts would involve significant expense and require strategic management decisions on, and timely implementation of, equipment choices, network deployment and management, and service offerings. In addition, these suppliers and vendors may also be subject to litigation with respect to technology on which DISH Network would depend, including litigation involving claims of patent infringement.
- ***Wireless services and DISH Network's wireless spectrum licenses are subject to government regulation.*** Wireless services and DISH Network's wireless spectrum licenses are subject to regulation by the FCC and other federal, state and local, as well as international, governmental authorities. These governmental authorities could adopt regulations or take other actions that would adversely affect DISH Network's business prospects, making it more difficult and/or expensive to commercialize its wireless spectrum licenses or acquire additional licenses. The licensing, construction, operation, sale and interconnection arrangements of wireless telecommunications systems are regulated by the FCC and, depending on the jurisdiction, other federal and international, state and local regulatory agencies. In particular, the FCC imposes significant regulation on licensees of wireless spectrum with respect to how radio spectrum is used by licensees, the nature of the services that licensees may offer and how the services may be offered, and resolution of issues of interference between spectrum bands. The FCC grants wireless licenses for terms of generally ten years that are subject to renewal or revocation based on certain factors depending on the license including, among others, public interest considerations, level and quality of services and/or operations provided by the licensee, frequency and duration of any interruptions or outages of services and/or operations provided by the licensee, and the extent to which service is provided to, and/or operation is provided in, rural areas and tribal lands. There can be no assurances that DISH Network's wireless spectrum licenses will be renewed or that DISH Network will be able to obtain additional licenses. Failure to comply with FCC requirements in a given license area could result in revocation of the license for that license area. In addition, the FCC uses its transactional "spectrum screen" to identify prospective wireless transactions that may require additional competitive scrutiny. If a proposed transaction would exceed the spectrum screen threshold, the FCC undertakes a more detailed analysis of relevant market conditions in the impacted geographic areas to determine whether the transaction would reduce competition without offsetting public benefits. If a proposed spectrum acquisition exceeds the spectrum screen trigger, such additional review could extend the duration of the regulatory review process and there can be no assurance that such proposed spectrum acquisition would ultimately be completed, in whole or in part. For further information related to DISH Network's wireless spectrum licenses, including build-out requirements, see "Item 1A. Risk Factors" in DISH Network's Annual Report on Form 10-K for the year ended December 31, 2019.

We may pursue acquisitions and other strategic transactions to complement or expand our business that may not be successful, and we may lose up to the entire value of our investment in these acquisitions and transactions.

Our future success may depend on opportunities to buy other businesses or technologies that could complement, enhance or expand our current business or products or that might otherwise offer us growth opportunities. To pursue this strategy successfully, we must identify attractive acquisition or investment opportunities and successfully complete transactions, some of which may be large and complex. We may not be able to identify or complete attractive acquisition or investment opportunities due to, among other things, the intense competition for these transactions. If we are not able to identify and complete such acquisition or investment opportunities, our future results of operations and financial condition may be adversely affected.

We may be unable to obtain in the anticipated timeframe, or at all, any regulatory approvals required to complete proposed acquisitions and other strategic transactions. Furthermore, the conditions imposed for obtaining any necessary approvals could delay the completion of such transactions for a significant period of time or prevent them from occurring at all. We may not be able to complete such transactions and such transactions, if executed, pose significant risks and could have a negative effect on our operations. Any transactions that we are able to identify and complete may involve a number of risks, including:

- the diversion of our management's attention from our existing business to integrate the operations and personnel of the acquired or combined business or joint venture;
- possible adverse effects on our operating results during the integration process;
- a high degree of risk inherent in these transactions, which could become substantial over time, and higher exposure to significant financial losses if the underlying ventures are not successful;
- our possible inability to achieve the intended objectives of the transaction; and
- the risks associated with complying with regulations applicable to the acquired business, which may cause us to incur substantial expenses.

In addition, we may not be able to successfully or profitably integrate, operate, maintain and manage our newly acquired operations or employees. We may not be able to maintain uniform standards, controls, procedures and policies, and this may lead to operational inefficiencies. In addition, the integration process may strain our financial and managerial controls and reporting systems and procedures.

New acquisitions, joint ventures and other transactions may require the commitment of significant capital that would otherwise be directed to investments in our existing business. To pursue acquisitions and other strategic transactions, we may need to raise additional capital in the future, which may not be available on acceptable terms or at all. In addition, we make cash distributions to DISH Network to finance acquisitions or investments that will not be part of our business.

In addition to committing capital to complete the acquisitions, substantial capital may be required to operate the acquired businesses following their acquisition. These acquisitions may result in significant financial losses if the intended objectives of the transactions are not achieved. Some of the businesses acquired by DISH Network have experienced significant operating and financial challenges in their recent history, which in some cases resulted in these businesses commencing bankruptcy proceedings prior to DISH Network's acquisition. DISH Network may acquire similar businesses in the future. There is no assurance that DISH Network will be able to successfully address the challenges and risks encountered by these businesses following their acquisition. If DISH Network is unable to successfully address these challenges and risks, our business, financial condition and/or results of operations may suffer.

We may need additional capital, which may not be available on acceptable terms or at all, to continue investing in our business and to finance acquisitions and other strategic transactions.

We may need to raise significant additional capital in the future, which may not be available on acceptable terms or at all, to among other things, continue investing in our business, construct and launch new satellites, and to pursue acquisitions and other strategic transactions. Weakness in the equity markets could make it difficult for DISH Network to raise equity financing without incurring substantial dilution to DISH Network's existing shareholders. Adverse changes in the credit markets, including rising interest rates, could increase our borrowing costs and/or make it more difficult for us to obtain financing for our operations or refinance existing indebtedness. In addition, economic weakness or weak results of operations may limit our ability to generate sufficient internal cash to fund investments, capital expenditures, acquisitions and other strategic transactions, as well as to fund ongoing operations and service our debt. We may be unable to generate cash flows from operating activities sufficient to pay the principal, premium, if any, and interest on our debt and other obligations. If we are unable to service our debt and other obligations from cash flows from operating activities, we may need to refinance or restructure all or a portion of such obligations prior to maturity. Any refinancing or restructuring could have a material adverse effect on our business, results of operations and/or financial condition. In addition, we cannot guarantee that any refinancing or restructuring would sufficiently meet any debt or other obligations then due. Furthermore, our borrowing costs can be affected by short and long-term debt ratings assigned by independent rating agencies, which are based, in significant part, on our performance as measured by their credit metrics. A decrease in these ratings would likely increase our cost of borrowing and/or make it more difficult for us to obtain financing. A severe disruption in the global financial markets could impact some of the financial institutions with which we do business, and such instability could also affect our access to financing. As a result, these conditions make it difficult for us to accurately forecast and plan future business activities because we may not have access to funding sources necessary for us to pursue organic and strategic business development opportunities.

See "Our parent, DISH Network, has made substantial investments to acquire certain wireless spectrum licenses and other related assets. In addition, DISH Network has made substantial non-controlling investments in the Northstar Entities and the SNR Entities related to AWS-3 wireless spectrum licenses" above for further information.

We have substantial debt outstanding and may incur additional debt.

As of December 31, 2019, our total long-term debt and finance lease obligations, including the debt of our subsidiaries, was \$10.822 billion. Our debt levels could have significant consequences, including:

- making it more difficult to satisfy our obligations;
- a dilutive effect on our future earnings;
- increasing our vulnerability to general adverse economic conditions, including changes in interest rates;
- requiring us to devote a substantial portion of our cash to make interest and principal payments on our debt, thereby reducing the amount of cash available for other purposes. As a result, we would have limited financial and operating flexibility in responding to changing economic and competitive conditions;
- limiting our ability to raise additional debt because it may be more difficult for us to obtain debt financing on attractive terms; and
- placing us at a disadvantage compared to our competitors that are less leveraged.

In addition, we may incur substantial additional debt in the future. The terms of the indentures relating to our senior notes permit us to incur additional debt. If new debt is added to our current debt levels, the risks we now face could intensify.

Our parent, DISH Network, is controlled by one principal stockholder who is also our Chairman.

Charles W. Ergen, DISH Network's Chairman, beneficially owns approximately 52.3% of DISH Network's total equity securities (assuming conversion of all Class B Common Stock into Class A Common Stock) and controls approximately 91.0% of the total voting power. Through his voting power, Mr. Ergen has the ability to elect a majority of DISH Network's directors and to control all other matters requiring the approval of DISH Network's stockholders. As a result, DISH Network is a "controlled company" as defined in the Nasdaq listing rules and is, therefore, not subject to Nasdaq requirements that would otherwise require DISH Network 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; and (iv) 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. Mr. Ergen is also the principal stockholder and Chairman of EchoStar.

Legal and Regulatory Risks

The rulings in the Telemarketing litigation requiring us to pay up to an aggregate amount of \$280 million and imposing certain injunctive relief against us, if upheld, would have a material adverse effect on our cash, cash equivalents and marketable investment securities balances and our business operations.

On March 25, 2009, our wholly-owned subsidiary DISH Network L.L.C. was sued in a civil action by the United States Attorney General and several states in the United States District Court for the Central District of Illinois (the "FTC Action"), alleging violations of the Telephone Consumer Protection Act ("TCPA") and the Telemarketing Sales Rule ("TSR"), as well as analogous state statutes and state consumer protection laws. The plaintiffs alleged that we, directly and through certain independent third-party retailers and their affiliates, committed certain telemarketing violations. On December 23, 2013, the plaintiffs filed a motion for summary judgment, which indicated for the first time that the state plaintiffs were seeking civil penalties and damages of approximately \$270 million and that the federal plaintiff was seeking an unspecified amount of civil penalties (which could substantially exceed the civil penalties and damages being sought by the state plaintiffs). The plaintiffs were also seeking injunctive relief that if granted would, among other things, enjoin DISH Network L.L.C., whether acting directly or indirectly through authorized telemarketers or independent third-party retailers, from placing any outbound telemarketing calls to market or promote its goods or services for five years, and enjoin DISH Network L.L.C. from accepting activations or sales from certain existing independent third-party retailers and from certain new independent third-party retailers, except under certain circumstances. We also filed a motion for summary judgment, seeking dismissal of all claims. On December 12, 2014, the Court issued its opinion with respect to the parties' summary judgment motions. The Court found that DISH Network L.L.C. was entitled to partial summary judgment with respect to one claim in the action. In addition, the Court found that the plaintiffs were entitled to partial summary judgment with respect to ten claims in the action, which included, among other things, findings by the Court establishing DISH Network L.L.C.'s liability for a substantial amount of the alleged outbound telemarketing calls by DISH Network L.L.C. and certain of its independent third-party retailers that were the subject of the plaintiffs' motion. The Court did not issue any injunctive relief and did not make any determination on civil penalties or damages, ruling instead that the scope of any injunctive relief and the amount of any civil penalties or damages were questions for trial.

The first phase of the bench trial took place January 19, 2016 through February 11, 2016 and the second phase took place October 25, 2016 through November 2, 2016.

On June 5, 2017, the Court issued Findings of Fact and Conclusions of Law and entered Judgment ordering DISH Network L.L.C. to pay an aggregate amount of \$280 million to the federal and state plaintiffs. The Court also issued a Permanent Injunction (the “Injunction”) against DISH Network L.L.C. that imposes certain ongoing compliance requirements on DISH Network L.L.C., which include, among other things: (i) the retention of a telemarketing-compliance expert to prepare a plan to ensure that DISH Network L.L.C. and certain independent third-party retailers will continue to comply with telemarketing laws and the Injunction; (ii) certain telemarketing records retention and production requirements; and (iii) certain compliance reporting and monitoring requirements. In addition to the compliance requirements under the Injunction, within ninety (90) days after the effective date of the Injunction, DISH Network L.L.C. is required to demonstrate that it and certain independent third-party retailers are in compliance with the Safe Harbor Provisions of the TSR and TCPA and have made no prerecorded telemarketing calls during the five (5) years prior to the effective date of the Injunction (collectively, the “Demonstration Requirements”). If DISH Network L.L.C. fails to prove that it meets the Demonstration Requirements, it will be barred from conducting any outbound telemarketing for two (2) years. If DISH Network L.L.C. fails to prove that a particular independent third-party retailer meets the Demonstration Requirements, DISH Network L.L.C. will be barred from accepting orders from that independent third-party retailer for two (2) years. On July 3, 2017, DISH Network L.L.C. filed two motions with the Court: (1) to alter or amend the Judgment or in the alternative to amend the Findings of Fact and Conclusions of Law; and (2) to clarify, alter and amend the Injunction. On August 10, 2017, the Court: (a) denied the motion to alter or amend the Judgment or in the alternative to amend the Findings of Fact and Conclusions of Law; and (b) allowed, in part, the motion to clarify, alter and amend the Injunction, and entered an Amended Permanent Injunction (the “Amended Injunction”). Among other things, the Amended Injunction provided DISH Network L.L.C. a thirty (30) day extension to meet the Demonstration Requirements, expanded the exclusion of certain independent third-party retailers from the Demonstration Requirements, and clarified that, with regard to independent third-party retailers, the Amended Injunction only applied to their telemarketing of DISH TV goods and services. On October 10, 2017, DISH Network L.L.C. filed a notice of appeal to the United States Court of Appeals for the Seventh Circuit, which heard oral argument on September 17, 2018.

During the second quarter 2017, we recorded \$255 million of “Litigation expense” related to the FTC Action on our Consolidated Statements of Operations and Comprehensive Income (Loss). We recorded \$25 million of “Litigation expense” related to the FTC Action during periods prior to 2017. Our total accrual at December 31, 2019 and 2018 related to the FTC Action was \$280 million and is included in “Other accrued expenses” on our Consolidated Balance Sheets. Any eventual payments made with respect to the FTC Action may not be deductible for tax purposes, which had a negative impact on our effective tax rate for the year ended December 31, 2017. The tax deductibility of any eventual payments made with respect to the FTC Action may change, based upon, among other things, further developments in the FTC Action, including final adjudication of the FTC Action.

We may also from time to time be subject to private civil litigation alleging telemarketing violations. For example, a portion of the alleged telemarketing violations by an independent third-party retailer at issue in the FTC Action are also the subject of a certified class action filed against DISH Network L.L.C. in the United States District Court for the Middle District of North Carolina (the “Krakauer Action”). Following a five-day trial, on January 19, 2017, a jury in that case found that the independent third-party retailer was acting as DISH Network L.L.C.’s agent when it made the 51,119 calls at issue in that case, and that class members are eligible to recover \$400 in damages for each call made in violation of the TCPA. On May 22, 2017, the Court ruled that the violations were willful and knowing, and trebled the damages award to \$1,200 for each call made in violation of TCPA. On April 5, 2018, the Court entered a \$61 million judgment in favor of the class. DISH Network L.L.C. appealed and on May 30, 2019, the United States Court of Appeals for the Fourth Circuit affirmed. On October 15, 2019, DISH Network L.L.C. filed a petition for writ of certiorari, requesting that the United States Supreme Court agree to hear a further appeal, but it denied the petition on December 16, 2019. On January 21, 2020, DISH Network L.L.C. filed a second notice of appeal relating to the district court’s orders on the claims administration process to identify, and disburse funds to, individual class members.

During the second quarter 2017, we recorded \$41 million of “Litigation expense” related to the Krakauer Action on our Consolidated Statements of Operations and Comprehensive Income (Loss). We recorded \$20 million of “Litigation expense” related to the Krakauer Action during the fourth quarter 2016. Our total accrual related to the Krakauer Action at December 31, 2018 was \$61 million and was included in “Other accrued expenses” on our Consolidated Balance Sheets. During the third quarter 2019, the judgment was paid to the court.

The rulings in the Telemarketing litigation requiring us to pay up to an aggregate amount of \$280 million and imposing certain injunctive relief against us, if upheld, would have a material adverse effect on our cash, cash equivalents and marketable investment securities balances and our business operations.

Our business may be materially affected by the Tax Reform Act. Negative or unexpected tax consequences could adversely affect our business, financial condition and results of operations

On December 22, 2017, the Tax Reform Act was enacted making significant changes to the Internal Revenue Code. Such changes include, but are not limited to, a reduction in the corporate tax rate and certain limitations on corporate deductions (e.g., a limitation on the interest expense deduction available to companies). These changes could have an adverse effect on our business, financial condition and results of operations. However, we are still assessing the full impact of the Tax Reform Act and cannot predict the manner in which regulations or legislation in these areas may be interpreted and enforced or the impact that such interpretations and enforcement could have on our business, financial condition and results of operations.

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 and trade secrets, as well as licenses and other agreements with our vendors and other parties, to use our technologies, conduct our operations and sell our products and services. Legal challenges to our intellectual property rights and claims of intellectual property infringement by third parties could require that we enter into royalty or licensing agreements on unfavorable terms, incur substantial monetary liability or be enjoined preliminarily or permanently from further use of the intellectual property in question or from the continuation of our business as currently conducted, which could require us to change our business practices or limit our ability to compete effectively or could have an adverse effect on our results of operations. Even if we believe any such challenges or claims are without merit, they can be time-consuming and costly to defend and divert management's attention and resources away from our business. Moreover, because of the rapid pace of technological change, we rely on technologies developed or licensed by third parties, and if we are unable to obtain or continue to obtain licenses from these third parties on reasonable terms, our business, financial condition and results of operations could be adversely affected.

In addition, we work with third parties such as vendors, contractors and suppliers for the development and manufacture of components that are integrated into our products and services, and our products and services may contain technologies provided to us by these third parties or other third parties. We may have little or no ability to determine in advance whether any such technology infringes the intellectual property rights of others. Our vendors, contractors and suppliers may not be required to indemnify us if a claim of infringement is asserted against us, or they may be required to indemnify us only up to a maximum amount, above which we would be responsible for any further costs or damages. Legal challenges to these intellectual property rights may impair our ability to use the products, services and technologies that we need in order to operate our business and may materially and adversely affect our business, financial condition and results of operations. Furthermore, our digital content offerings depend in part on effective digital rights management technology to control access to digital content. If the digital rights management technology that we use is compromised or otherwise malfunctions, content providers may be unwilling to provide access to their content. Changes in the copyright laws or how such laws may be interpreted could impact our ability to deliver content and provide certain features and functionality, particularly over the Internet.

We are, and may become, party to various lawsuits which, if adversely decided, could have a significant adverse impact on our business, particularly lawsuits regarding intellectual property.

We are, and may become, subject to various legal proceedings and claims which arise in the ordinary course of business, including among other things, disputes with programmers regarding fees. Many entities, including some of our competitors, have or may in the future obtain patents and other intellectual property rights that may cover or affect products or services related to those that we offer. In general, if a court determines that one or more of our products or services infringes on intellectual property held by others, we may be required to cease developing or marketing those products or services, to obtain licenses from the holders of the intellectual property at a material cost, or to redesign those products or services in such a way as to avoid infringing the intellectual property. If those intellectual property rights are held by a competitor, we may be unable to obtain the intellectual property at any price, which could adversely affect our competitive position. See "Item 1. Business – Patents and Other Intellectual Property" of DISH Network's Annual Report on Form 10-K for the year ended December 31, 2019 for further information.

We may not be aware of all intellectual property rights that our services or the products used in connection with our services may potentially infringe. In addition, patent applications in the United States are confidential until the Patent and Trademark Office either publishes the application or issues a patent (whichever arises first). Therefore, it is difficult to evaluate the extent to which our services or the products used in connection with our services may infringe claims contained in pending patent applications. Further, it is sometimes not possible to determine definitively whether a claim of infringement is valid.

Our ability to distribute video content via the Internet, including our Sling TV services, involves regulatory risk.

Certain of our programming agreements allow us to, among other things, deliver certain authenticated content via the Internet and/or deliver certain content through our Sling TV services, and we are increasingly distributing video content to our subscribers via the Internet and through our Sling TV services. The ability to continue this strategy may depend in part on the FCC's success in implementing rules prohibiting fixed and mobile broadband access providers, among other things, from blocking or throttling traffic, from paid privatization, and from unreasonably interfering with, or disadvantaging, consumers' or content providers' access to the Internet.

See "Item 1. Business – Government Regulations – FCC Regulations Governing our Pay-TV Operations – Open Internet" of DISH Network's Annual Report on Form 10-K for the year ended December 31, 2019 for further information.

Changes in the Cable Act, and/or the rules of the FCC that implement the Cable Act, may limit our ability to access programming from cable-affiliated programmers at nondiscriminatory rates.

We purchase a large percentage of our programming from cable-affiliated programmers. Pursuant to the Cable Act, cable providers had been prohibited from entering into exclusive contracts with cable-affiliated programmers. The Cable Act directed that this prohibition expires after a certain period of time unless the FCC determined that the prohibition continued to be necessary. In October 2012, the FCC allowed this prohibition to expire. While the FCC has issued a Further Notice of Proposed Rulemaking aimed at serving some of the same objectives as the prohibition, there can be no assurances that such protections will be adopted or be as effective as the prohibition if they are adopted. In the event that this decision is reconsidered by the FCC or reviewed by a court of appeals, we cannot predict the timing or outcome of any subsequent FCC decision.

As a result of the expiration of this prohibition on exclusivity, we may be limited in our ability to obtain access at all, or on nondiscriminatory terms, to programming from programmers that are affiliated with cable system operators. In addition, any other changes in the Cable Act, and/or the FCC's rules that implement the Cable Act, that currently limit the ability of cable-affiliated programmers to discriminate against competing businesses such as ours, could adversely affect our ability to acquire cable-affiliated programming at all or to acquire programming on nondiscriminatory terms.

Furthermore, the FCC had imposed program access conditions on certain cable companies as a result of mergers, consolidations or affiliations with programmers. The expiration of the exclusivity prohibition in the Cable Act triggered the termination of certain program access conditions that the FCC had imposed on Liberty Media Corporation ("Liberty"). In July 2012, similar program access conditions that had applied to Time Warner Cable, which was acquired by Charter in 2016, expired as previously scheduled. These developments may adversely affect our ability to obtain Liberty's and Charter's programming, or to obtain it on nondiscriminatory terms. In the case of certain types of programming affiliated with Comcast through its control of NBCUniversal, the prohibition on exclusivity expired in January 2018, and we can no longer rely on these protections.

In addition, affiliates of certain cable providers have denied us access to sports programming that they distribute to their cable systems terrestrially, rather than by satellite. The FCC has held that new denials of such service are unfair if they have the purpose or effect of significantly hindering us from providing programming to consumers. However, we cannot be certain that we can prevail in a complaint related to such programming and gain access to it. Our continuing failure to access such programming could materially and adversely affect our ability to compete in regions serviced by these cable providers.

The injunction against our retransmission of distant networks, which is currently waived, may be reinstated.

Pursuant to the Satellite Television Extension and Localism Act of 2010 (“STELA”), we obtained a waiver of a court injunction that previously prevented us from retransmitting certain distant network signals under a statutory copyright license. Because of that waiver, we may provide distant network signals to eligible subscribers. To qualify for that waiver, we are required to provide local service in all 210 local markets in the United States on an ongoing basis. This condition poses a significant strain on our capacity. Moreover, we may lose that waiver if we are found to have failed to provide local service in any of the 210 local markets. If we lose the waiver, the injunction could be reinstated. Furthermore, depending on the severity of the failure, we may also be subject to other sanctions, which may include, among other things, damages.

We are subject to significant regulatory oversight, and changes in applicable regulatory requirements, including any adoption or modification of laws or regulations relating to the Internet, could adversely affect our business.

Our operations are subject to significant government regulation and oversight, primarily by the FCC and, to a certain extent, by Congress, other federal agencies and foreign, state and local authorities. Depending upon the circumstances, noncompliance with legislation or regulations promulgated by these authorities could result in the limitations on, or suspension or revocation of, our licenses or registrations, the termination or loss of contracts or the imposition of contractual damages, civil fines or criminal penalties, any of which could have a material adverse effect on our business, financial condition and results of operations. Furthermore, the change in the Administration and any government policy changes it may institute, which may be substantial, could increase regulatory uncertainty. The adoption or modification of laws or regulations relating to video programming, satellite services, the Internet or other areas of our business could limit or otherwise adversely affect the manner in which we currently conduct our business, including our Sling TV services. In addition, the manner in which regulations or legislation in these areas may be interpreted and enforced cannot be precisely determined, which in turn could have an adverse effect on our business, financial condition and results of operations. See regulatory disclosures under the caption “*Item 1. Business – Government Regulations*” of DISH Network’s Annual Report on Form 10-K for the year ended December 31, 2019 for additional information.

Our DISH TV services depend on FCC licenses that can expire or be revoked or modified and applications for FCC licenses that may not be granted.

If the FCC were to cancel, revoke, suspend, restrict, significantly condition, or fail to renew any of our licenses or authorizations, or fail to grant our applications for FCC licenses that we may file from time to time, it could have a material adverse effect on our business, financial condition and results of operations. Specifically, loss of a frequency authorization would reduce the amount of spectrum available to us, potentially reducing the amount of DISH TV services available to our DISH TV subscribers. The materiality of such a loss of authorizations would vary based upon, among other things, the location of the frequency used or the availability of replacement spectrum. In addition, Congress often considers and enacts legislation that affects us and FCC proceedings to implement the Communications Act and enforce its regulations are ongoing. We cannot predict the outcomes of these legislative or regulatory proceedings or their effect on our business.

We are subject to digital HD “carry-one, carry-all” requirements that cause capacity constraints.

To provide any full-power local broadcast signal in any market, we are required to retransmit all qualifying broadcast signals in that market (“carry-one, carry-all”), including the carriage of full-power broadcasters’ HD signals in markets in which we elect to provide local channels in HD. The carriage of additional HD signals on our DISH TV services could cause us to experience significant capacity constraints and prevent us from carrying additional popular national channels and/or carrying those national channels in HD.

Our business, investor confidence in our financial results and DISH Network’s stock price may be adversely affected if our internal controls are not effective.

We periodically evaluate and test our internal control over financial reporting to satisfy the requirements of Section 404 of the Sarbanes-Oxley Act. Our management has concluded that our internal control over financial reporting was effective as of December 31, 2019. If in the future we are unable to report that our internal control over financial reporting is effective, investors, customers and business partners could lose confidence in the accuracy of our financial reports, which could in turn have a material adverse effect on our business, investor confidence in our financial results may weaken, and DISH Network’s stock price may suffer.

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

The following table sets forth certain information concerning our principal properties.

Description/Use/Location	Owned	Leased From		Other Third Party
		EchoStar	DISH	
Corporate headquarters, Englewood, Colorado (1)		X		
Customer call center and general offices, Roseland, New Jersey				X
Customer call center, Bluefield, West Virginia	X			
Customer call center, Christiansburg, Virginia				X
Customer call center, Harlingen, Texas	X			
Customer call center, Hilliard, Ohio				X
Customer call center, Littleton, Colorado (2)			X	
Customer call center, Phoenix, Arizona				X
Customer call center, Thornton, Colorado	X			
Customer call center, Tulsa, Oklahoma				X
Customer call center, warehouse, service, and remanufacturing center, El Paso, Texas	X			
Data Center, Cheyenne, Wyoming (2)			X	
Digital broadcast operations center, Cheyenne, Wyoming (3)	X			
Digital broadcast operations center, Gilbert, Arizona (3)	X			
Engineering offices and service center, Englewood, Colorado (3)	X			
Engineering office, American Fork, Utah (3)				X
Engineering office, Bangalore, India (3)				X
Engineering office, Foster City, California (3)				X
Engineering office, Kharkov, Ukraine (3)				X
Engineering office, Superior, Colorado (3)				X
IT development center, Denver, Colorado				X
Micro digital broadcast operations center, Lockhart, Texas (3)	X			
Regional digital broadcast operations center, Monee, Illinois (3)	X			
Regional digital broadcast operations center, New Braunfels, Texas (3)	X			
Regional digital broadcast operations center, Quicksburg, Virginia (3)	X			
Regional digital broadcast operations center, Spokane, Washington (3)	X			
Service and remanufacturing center, Spartanburg, South Carolina				X
Warehouse and distribution center, Denver, Colorado				X
Warehouse and distribution center, Atlanta, Georgia				X
Warehouse, Denver, Colorado	X			

(1) See Note 17 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information on our Related Party Transactions with EchoStar.

- (2) These properties were transferred to DISH Network in connection with the completion of the Master Transaction Agreement. See Note 17 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information on our Related Party Transactions with DISH Network.
- (3) These properties were transferred to us in connection with the completion of the Share Exchange.

In addition to the principal properties listed above, we operate numerous facilities for, among other things, our in-home service operations strategically located in regions throughout the United States. Furthermore, we own or lease capacity on 11 satellites, which are a major component of our DISH TV services. See further information under Note 6 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K.

Item 3. LEGAL PROCEEDINGS

See Note 12 “*Commitments and Contingencies – Contingencies – Litigation*” in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for information regarding certain legal proceedings in which we are involved.

Item 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

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

Market Information. As of February 24, 2020, all 1,015 issued and outstanding shares of our common stock were held by DOC. There is currently no established trading market for our common stock.

Item 7. MANAGEMENT’S NARRATIVE ANALYSIS OF RESULTS OF OPERATIONS

You should read the following narrative analysis of our financial condition and results of operations together with the audited consolidated financial statements and notes to our financial statements included elsewhere in this Annual Report on Form 10-K. This management’s narrative analysis is intended to help provide an understanding of our financial condition, changes in financial condition and results of our operations and contains forward-looking statements that involve risks and uncertainties. The forward-looking statements are not historical facts, but rather are based on current expectations, estimates, assumptions and projections about our industry, business and future financial results. Our actual results could differ materially from the results contemplated by these forward-looking statements due to a number of factors, including those discussed under the caption “Item 1A. Risk Factors” and elsewhere in this Annual Report on Form 10-K. Furthermore, such forward-looking statements speak only as of the date of this Annual Report on Form 10-K and we expressly disclaim any obligation to update any forward-looking statements.

Overview

Our business strategy is to be the best provider of video services in the United States by providing products with the best technology, outstanding customer service, and great value. We promote our Pay-TV services as providing our subscribers with a better “price-to-value” relationship than those available from other subscription television service providers. In connection with the growth in OTT industry, we promote our Sling TV services primarily to consumers who do not subscribe to traditional satellite and cable pay-TV services.

As the pay-TV industry is mature, our DISH TV strategy has included an emphasis on acquiring and retaining higher quality subscribers, including subscribers in markets underserved by pay-TV services, even if it means that we will acquire and retain fewer overall subscribers. We evaluate the quality of subscribers based upon a number of factors, including, among others, profitability. Our DISH TV subscriber base has been declining due to, among other things, this strategy. There can be no assurance that our DISH TV subscriber base will not continue to decline and that the pace of such decline will not accelerate.

Our revenue and profit is primarily derived from Pay-TV programming services that we provide to our subscribers. We also generate revenue from equipment rental fees and other hardware related fees, including DVRs and fees from subscribers with multiple receivers; advertising services; fees earned from our Smart Home service operations; warranty services; and sales of digital receivers and related equipment to third-party pay-TV providers. Our subscriber-related revenue has been declining due to, among other things, the continuing decline in our DISH TV subscriber base. Our most significant expenses are subscriber-related expenses, which are primarily related to programming.

Financial Highlights

2019 Consolidated Results of Operations and Key Operating Metrics

- Revenue of \$12.623 billion
- Net income attributable to DISH DBS of \$828 million
- Loss of approximately 336,000 net Pay-TV subscribers
- Loss of approximately 511,000 net DISH TV subscribers
- Addition of approximately 175,000 net Sling TV subscribers
- Pay-TV ARPU of \$85.92
- Gross new DISH TV subscriber activations of approximately 1.348 million
- DISH TV churn rate of 1.62%
- DISH TV SAC of \$822

Consolidated Financial Condition as of December 31, 2019

- Cash, cash equivalents and current marketable investment securities of \$17 million
- Total assets of \$4.387 billion
- Total long-term debt and finance lease obligations of \$10.822 billion

We currently operate one business segment.

Pay-TV

We are the nation's fourth largest pay-TV provider and offer Pay-TV services under the DISH brand, and the Sling brand. As of December 31, 2019, we had 11.986 million Pay-TV subscribers in the United States, including 9.394 million DISH TV subscribers and 2.592 million Sling TV subscribers.

Competition has intensified in recent years as the pay-TV industry has matured. To differentiate our DISH TV services from our competitors, we offer the Hopper whole-home DVR and have continued to add functionality and simplicity for a more intuitive user experience. Our Hopper and Joey[®] whole-home DVR promotes a suite of integrated features and functionality designed to maximize the convenience and ease of watching TV anytime and anywhere. It also has several innovative features that a consumer can use, at his or her option, to watch and record television programming, through their televisions, streaming media devices, tablets, phones and computers. The Hopper 3, among other things, features 16 tuners, delivers an enhanced 4K Ultra HD experience, and supports up to seven TVs simultaneously.

We market our Sling TV services primarily to consumers who do not subscribe to traditional satellite and cable pay-TV services. Our Sling TV services require an Internet connection and are available on multiple streaming-capable devices including streaming media devices, TVs, tablets, computers, game consoles and phones. We offer Sling International, Sling Latino and Sling domestic video programming services. Our domestic Sling TV services have a single-stream service branded Sling Orange and a multi-stream service branded Sling Blue, which includes, among other things, the ability to stream on up to three devices simultaneously.

We face competition from providers of video content distributed over the Internet including services with live-linear television programming, as well as single programmer offerings and offerings of large libraries of on-demand content, including in certain cases original content. These providers include, among others, Netflix, Hulu, Apple, Amazon, Alphabet, Disney, Verizon, AT&T, ViacomCBS, STARZ, Fubo and Philo. Many of these companies have larger customer bases, stronger brand recognition and greater financial, marketing and other resources than we do. In addition, traditional providers of video entertainment, including broadcasters, cable channels and MVPDs, are increasing their Internet-based video offerings. Some of these services charge nominal or no fees for access to their content, which could adversely affect demand for our Pay-TV services. Moreover, new technologies have been, and will likely continue to be, developed that further increase the number of competitors we face with respect to video services, including competition from piracy-based video offerings. This competition, among other things, has caused the rate of growth in subscribers to our Sling TV services to decrease. In June 2018, we launched additional Sling TV services which include offering consumers a la carte channel subscriptions, access to pay-per-view events and movies, and access to free content. There can be no assurance that these additional services or other offers will positively affect our results of operations or our net Sling TV subscribers.

Recent Developments

Mergers and acquisitions, joint ventures and alliances among cable television providers, telecommunications companies, programming providers and others may result in, among other things, greater scale and financial leverage and increase the availability of offerings from providers capable of bundling video, broadband and/or wireless services in competition with our services, and may exacerbate the risks described in our public filings. In October 2016, AT&T announced its acquisition of Time Warner, which was completed in June 2018. In December 2017, Walt Disney Company announced its acquisition of certain assets of Twenty-First Century Fox, Inc., which was completed in March 2019. These transactions may affect us adversely by, among other things, making it more difficult for us to obtain access to certain programming networks on nondiscriminatory and fair terms, or at all. For example, in connection with AT&T's acquisition of Time Warner, Turner sent all of its distributors written, irrevocable offers to submit disputes over the price and other terms of Turner programming to binding arbitration and to guarantee continued access to that programming while any arbitration is pending. However, in October 2018, AT&T removed its HBO and Cinemax channels, which are not part of Turner, from our DISH TV and Sling TV programming lineup, as we and AT&T have been unable to negotiate the terms and conditions of a new programming carriage contract.

Trends

Competition

Competition has intensified in recent years as the pay-TV industry has matured. With respect to our DISH TV services, we and our competitors increasingly must seek to attract a greater proportion of new subscribers from each other's existing subscriber bases rather than from first-time purchasers of pay-TV services. We incur significant costs to retain our existing DISH TV subscribers, mostly as a result of upgrading their equipment to next generation receivers, primarily including our Hopper receivers, and by providing retention credits. Our DISH TV subscriber retention costs may vary significantly from period to period.

Many of our competitors have been especially aggressive by offering discounted programming and services for both new and existing subscribers, including bundled offers combining broadband, video and/or wireless services and other promotional offers. Certain competitors have been able to subsidize the price of video services with the price of broadband and/or wireless services.

Our Pay-TV services also face increased competition from programmers and other companies who distribute video directly to consumers over the Internet. Our Sling TV services face increased competition from content providers and other companies, as well as traditional satellite television providers, cable companies and large telecommunications companies, that are increasing their Internet-based video offerings. We also face competition from providers of video content distributed over the Internet including services with live linear television programming, as well as single programmer offerings and offerings of large libraries of on-demand content, including in certain cases original content. These providers include, among others, Netflix, Hulu, Apple, Amazon, Alphabet, Disney, Verizon, AT&T, ViacomCBS, STARZ, Fubo and Philo. Furthermore, our DISH TV services face increased competition as programming offered over the Internet has become more prevalent and consumers are spending an increasing amount of time accessing video content via the Internet on their mobile devices. Significant changes in consumer behavior with regard to the means by which consumers obtain video entertainment and information in response to digital media competition could have a material adverse effect on our business, results of operations and financial condition or otherwise disrupt our business. In particular, consumers have shown increased interest in viewing certain video programming in any place, at any time and/or on any broadband-connected device they choose. Online content providers may cause our subscribers to disconnect our DISH TV services (“cord cutting”), downgrade to smaller, less expensive programming packages (“cord shaving”) or elect to purchase through these online content providers a certain portion of the services that they would have historically purchased from us, such as pay per view movies, resulting in less revenue to us.

We implement new marketing promotions from time to time that are intended to increase our Pay-TV subscriber activations. For our DISH TV services, we have launched various marketing promotions offering certain DISH TV programming packages without a price increase for a commitment period. We also launched our Flex Pack skinny bundle with a core package of programming consisting of more than 50 channels and the choice of one of ten themed add-on channel packs, which include, among others, local broadcast networks and kids and general entertainment programming. Subscribers can also add or remove additional channel packs to best suit their entertainment needs. In addition, certain streaming apps, including, among others, Netflix, Amazon Prime Video and YouTube, have been integrated into select Hopper receiver systems. During 2017, we launched “Tuned In To You” and during 2019 we launched the “Tuned In To You 2.0” campaign, which further amplifies our commitment to customer satisfaction. While we plan to implement these and other new marketing efforts for our DISH TV services, there can be no assurance that we will ultimately be successful in increasing our gross new DISH TV subscriber activations.

Additionally, in response to our efforts, we may face increased competitive pressures, including aggressive marketing and retention efforts, bundled discount offers combining broadband, video and/or wireless services and other discounted promotional offers. For our Sling TV services, we offer a personalized TV experience with a customized channel line-up and two of the lowest priced multichannel live-linear online streaming services in the industry, our Sling Orange service and our Sling Blue service. During 2018, we launched our “We are Slingers” campaign and during 2019, we launched our “Sling In” campaign. While we plan to implement this and other new marketing efforts for our Sling TV services, there can be no assurance that we will ultimately be successful in increasing our net Sling TV subscriber activations.

Our DISH TV subscriber base has been declining due to, among other things, the factors described above. There can be no assurance that our DISH TV subscriber base will not continue to decline and that the pace of such decline will not accelerate. As our DISH TV subscriber base continues to decline, it could have a material adverse long-term effect on our business, results of operations, financial condition and cash flow.

Programming

Our ability to compete successfully will depend, among other things, on our ability to continue to obtain desirable programming and deliver it to our subscribers at competitive prices. Programming costs represent a large percentage of our “Subscriber-related expenses” and the largest component of our total expense. We expect these costs to continue to increase due to contractual price increases and the renewal of long-term programming contracts on less favorable pricing terms and certain programming costs are rising at a much faster rate than wages or inflation. In particular, the rates we are charged for retransmitting local broadcast channels have been increasing substantially and may exceed our ability to increase our prices to our customers. Going forward, our margins may face pressure if we are unable to renew our long-term programming contracts on acceptable pricing and other economic terms or if we are unable to pass these increased programming costs on to our customers.

Increases in programming costs have caused us to increase the rates that we charge to our subscribers, which could in turn cause our existing Pay-TV subscribers to disconnect our service or cause potential new Pay-TV subscribers to choose not to subscribe to our service. Additionally, even if our subscribers do not disconnect our services, they may purchase through new and existing online content providers a certain portion of the services that they would have historically purchased from us, such as pay-per-view movies, resulting in less revenue to us.

Furthermore, our net Pay-TV subscriber additions, gross new DISH TV subscriber activations, and DISH TV churn rate may be negatively impacted if we are unable to renew our long-term programming carriage contracts before they expire. In the past, our net Pay-TV subscriber additions, gross new DISH TV subscriber activations, and DISH TV churn rate have been negatively impacted as a result of programming interruptions and threatened programming interruptions in connection with the scheduled expiration of programming carriage contracts with content providers. For example, in June 2018 and November 2018, Univision Communications Inc. (“Univision”) removed certain of its channels from our DISH TV and Sling TV programming lineup. On March 26, 2019, we and Univision signed a new programming carriage contract which restored certain of these Univision channels to our DISH TV programming lineup. In October 2018, AT&T removed its HBO and Cinemax channels from our DISH TV and Sling TV programming lineup, as we and AT&T have been unable to negotiate the terms and conditions of a new programming carriage contract. AT&T offers its programming, including its HBO and Cinemax channels, directly to consumers over the Internet and provides HBO for free to its subscribers under certain offers. In July 2019, Fox RSNs also removed certain of its channels from our DISH TV and Sling TV programming lineup. In August 2019, Sinclair Broadcast Group acquired the Fox RSNs. We experienced a higher DISH TV churn rate, higher net Pay-TV subscriber losses and lower gross new DISH TV subscriber activations during 2018 and 2019, when Univision, AT&T and Fox RSNs removed certain of their channels from our DISH TV and Sling TV programming lineup. There can be no assurance that channel removals, such as the removal of the channels discussed above or others, will not have a material adverse effect on our business, results of operations and financial condition or otherwise disrupt our business.

We cannot predict with any certainty the impact to our net Pay-TV subscriber additions, gross new DISH TV subscriber activations, and DISH TV churn rate resulting from additional programming interruptions or threatened programming interruptions that may occur in the future. As a result, we may at times suffer from periods of lower net Pay-TV subscriber additions or higher net Pay-TV subscriber losses.

Operations and Customer Service

While competitive factors have impacted the entire pay-TV industry, our relative performance has also been driven by issues specific to us. In the past, our subscriber growth has been adversely affected by signal theft and other forms of fraud and by our operational inefficiencies. For our DISH TV services, in order to combat signal theft and improve the security of our broadcast system, we use microchips embedded in credit card sized access cards, called “smart cards,” or security chips in our DBS receiver systems to control access to authorized programming content (“Security Access Devices”). We expect that future replacements of these devices may be necessary to keep our system secure. To combat other forms of fraud, among other things, we monitor our independent third-party distributors’ and independent third-party retailers’ adherence to our business rules. Furthermore, for our Sling TV services, we encrypt programming content and use digital rights management software to, among other things, prevent unauthorized access to our programming content.

While we have made improvements in responding to and dealing with customer service issues, we continue to focus on the prevention of these issues, which is critical to our business, financial condition and results of operations. To improve our operational performance, we continue to make investments in staffing, training, information systems, and other initiatives, primarily in our call center and in-home service operations. These investments are intended to help combat inefficiencies introduced by the increasing complexity of our business, improve customer satisfaction, reduce churn, increase productivity, and allow us to scale better over the long run. We cannot be certain, however, that our spending will ultimately be successful in improving our operational performance.

Changes in our Technology

We have been deploying DBS receivers for our DISH TV services that utilize 8PSK modulation technology with MPEG-4 compression technology for several years. These technologies, when fully deployed, will allow improved broadcast efficiency, and therefore allow increased programming capacity. Many of our customers today, however, do not have DBS receivers that use MPEG-4 compression technology. In addition, given that all of our HD content is broadcast in MPEG-4, any growth in HD penetration will naturally accelerate our transition to these newer technologies and may increase our retention costs. All new DBS receivers have MPEG-4 compression with 8PSK modulation technology.

In addition, from time to time, we change equipment for certain subscribers to make more efficient use of transponder capacity in support of HD and other initiatives. We believe that the benefit from the increase in available transponder capacity outweighs the short-term cost of these equipment changes.

Operational Liquidity

We make general investments in property such as satellites, set-top boxes, information technology and facilities that support our overall Pay-TV business. Moreover, since we are a subscriber-based company, we also make subscriber-specific investments to acquire new subscribers and retain existing subscribers. While the general investments may be deferred without impacting the business in the short-term, the subscriber-specific investments are less discretionary. Our overall objective is to generate sufficient cash flow over the life of each subscriber to provide an adequate return against the upfront investment. Once the upfront investment has been made for each subscriber, the subsequent cash flow is generally positive, but there can be no assurances that over time we will recoup or earn a return on the upfront investment.

There are a number of factors that impact our future cash flow compared to the cash flow we generate at a given point in time. The first factor is our DISH TV churn rate and how successful we are at retaining our current Pay-TV subscribers. To the extent we lose Pay-TV subscribers from our existing base, the positive cash flow from that base is correspondingly reduced. The second factor is how successful we are at maintaining our subscriber-related margins. To the extent our "Subscriber-related expenses" grow faster than our "Subscriber-related revenue," the amount of cash flow that is generated per existing subscriber is reduced. Our subscriber-related margins have been reduced by, among other things, a shift to lower priced Pay-TV programming packages and higher programming costs. The third factor is the rate at which we acquire new subscribers. The faster we acquire new subscribers, the more our positive ongoing cash flow from existing subscribers is offset by the negative upfront cash flow associated with acquiring new subscribers. Conversely, the slower we acquire subscribers, the more our operating cash flow is enhanced in that period. Finally, our future cash flow is impacted by the rate at which we make general investments, incur litigation expense, and any cash flow from financing activities. Declines in our Pay-TV subscriber base and subscriber-related margins continue to negatively impact our cash flow, and there can be no assurances that these declines will not continue.

Availability of Credit and Effect on Liquidity

The ability to raise capital has generally existed for us despite economic weakness and uncertainty. While modest fluctuations in the cost of capital will not likely impact our current operational plans, significant fluctuations could have a material adverse effect on our business, results of operations and financial condition.

Debt Maturity

Our 4 5/8% Senior Notes with an aggregate principal balance of \$900 million were redeemed on July 17, 2017.

During 2017 and 2018, we repurchased \$174 million and \$57 million, respectively, of our 4 1/4% Senior Notes due 2018 in open market trades. The remaining balance of \$969 million were redeemed on April 2, 2018.

During the year ended December 31, 2018 and 2019, we repurchased \$83 million and \$22 million, respectively, of our 7 7/8% Senior Notes due 2019 in open market trades. The remaining balance of \$1.295 billion was redeemed on September 3, 2019.

Our 5 1/8% Senior Notes with an aggregate principal balance of \$1.1 billion mature on May 1, 2020. We will either fund this obligation from cash and marketable investment securities balances at that time and/or advances from our parent, DISH Network or, depending on market conditions, we may refinance this obligation, in whole or in part.

Future Liquidity

Wireless

Since 2008, DISH Network has directly invested over \$11 billion to acquire certain wireless spectrum licenses and related assets and made over \$10 billion in non-controlling investments in certain entities, for a total of over \$21 billion, as described further below.

DISH Network Spectrum. DISH Network has directly invested over \$11 billion to acquire certain wireless spectrum licenses and related assets. These wireless spectrum licenses are subject to certain interim and final build-out requirements, as well as certain renewal requirements. In March 2017, DISH Network notified the FCC that it planned to deploy a narrowband IoT network on certain of these wireless licenses, which was to be the First Phase. DISH Network expected to complete the First Phase by March 2020, with subsequent phases to be completed thereafter. DISH Network has entered into vendor contracts with multiple parties for, among other things, base stations, chipsets, modules, tower leases, the core network, RF design, and deployment services for the First Phase. Among other things, initial RF design in connection with the First Phase was complete, DISH Network had secured certain tower sites, and they were in the process of identifying and securing additional tower sites. The core network had been installed and commissioned. DISH Network installed the first base stations on sites in 2018 and were in the process of deploying the remaining base stations. During October 2019, DISH Network paused work on its narrowband IoT deployment due to its March 2020 build-out deadlines being tolled as discussed above. In addition, DISH Network has issued RF/Is to various vendors in the wireless industry as it moves forward with its 5G Network Deployment. DISH Network currently expects expenditures for its wireless projects to be between \$250 million and \$500 million during 2020, excluding capitalized interest. DISH Network currently expects expenditures for its 5G Network Deployment to be approximately \$10 billion, excluding capitalized interest. DISH Network will need to make significant additional investments or partner with others to, among other things, commercialize, build-out, and integrate these licenses and related assets, and any additional acquired licenses and related assets; and comply with regulations applicable to such licenses. Depending on the nature and scope of such commercialization, build-out, integration efforts, and regulatory compliance, any such investments or partnerships could vary significantly. In addition, as DISH Network considers its options for the commercialization of its wireless spectrum, it will incur significant additional expenses and will have to make significant investments related to, among other things, research and development, wireless testing and wireless network infrastructure. DISH Network may also determine that additional wireless spectrum licenses may be required to commercialize its wireless business and to compete with other wireless service providers.

Asset Purchase Agreement. On July 26, 2019, DISH Network entered into an Asset Purchase Agreement (the “APA”) with T-Mobile US, Inc. (“TMUS”) and Sprint Corporation (“Sprint” and together with TMUS, the “Sellers” and after the consummation of the Sprint-TMUS merger, sometimes referred to as “NTM”).

Pursuant to the APA, after the consummation of the Sprint-TMUS merger and at the closing of the transaction, NTM will sell to DISH Network and DISH Network will acquire from NTM certain assets and liabilities associated with Sprint’s Boost Mobile, Virgin Mobile and Sprint-branded prepaid mobile services businesses (the “Prepaid Business”) for an aggregate purchase price of \$1.4 billion as adjusted for specific categories of net working capital on the Closing Date (the “Prepaid Business Sale”).

At the closing of the Prepaid Business Sale, DISH Network and NTM will enter into a transition services agreement under which DISH Network will receive certain transitional services (the “TSA”), a master network services agreement for the provision of network services by NTM to DISH Network (the “MNSA”), an option agreement entitling DISH Network to acquire certain decommissioned cell sites and retail stores of NTM (the “Option Agreement”) and an agreement under which DISH Network would purchase all of Sprint’s 800 MHz spectrum licenses, totaling approximately 13.5 MHz of nationwide wireless spectrum for an additional approximately \$3.59 billion (the “Spectrum Purchase Agreement” and together with the APA, the TSA, the MNSA and the Option Agreement, the “Transaction Agreements”). See Note 15 “*Commitments and Contingencies – Commitments – Sprint Asset Acquisition*” of DISH Network’s Annual Report on Form 10-K for the year ended December 31, 2019 for further information on the Transaction Agreements.

Beginning on November 5, 2019, and while the approval of the Sprint-TMUS merger is pending, the March 7, 2020 build-out deadline for both the AWS-4 and Lower 700 MHz E Block spectrum bands is tolled; however, if the Sprint-TMUS merger is not consummated, the original deadlines would be reinstated with extensions equal to the length of time the deadline was tolled. During October 2019, DISH Network paused work on its narrowband IoT deployment due to its March 2020 build-out deadlines being tolled. DISH Network has issued requests for RFI/PS to various vendors in the wireless industry as it moves forward with its 5G Network Deployment.

In connection with the development of DISH Network’s wireless business, including, without limitation, the efforts described above, we have made cash distributions to partially finance these efforts to date and may make additional cash distributions to finance, in whole or in part, DISH Network’s future efforts. There can be no assurance that DISH Network will be able to develop and implement a business model that will realize a return on these wireless spectrum licenses or that DISH Network will be able to profitably deploy the assets represented by these wireless spectrum licenses.

DISH Network Non-Controlling Investments in the Northstar Entities and the SNR Entities Related to AWS-3 Wireless Spectrum Licenses. During 2015, through its wholly-owned subsidiaries American II and American III, DISH Network initially made over \$10 billion in certain non-controlling investments in Northstar Spectrum, the parent company of Northstar Wireless, and in SNR HoldCo, the parent company of SNR Wireless, respectively. On October 27, 2015, the FCC granted certain AWS-3 Licenses to Northstar Wireless and to SNR Wireless, respectively. The Northstar Entities and/or the SNR Entities may need to raise significant additional capital in the future, which may be obtained from third party sources or from DISH Network, so that the Northstar Entities and the SNR Entities may commercialize, build-out and integrate these AWS-3 Licenses, comply with regulations applicable to such AWS-3 Licenses, and make any potential payments related to the re-auction of AWS-3 licenses retained by the FCC. Depending upon the nature and scope of such commercialization, build-out, integration efforts, regulatory compliance, and potential re-auction payments, any such loans, equity contributions or partnerships could vary significantly. For further information regarding the potential re-auction of AWS-3 licenses retained by the FCC, see Note 15 “*Commitments and Contingencies – Commitments – DISH Network Non-Controlling Investments in the Northstar Entities and the SNR Entities Related to AWS-3 Wireless Spectrum Licenses*” in the Notes to DISH Network’s Annual Report on Form 10-K for the year ended December 31, 2019.

In connection with certain funding obligations related to the investments by American II and American III discussed above, in February 2015, we paid a dividend of \$8.250 billion to DOC for, among other things, general corporate purposes, which included such funding obligations, and to fund other DISH Network cash needs. We may make additional cash distributions to finance, in whole or in part, loans that DISH Network may make to the Northstar Entities and the SNR Entities in the future related to DISH Network’s non-controlling investments in these entities. There can be no assurance that DISH Network will be able to obtain a profitable return on its non-controlling investments in the Northstar Entities and the SNR Entities.

We may need to raise significant additional capital in the future, which may not be available on acceptable terms or at all, to among other things, make additional cash distributions to DISH Network, continue investing in our business and to pursue acquisitions and other strategic transactions.

See “Item 1A. Risk Factors – Acquisition and Capital Structure Risks – We have made substantial investments to acquire certain wireless spectrum licenses and other related assets. In addition, we have made substantial non-controlling investments in the Northstar Entities and the SNR Entities related to AWS-3 wireless spectrum licenses” in DISH Network’s Annual Report on Form 10-K for the year ended December 31, 2019 for further information.

Covenants and Restrictions Related to our Senior Notes

The indentures related to our outstanding senior notes contain restrictive covenants that, among other things, impose limitations on our ability to: (i) incur additional indebtedness; (ii) enter into sale and leaseback transactions; (iii) pay dividends or make distributions on our capital stock or repurchase our capital stock; (iv) make certain investments; (v) create liens; (vi) enter into certain transactions with affiliates; (vii) merge or consolidate with another company; and (viii) transfer or sell assets. Should we fail to comply with these covenants, all or a portion of the debt under the senior notes could become immediately payable. The senior notes also provide that the debt may be required to be prepaid if certain change-in-control events occur. As of the date of filing of this Annual Report on Form 10-K, we were in compliance with the covenants and restrictions related to our senior notes.

New Accounting Pronouncements

Financial Instruments – Credit Losses. On June 16, 2016, the FASB issued ASU 2016-13 *Financial Instruments – Credit Losses, Measurement of Credit Losses on Financial Instruments* (“ASU 2016-13”), which changes the way entities measure credit losses for most financial assets and certain other instruments that are not measured at fair value through net earnings. This standard will be effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. Early adoption is permitted. We currently expect that the adoption of ASU 2016-13 will have an immaterial impact on our Consolidated Financial Statements and related disclosures.

Fair Value Measurement. On August 28, 2018, the FASB issued ASU 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurement* (“ASU 2018-13”), which modifies the disclosure requirements on fair value measurements by adding, modifying or removing certain disclosures. This standard will be effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. Early adoption is permitted. Certain disclosures in ASU 2018-13 are required to be applied on a retrospective basis and others on a prospective basis. We currently expect that the adoption of ASU 2018-13 will have an immaterial impact on our Consolidated Financial Statements and related disclosures.

EXPLANATION OF KEY METRICS AND OTHER ITEMS

Subscriber-related revenue. “Subscriber-related revenue” consists principally of revenue from basic, local, premium movie, pay-per-view, Latino and international subscriptions; equipment rental fees and other hardware related fees, including DVRs and fees from subscribers with multiple receivers; advertising services; fees earned from our in-home service operations; warranty services; and other subscriber revenue. Certain of the amounts included in “Subscriber-related revenue” are not recurring on a monthly basis.

Equipment sales and other revenue. “Equipment sales and other revenue” principally includes the non-subsidized sales of DBS accessories to independent third-party retailers and other independent third-party distributors of our equipment, sales of digital receivers and related components to third-party pay-TV providers, revenue from OnTech Smart Services and revenue from services and other agreements with EchoStar.

Subscriber-related expenses. “Subscriber-related expenses” principally include programming expenses, which represent a substantial majority of these expenses. “Subscriber-related expenses” also include costs for Pay-TV services incurred in connection with our subscriber retention, in-home service and call center operations, billing costs, refurbishment and repair costs related to DBS receiver systems and other variable subscriber expenses.

Satellite and transmission expenses. “Satellite and transmission expenses” includes the cost of digital broadcast operations, the cost of leasing satellite capacity, executory costs associated with finance leases, the cost of telemetry, tracking and control, and other related services. In addition, “Satellite and transmission expenses” includes costs associated with our Sling TV services including, among other things, streaming delivery technology and infrastructure.

Cost of sales - equipment and other. “Cost of sales - equipment and other” primarily includes the cost of non-subsidized sales of DBS accessories to independent third-party retailers and other independent third-party distributors of our equipment, costs associated with sales of digital receivers and related components to third-party pay-TV providers, costs associated with OnTech Smart Services and costs related to services and other agreements with EchoStar.

Subscriber acquisition costs. While we primarily lease DBS receiver systems, we also subsidize certain costs to attract new subscribers. Our “Subscriber acquisition costs” include the cost of subsidized sales of DBS receiver systems to independent third-party retailers and other independent third-party distributors of our equipment, the cost of subsidized sales of DBS receiver systems directly by us to subscribers, including net costs related to our promotional incentives, costs related to our direct sales efforts and costs related to installation and acquisition advertising. Our “Subscriber acquisition costs” also includes costs associated with acquiring Sling TV subscribers including, among other things, costs related to acquisition advertising and our direct sales efforts and commissions. Subsequent to the adoption of ASU 2014-09 on January 1, 2018, we capitalize payments made under certain sales incentive programs, including those with our independent third-party retailers and other independent third-party distributors, which were previously expensed as “Subscriber acquisition costs.” These amounts are now initially capitalized in “Other current assets” and “Other noncurrent assets, net” on our Consolidated Balance Sheets, and then amortized in “Other subscriber acquisition costs” on our Consolidated Statements of Operations and Comprehensive Income (Loss). See Note 2 in the Notes to our Consolidated Financial Statements in this Annual Report on Form 10-K for further information.

DISH TV SAC. Subscriber acquisition cost measures are commonly used by those evaluating traditional companies in the pay-TV industry. We are not aware of any uniform standards for calculating the “average subscriber acquisition costs per new DISH TV subscriber activation,” or DISH TV SAC, and we believe presentations of pay-TV SAC may not be calculated consistently by different companies in the same or similar businesses. Our DISH TV SAC is calculated as “Subscriber acquisition costs,” excluding “Subscriber acquisition costs” associated with our Sling TV services, plus capitalized payments made under certain sales incentive programs, excluding amortization related to these payments, plus the value of equipment capitalized under our lease program for new DISH TV subscribers, divided by gross new DISH TV subscriber activations. We include all the costs of acquiring DISH TV subscribers (e.g., subsidized and capitalized equipment) as we believe it is a more comprehensive measure of how much we are spending to acquire subscribers. We also include all new DISH TV subscribers in our calculation, including DISH TV subscribers added with little or no subscriber acquisition costs.

General and administrative expenses. “General and administrative expenses” consists primarily of employee-related costs associated with administrative services such as legal, information systems, and accounting and finance. It also includes outside professional fees (e.g., legal, information systems and accounting services) and other items associated with facilities and administration.

Litigation expense. “Litigation expense” primarily consists of certain significant legal settlements, judgments and/or accruals.

Interest expense, net of amounts capitalized. “Interest expense, net of amounts capitalized” primarily includes interest expense (net of capitalized interest), prepayment premiums and amortization of debt issuance costs associated with our senior debt, and interest expense associated with our finance lease obligations.

Other, net. The main components of “Other, net” are gains and losses realized on the sale of investments, impairment of marketable and non-marketable investment securities, unrealized gains and losses from changes in fair value of certain marketable investment securities and equity in earnings and losses of our affiliates.

Earnings before interest, taxes, depreciation and amortization (“EBITDA”). EBITDA is defined as “Net income (loss) attributable to DISH DBS” plus “Interest expense, net of amounts capitalized” net of “Interest income,” “Income tax (provision) benefit, net” and “Depreciation and amortization.” This “non-GAAP measure” is reconciled to “Net income (loss) attributable to DISH DBS” in our discussion of “Results of Operations” below.

DISH TV subscribers. We include customers obtained through direct sales, independent third-party retailers and other independent third-party distribution relationships in our DISH TV subscriber count. We also provide DISH TV services to hotels, motels and other commercial accounts. For certain of these commercial accounts, we divide our total revenue for these commercial accounts by \$34.99 and include the resulting number, which is substantially smaller than the actual number of commercial units served, in our DISH TV subscriber count.

Sling TV subscribers. We include customers obtained through direct sales and third-party marketing agreements in our Sling TV subscriber count. Sling TV subscribers are recorded net of disconnects. Sling TV customers receiving service for no charge, under certain new subscriber promotions, are excluded from our Sling TV subscriber count. For customers who subscribe to multiple Sling TV packages, including, among others, Sling TV Blue, Sling TV Orange, Sling Latino and Sling International, each customer is only counted as one Sling TV subscriber.

Pay-TV subscribers. Our Pay-TV subscriber count includes all DISH TV and Sling TV subscribers discussed above. For customers who subscribe to both our DISH TV services and our Sling TV services, each subscription is counted as a separate Pay-TV subscriber.

Pay-TV average monthly revenue per subscriber (“Pay-TV ARPU”). We are not aware of any uniform standards for calculating ARPU and believe presentations of ARPU may not be calculated consistently by other companies in the same or similar businesses. We calculate Pay-TV average monthly revenue per Pay-TV subscriber, or Pay-TV ARPU, by dividing average monthly “Subscriber-related revenue” for the period by our average number of Pay-TV subscribers for the period. The average number of Pay-TV subscribers is calculated for the period by adding the average number of Pay-TV subscribers for each month and dividing by the number of months in the period. The average number of Pay-TV subscribers for each month is calculated by adding the beginning and ending Pay-TV subscribers for the month and dividing by two. Sling TV subscribers on average purchase lower priced programming services than DISH TV subscribers, and therefore, as Sling TV subscribers increase, it has had a negative impact on Pay-TV ARPU.

DISH TV average monthly subscriber churn rate (“DISH TV churn rate”). We are not aware of any uniform standards for calculating subscriber churn rate and believe presentations of subscriber churn rates may not be calculated consistently by different companies in the same or similar businesses. We calculate DISH TV churn rate for any period by dividing the number of DISH TV subscribers who terminated service during the period by the average number of DISH TV subscribers for the same period, and further dividing by the number of months in the period. The average number of DISH TV subscribers is calculated for the period by adding the average number of DISH TV subscribers for each month and dividing by the number of months in the period. The average number of DISH TV subscribers for each month is calculated by adding the beginning and ending DISH TV subscribers for the month and dividing by two.

RESULTS OF OPERATIONS

Year Ended December 31, 2019 Compared to the Year Ended December 31, 2018.

Statements of Operations Data	For the Years Ended December 31,		Variance	
	2019	2018	Amount	%
	(In thousands)			
Revenue:				
Subscriber-related revenue	\$ 12,436,637	\$ 13,197,994	\$ (761,357)	(5.8)
Equipment sales and other revenue	186,256	164,145	22,111	13.5
Total revenue	12,622,893	13,362,139	(739,246)	(5.5)
Costs and Expenses:				
Subscriber-related expenses	7,768,732	8,392,150	(623,418)	(7.4)
% of Subscriber-related revenue	62.5 %	63.6 %		
Satellite and transmission expenses	555,803	637,160	(81,357)	(12.8)
% of Subscriber-related revenue	4.5 %	4.8 %		
Cost of sales - equipment and other	172,700	143,671	29,029	20.2
Subscriber acquisition costs	994,523	769,307	225,216	29.3
General and administrative expenses	732,589	692,881	39,708	5.7
% of Total revenue	5.8 %	5.2 %		
Depreciation and amortization	577,348	660,460	(83,112)	(12.6)
Total costs and expenses	10,801,695	11,295,629	(493,934)	(4.4)
Operating income (loss)	1,821,198	2,066,510	(245,312)	(11.9)
Other Income (Expense):				
Interest income	30,041	8,923	21,118	*
Interest expense, net of amounts capitalized	(756,690)	(792,436)	35,746	4.5
Other, net	7,609	8,994	(1,385)	(15.4)
Total other income (expense)	(719,040)	(774,519)	55,479	7.2
Income (loss) before income taxes	1,102,158	1,291,991	(189,833)	(14.7)
Income tax (provision) benefit, net	(274,751)	(318,305)	43,554	13.7
Effective tax rate	24.9 %	24.6 %		
Net income (loss)	827,407	973,686	(146,279)	(15.0)
Less: Net income (loss) attributable to noncontrolling interests, net of tax	(124)	2,399	(2,523)	*
Net income (loss) attributable to DISH DBS	\$ 827,531	\$ 971,287	\$ (143,756)	(14.8)
Other Data:				
Pay-TV subscribers, as of period end (in millions)	11.986	12.322	(0.336)	(2.7)
DISH TV subscribers, as of period end (in millions)	9.394	9.905	(0.511)	(5.2)
Sling TV subscribers, as of period end (in millions)	2.592	2.417	0.175	7.2
Pay-TV subscriber additions (losses), net (in millions)	(0.336)	(0.920)	0.584	63.5
DISH TV subscriber additions (losses), net (in millions)	(0.511)	(1.125)	0.614	54.6
Sling TV subscriber additions (losses), net (in millions)	0.175	0.205	(0.030)	(14.6)
Pay-TV ARPU	\$ 85.92	\$ 85.46	\$ 0.46	0.5
DISH TV subscriber additions, gross (in millions)	1.348	1.114	0.234	21.0
DISH TV churn rate	1.62 %	1.78 %	(0.16)%	(9.0)
DISH TV SAC	\$ 822	\$ 759	\$ 63	8.3
EBITDA	\$ 2,406,279	\$ 2,733,565	\$ (327,286)	(12.0)

* Percentage is not meaningful.

Pay-TV subscribers. We lost approximately 336,000 net Pay-TV subscribers during the year ended December 31, 2019 compared to the loss of approximately 920,000 net Pay-TV subscribers during the same period in 2018. The decrease in net Pay-TV subscriber losses during the year ended December 31, 2019 resulted from fewer net DISH TV subscriber losses, partially offset by fewer net Sling TV subscriber additions. Our net Pay-TV subscriber losses during the years ended December 31, 2019 and 2018 were negatively impacted by Univision, AT&T and Fox RSNs' removal of certain of their channels from our DISH TV and Sling TV programming lineup. On March 26, 2019, we and Univision signed a new programming carriage contract which restored certain Univision channels to our DISH TV programming lineup. In August 2019, Sinclair Broadcast Group acquired the Fox RSNs. We lost approximately 511,000 net DISH TV subscribers during the year ended December 31, 2019 compared to the loss of approximately 1.125 million net DISH TV subscribers during the same period in 2018. This decrease in net DISH TV subscriber losses primarily resulted from a lower DISH TV churn rate and higher gross new DISH TV subscriber activations. We added approximately 175,000 net Sling TV subscribers during the year ended December 31, 2019 compared to the addition of approximately 205,000 net Sling TV subscribers during the same period in 2018. This decrease in net Sling TV subscriber additions is primarily related to increased competition, including competition from other OTT service providers, and to a higher number of customer disconnects on a larger Sling TV subscriber base, including the impact from Univision, AT&T and Fox RSNs' removal of certain of their channels from our programming lineup, discussed above.

Our DISH TV churn rate for the year ended December 31, 2019 was 1.62% compared to 1.78% for the same period in 2018. This decrease primarily resulted from our emphasis on acquiring and retaining higher quality subscribers. Our DISH TV churn rate for the year ended December 31, 2019 was negatively impacted by various channel removals from our programming lineup. For example, our DISH TV churn rate for the years ended December 31, 2019 and 2018 was negatively impacted by Univision, AT&T and Fox RSNs' removal of certain of their channels from our programming lineup. Our DISH TV churn rate continues to be adversely impacted by external factors, such as, among other things, increased competitive pressures, including aggressive marketing, bundled discount offers combining broadband, video and/or wireless services and other discounted promotional offers, as well as cord cutting. Our DISH TV churn rate is also impacted by internal factors, such as, among other things, our ability to consistently provide outstanding customer service, price increases, programming interruptions in connection with the scheduled expiration of certain programming carriage contracts, our ability to control piracy and other forms of fraud and the level of our retention efforts.

During the year ended December 31, 2019, we activated approximately 1.348 million gross new DISH TV subscribers compared to approximately 1.114 million gross new DISH TV subscribers during the same period in 2018, an increase of 21.0%. The increase in gross new DISH TV subscribers resulted from the effectiveness of our promotions and product offers. Although our gross new DISH TV subscriber activations increased, our gross new DISH TV subscriber activations continue to be negatively impacted by stricter customer acquisition policies for our DISH TV subscribers, including an emphasis on acquiring higher quality subscribers, and by increased competitive pressures, including aggressive short term introductory pricing and bundled offers combining broadband, video and/or wireless services and other discounted promotional offers; and channel removals.

During September 2017, Hurricane Maria caused extraordinary damage in Puerto Rico and the U.S. Virgin Islands, resulting in a widespread loss of power and infrastructure. Given the devastation and loss of power, substantially all customers in those areas were unable to receive our service as of September 30, 2017. In an effort to ensure customers would not be charged for services they were unable to receive, we proactively paused service for those customers. Accordingly, we removed approximately 145,000 subscribers, representing all of our subscribers in Puerto Rico and the U.S. Virgin Islands, from our ending Pay-TV subscriber count as of September 30, 2017. During the fourth quarter 2017, 75,000 of these customers reactivated. During the year ended December 31, 2018, 31,000 of these customers reactivated. We incurred certain costs in connection with the re-activation of these returning subscribers, and accordingly, these returning customers were recorded as gross new DISH TV subscriber activations with the corresponding costs recorded in "Subscriber acquisition costs" on our Consolidated Statements of Operations and Comprehensive Income (Loss) and/or in "Purchases of property and equipment" on our Consolidated Statements of Cash Flows.

We cannot predict with any certainty the impact to our net Pay-TV subscriber additions, gross new DISH TV subscriber activations, and DISH TV subscriber churn rate resulting from programming interruptions or threatened programming interruptions that may occur in the future. As a result, we may at times suffer from periods of lower net Pay-TV subscriber additions or higher net Pay-TV subscriber losses.

We have not always met our own standards for performing high-quality installations, effectively resolving subscriber issues when they arise, answering subscriber calls in an acceptable timeframe, effectively communicating with our subscriber base, reducing calls driven by the complexity of our business, improving the reliability of certain systems and subscriber equipment, and aligning the interests of certain independent third-party retailers and installers to provide high-quality service. Most of these factors have affected both gross new DISH TV subscriber activations as well as DISH TV subscriber churn rate. Our future gross new DISH TV subscriber activations and our DISH TV subscriber churn rate may be negatively impacted by these factors, which could in turn adversely affect our revenue.

Subscriber-related revenue. “Subscriber-related revenue” totaled \$12.437 billion for the year ended December 31, 2019, a decrease of \$761 million or 5.8% compared to the same period in 2018. The decrease in “Subscriber-related revenue” compared to the same period in 2018 was primarily related to a lower average Pay-TV subscriber base, partially offset by an increase in Pay-TV ARPU discussed below. We expect these trends in “Subscriber-related revenue” to continue.

Pay-TV ARPU. Pay-TV ARPU was \$85.92 during the year ended December 31, 2019 versus \$85.46 during the same period in 2018. The \$0.46 or 0.5% increase in Pay-TV ARPU was primarily attributable to the DISH TV programming package price increases in the first quarter 2019 and 2018 and Sling TV programming package price increases in the third quarter 2018. The increases were partially offset by an increase in Sling TV subscribers as a percentage of our total Pay-TV subscriber base and a decrease in revenue related to premium channels. Sling TV subscribers on average purchase lower priced programming services than DISH TV subscribers, and therefore, the increase in Sling TV subscribers had a negative impact on Pay-TV ARPU. We expect this trend to continue.

Subscriber-related expenses. “Subscriber-related expenses” totaled \$7.769 billion during the year ended December 31, 2019, a decrease of \$623 million or 7.4% compared to the same period in 2018. The decrease in “Subscriber-related expenses” was primarily attributable to a lower average Pay-TV subscriber base and lower programming costs per subscriber. Programming costs per subscriber during the year ended December 31, 2019 decreased due to AT&T and Fox RSN’s removal of certain of their channels from our programming lineup. This decrease was partially offset by rate increases in certain of our programming contracts, including the renewal of certain contracts at higher rates, particularly for local broadcast channels. “Subscriber-related expenses” represented 62.5% and 63.6% of “Subscriber-related revenue” during the years ended December 31, 2019 and 2018, respectively.

In the normal course of business, we enter into contracts to purchase programming content in which our payment obligations are generally contingent on the number of Pay-TV subscribers to whom we provide the respective content. Our “Subscriber-related expenses” have and will continue to face further upward pressure from price increases and the renewal of long-term programming contracts on less favorable pricing terms. In addition, our programming expenses will increase to the extent we are successful in growing our Pay-TV subscriber base.

Satellite and transmission expenses. “Satellite and transmission expenses” totaled \$556 million during the year ended December 31, 2019, a decrease of \$81 million or 12.8% compared to the same period in 2018. This decrease resulted from the reduction of expense associated with the EchoStar VII and EchoStar XVIII satellite leases. The EchoStar VII lease expired June 30, 2018 and in May 2019, our lease of EchoStar XVIII ended as a result of an agreement to sell our interests in the LMDS and MVDDS licenses in exchange for the EchoStar XVIII satellite.

Subscriber acquisition costs. “Subscriber acquisition costs” totaled \$995 million for the year ended December 31, 2019, an increase of \$225 million or 29.3% compared to the same period in 2018. This change was primarily attributable to higher gross new DISH TV subscriber activations and the increase in DISH TV SAC, discussed below.

DISH TV SAC. DISH TV SAC was \$822 during the year ended December 31, 2019 compared to \$759 during the same period in 2018, an increase of \$63 or 8.3%. This change was primarily attributable to an increase in hardware, advertising and installation costs per activation. The increase in hardware and installation costs resulted from our emphasis on acquiring higher quality subscribers who activate with higher priced receivers, such as the Hopper 3, and a lower percentage of remanufactured receivers being activated on new subscriber accounts. In addition, the year ended December 31, 2018 were positively impacted by the reactivation of certain subscribers in Puerto Rico related to Hurricane Maria. The expenses we incurred for these reactivations were lower on a per subscriber basis than those incurred for the remaining gross new DISH TV subscriber activations during the year ended December 31, 2019.

During the years ended December 31, 2019 and 2018, the amount of equipment capitalized under our lease program for new DISH TV subscribers totaled \$191 million and \$120 million, respectively. This increase in capital expenditures resulted from higher gross new DISH TV subscriber activations, discussed above, and our emphasis on acquiring higher quality subscribers who activate with higher priced receivers, such as the Hopper 3, and a lower percentage of remanufactured receivers being activated on new subscriber accounts.

To remain competitive, we upgrade or replace subscriber equipment periodically as technology changes, and the costs associated with these upgrades may be substantial. To the extent technological changes render a portion of our existing equipment obsolete, we would be unable to redeploy all returned equipment and consequently would realize less benefit from the DISH TV SAC reduction associated with redeployment of that returned lease equipment.

Our “Subscriber acquisition costs” and “DISH TV SAC” may materially increase in the future to the extent that we, among other things, transition to newer technologies, introduce more aggressive promotions, or provide greater equipment subsidies.

General and administrative expenses. “General and administrative expenses” totaled \$733 million during the year ended December 31, 2019, a \$40 million or 5.7% increase compared to the same period in 2018. This increase was primarily driven by an increase in legal fees. The year ended December 31, 2018 was positively impacted by the reimbursement of legal fees during 2018.

Depreciation and amortization. “Depreciation and amortization” expense totaled \$577 million during the year ended December 31, 2019, an \$83 million or 12.6% decrease compared to the same period in 2018. This change was primarily driven by a decrease in depreciation expense from equipment leased to new and existing DISH TV subscribers.

Interest expense, net of amounts capitalized. “Interest expense, net of amounts capitalized” totaled \$757 million during the year ended December 31, 2019, a decrease of \$36 million or 4.5% compared to the same period in 2018. This decrease was primarily related to a reduction in interest expense resulting from debt redemptions during 2019 and 2018.

Earnings before interest, taxes, depreciation and amortization. EBITDA was \$2.406 billion during the year ended December 31, 2019, a decrease of \$327 million or 12.0% compared to the same period in 2018. The decrease in EBITDA was primarily attributable to the changes in operating income discussed above, excluding the change in “Depreciation and amortization.” The following table reconciles EBITDA to the accompanying financial statements.

	For the Years Ended December 31,	
	2019	2018
	(In thousands)	
EBITDA	\$ 2,406,279	\$ 2,733,565
Interest, net	(726,649)	(783,513)
Income tax (provision) benefit, net	(274,751)	(318,305)
Depreciation and amortization	(577,348)	(660,460)
Net income (loss) attributable to DISH DBS	\$ 827,531	\$ 971,287

EBITDA is not a measure determined in accordance with accounting principles generally accepted in the United States (“GAAP”) and should not be considered a substitute for operating income, net income or any other measure determined in accordance with GAAP. EBITDA is used as a measurement of operating efficiency and overall financial performance and we believe it to be a helpful measure for those evaluating companies in the pay-TV industry. Conceptually, EBITDA measures the amount of income generated each period that could be used to service debt, pay taxes and fund capital expenditures. EBITDA should not be considered in isolation or as a substitute for measures of performance prepared in accordance with GAAP.

Income tax (provision) benefit, net. Our income tax provision was \$275 million during the year ended December 31, 2019, a decrease of \$44 million compared to the same period in 2018. The decrease in the provision was primarily related to a decrease in “Income (loss) before income taxes.”

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market Risks Associated with Financial Instruments

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

Cash, Cash Equivalents and Current Marketable Investment Securities

As of December 31, 2019, our cash, cash equivalents and current marketable investment securities had a fair value of \$17 million, of which the entire amount was invested in cash. The size of this portfolio can fluctuate significantly as cash is received and used in our business.

Restricted Cash, Cash Equivalents and Marketable Investment Securities

As of December 31, 2019, we had \$61 million of restricted cash and marketable investment securities invested in: (a) cash; (b) money market funds; (c) debt instruments of the United States Government and its agencies; and/or (d) instruments with similar risk, duration and credit quality characteristics to commercial paper. Based on our December 31, 2019 investment portfolio, a hypothetical 10% increase in average interest rates would not have a material impact on the fair value of our restricted cash and marketable investment securities.

Long-Term Debt

As of December 31, 2019, we had long-term debt of \$10.626 billion, excluding finance lease obligations and unamortized deferred financing costs and debt discounts, on our Consolidated Balance Sheets. We estimated the fair value of this debt to be approximately \$11.097 billion using quoted market prices. The fair value of our debt is affected by fluctuations in interest rates. A hypothetical 10% decrease in assumed interest rates would increase the fair value of our debt by approximately \$163 million. To the extent interest rates increase, our future costs of financing would increase at the time of any future financings. As of December 31, 2019, all of our long-term debt consisted of fixed rate indebtedness.

Derivative Financial Instruments

From time to time, we invest in speculative financial instruments, including derivatives. As of December 31, 2019, we did not hold any derivative financial instruments.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Our consolidated financial statements are included in this Annual Report on Form 10-K beginning on page F-1.

Our selected quarterly financial data for each of the quarterly periods ended March 31, June 30, September 30 and December 31 for 2019 and 2018 is included in Note 16 in the Notes to our Consolidated Financial Statements in this Annual Report on 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 Principal Financial Officer, we evaluated the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934) as of the end of the period covered by this report. Based upon that evaluation, our Chief Executive Officer and Principal Financial Officer concluded that our disclosure controls and procedures were effective as of the end of the period covered by this report.

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) under the Securities Exchange Act of 1934) during our most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

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 United States generally accepted accounting principles.

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 generally accepted accounting principles, 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 (COSO). Based on this evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2019.

Item 9B. OTHER INFORMATION

None

Item 14. PRINCIPAL ACCOUNTING FEES AND SERVICES**Appointment of Independent Registered Public Accounting Firm**

Appointment of Independent Registered Public Accounting Firm for 2019. KPMG LLP served as our independent registered public accounting firm for the fiscal year ended December 31, 2019.

Our Board of Directors, in its discretion, may direct the appointment of a different independent registered public accounting firm at any time during the year if the Board of Directors believes that a change would be in our best interests.

Fees Paid to KPMG LLP for 2019 and 2018

The following table presents fees for the aggregate professional audit services rendered by KPMG LLP for the audit of DISH Network's and our annual financial statements for the years ended December 31, 2019 and 2018, and fees billed for other services rendered by KPMG LLP to DISH Network and us during those periods. We have reported the fees billed for services rendered to both DISH Network and us because the services are not rendered or billed specifically for us but for the DISH Network consolidated group as a whole.

	For the Years Ended December 31,	
	2019	2018
Audit Fees (1)	\$ 3,632,000	\$ 2,960,000
Audit-Related Fees (2)	—	—
Total Audit and Audit-Related Fees	3,632,000	2,960,000
Tax Compliance Fees	231,177	326,464
Tax Consultation Fees	3,381	82,372
All Other Fees	—	—
Total Fees	\$ 3,866,558	\$ 3,368,836

- (1) Consists of fees paid by DISH Network and us for the audit of DISH Network's and our consolidated financial statements included in DISH Network's and our Annual Reports on Form 10-K, review of DISH Network's and our unaudited financial statements included in DISH Network's and our Quarterly Reports on Form 10-Q and fees in connection with the audit of DISH Network's internal control over financial reporting.
- (2) Consists of fees for services that are normally provided by the accountant in connection with registration statement filings, issuance of consents and professional consultations with respect to accounting issues.

Policy on Audit Committee Pre-Approval of Audit and Permissible Non-Audit Services of Independent Registered Public Accounting Firm

Our Board of Directors has delegated to DISH Network's Audit Committee the responsibility for appointing, setting compensation, retaining, and overseeing the work of our independent registered public accounting firm. The Audit Committee of DISH Network has established a process regarding pre-approval of all audit and permissible non-audit services provided by the independent registered public accounting firm.

Requests are submitted to the Audit Committee of DISH Network in one of the following ways:

- Request for approval of services at a meeting of the Audit Committee; or
- Request for approval of services by members of the Audit Committee acting by written consent.

The request may be made with respect to either specific services or a type of service for predictable or recurring services. 100% of the fees paid to KPMG LLP for services rendered in 2019 and 2018 were pre-approved by the Audit Committee of DISH Network.

PART IV

Item 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

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

(1) *Financial Statements*

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(2) *Financial Statement Schedules*

None. All schedules have been included in the consolidated financial statements or notes thereto.

(3) *Exhibits*

<u>Exhibit No.</u>	<u>Description</u>
3.1(a)*	Articles of Incorporation of DISH DBS Corporation (incorporated by reference to Exhibit 3.4(a) to the Registration Statement on Form S-4 of DISH DBS Corporation, Registration No. 333-31929), as amended by the Certificate of Amendment of the Articles of Incorporation of DISH DBS Corporation, dated as of August 25, 2003 (incorporated by reference to Exhibit 3.1(b) to the Annual Report on Form 10-K of DISH DBS Corporation for the year ended December 31, 2003, Commission File No. 333-31929), and as further amended by the Amendment of the Articles of Incorporation of DISH DBS Corporation, effective December 12, 2008 (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of DISH DBS Corporation filed December 12, 2008, Registration No. 333-31929).
3.1(b)*	Bylaws of DISH DBS Corporation (incorporated by reference to Exhibit 3.4(b) to the Registration Statement on Form S-4 of DISH DBS Corporation, Registration No. 333-31929).
4.1*	Indenture, relating to the 5 1/8% Senior Notes due 2020, dated as of April 5, 2013, among DISH DBS Corporation, the guarantors named on the signature pages thereto and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K of DISH DBS Corporation filed April 5, 2013, Commission File No. 333-31929).
4.2*	Indenture, relating to the 6 3/4% Senior Notes due 2021, dated as of May 5, 2011, among DISH DBS Corporation, the guarantors named on the signature pages thereto and Wells Fargo Bank, National Association, as Trustee (incorporated by reference from Exhibit 4.1 to the Current Report on Form 8-K of DISH Network Corporation filed May 5, 2011, Commission File No. 0-26176).
4.3*	Indenture, relating to the 5 7/8% Senior Notes due 2022, dated as of May 16, 2012 among DISH DBS Corporation, the guarantors named on the signature pages thereto and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 4.2 to the Current Report on Form 8-K of DISH DBS Corporation filed May 16, 2012, Commission File No. 333-31929).
4.4*	Indenture, relating to the 5% Senior Notes due 2023, dated as of December 27, 2012 among DISH DBS Corporation, the guarantors named on the signature pages thereto and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K of DISH DBS Corporation filed December 27, 2012, Commission File No. 333-31929).

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- 4.5* [Indenture, relating to the 5 7/8% Senior Notes due 2024, dated as of November 20, 2014 among DISH DBS Corporation, the guarantors named on the signature pages thereto and U.S. Bank National Association, as Trustee \(incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K of DISH DBS Corporation filed November 21, 2014, Commission File No. 333-31929\).](#)
- 4.6* [Indenture, relating to the 7 3/4% Senior Notes due 2026, dated as of June 13, 2016 among DISH DBS Corporation, the guarantors named on the signature pages thereto and U.S. Bank National Association, as Trustee \(incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K of DISH DBS Corporation filed June 13, 2016, Commission File No. 333-31929\).](#)
- 4.7* [Supplemental Indenture relating to the 5 1/8% Senior Notes due 2020 \(incorporated by reference to Exhibit 4.11 to the Annual Report on Form 10-K of DISH DBS Corporation filed March 29, 2018, Commission File No. 333-31929\).](#)
- 4.8* [Supplemental Indenture relating to the 6 3/4% Senior Notes due 2021 \(incorporated by reference to Exhibit 4.12 to the Annual Report on Form 10-K of DISH DBS Corporation filed March 29, 2018, Commission File No. 333-31929\).](#)
- 4.9* [Supplemental Indenture relating to the 5 7/8% Senior Notes due 2022 \(incorporated by reference to Exhibit 4.13 to the Annual Report on Form 10-K of DISH DBS Corporation filed March 29, 2018, Commission File No. 333-31929\).](#)
- 4.10* [Supplemental Indenture relating to the 5% Senior Notes due 2023 \(incorporated by reference to Exhibit 4.14 to the Annual Report on Form 10-K of DISH DBS Corporation filed March 29, 2018, Commission File No. 333-31929\).](#)
- 4.11* [Supplemental Indenture relating to the 5 7/8% Senior Notes due 2024 \(incorporated by reference to Exhibit 4.15 to the Annual Report on Form 10-K of DISH DBS Corporation filed March 29, 2018, Commission File No. 333-31929\).](#)
- 4.12* [Supplemental Indenture relating to the 7 3/4% Senior Notes due 2026 \(incorporated by reference to Exhibit 4.16 to the Annual Report on Form 10-K of DISH DBS Corporation filed March 29, 2018, Commission File No. 333-31929\).](#)
- 10.1* [2002 Class B CEO Stock Option Plan \(incorporated by reference to Appendix A to DISH Network Corporation's Definitive Proxy Statement on Schedule 14A dated April 9, 2002\).**](#)
- 10.2* [Whole RF Channel Service Agreement, dated February 4, 2004, between Telesat Canada and DISH Network Corporation \(incorporated by reference to Exhibit 10.4 to the Quarterly Report on Form 10-Q of DISH Network Corporation for the quarter ended March 31, 2004, Commission File No. 0-26176\).***](#)
- 10.3* [Letter Amendment to Whole RF Channel Service Agreement, dated March 25, 2004, between Telesat Canada and DISH Network Corporation \(incorporated by reference to Exhibit 10.5 to the Quarterly Report on Form 10-Q of DISH Network Corporation for the quarter ended March 31, 2004, Commission File No. 0-26176\).***](#)
- 10.4* [Second Amendment to Whole RF Channel Service Agreement, dated May 5, 2004, between Telesat Canada and DISH Network Corporation \(incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q of DISH Network Corporation for the quarter ended June 30, 2004, Commission File No. 0-26176\).***](#)

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- 10.5* [Third Amendment to Whole RF Channel Service Agreement, dated October 12, 2004, between Telesat Canada and DISH Network Corporation \(incorporated by reference to Exhibit 10.22 to the Annual Report on Form 10-K of DISH Network Corporation for the year ended December 31, 2004, Commission File No. 0-26176\).***](#)
- 10.6* [Incentive Stock Option Agreement \(Form A\) \(incorporated by reference to Exhibit 99.1 to the Current Report on Form 8-K of DISH Network Corporation filed July 7, 2005, Commission File No. 0-26176\).**](#)
- 10.7* [Incentive Stock Option Agreement \(Form B\) \(incorporated by reference to Exhibit 99.2 to the Current Report on Form 8-K of DISH Network Corporation filed July 7, 2005, Commission File No. 0-26176\).**](#)
- 10.8* [Restricted Stock Unit Agreement \(Form A\) \(incorporated by reference to Exhibit 99.3 to the Current Report on Form 8-K of DISH Network Corporation filed July 7, 2005, Commission File No. 0-26176\).**](#)
- 10.9* [Restricted Stock Unit Agreement \(Form B\) \(incorporated by reference to Exhibit 99.4 to the Current Report on Form 8-K of DISH Network Corporation filed July 7, 2005, Commission File No. 0-26176\).**](#)
- 10.10* [Nonemployee Director Stock Option Agreement \(incorporated by reference to Exhibit 99.6 to the Current Report on Form 8-K of DISH Network Corporation filed July 7, 2005, Commission File No. 0-26176\).**](#)
- 10.11* [Separation Agreement between EchoStar Corporation and DISH Network Corporation \(incorporated by reference from Exhibit 2.1 to the Amendment No. 1 to the Form 10 of EchoStar Corporation filed December 12, 2007, Commission File No. 001-33807\).](#)
- 10.12* [Tax Sharing Agreement between EchoStar Corporation and DISH Network Corporation \(incorporated by reference from Exhibit 10.2 to the Amendment No. 1 to the Form 10 of EchoStar Corporation filed December 12, 2007, Commission File No. 001-33807\).](#)
- 10.13* [Employee Matters Agreement between EchoStar Corporation and DISH Network Corporation \(incorporated by reference from Exhibit 10.3 to the Amendment No. 1 to the Form 10 of EchoStar Corporation filed December 12, 2007, Commission File No. 001-33807\).](#)
- 10.14* [Intellectual Property Matters Agreement between EchoStar Corporation, EchoStar Acquisition L.L.C., Echosphere L.L.C., DISH DBS Corporation, EIC Spain SL, EchoStar Technologies L.L.C. and DISH Network Corporation \(incorporated by reference from Exhibit 10.4 to the Amendment No. 1 to the Form 10 of EchoStar Corporation filed December 12, 2007, Commission File No. 001-33807\).](#)
- 10.15* [Form of Satellite Capacity Agreement between EchoStar Corporation and DISH Network L.L.C. \(incorporated by reference from Exhibit 10.28 to the Amendment No. 2 to Form 10 of EchoStar Corporation filed December 26, 2007, Commission File No. 001-33807\).](#)
- 10.16* [DISH Network Corporation 2009 Stock Incentive Plan \(incorporated by reference to Appendix A to DISH Network Corporation's Definitive Proxy Statement on Form 14A filed September 19, 2014, Commission File No. 0-26176\).**](#)
- 10.17* [Amended and Restated DISH Network Corporation 2001 Nonemployee Director Stock Option Plan \(incorporated by reference to Appendix B to DISH Network Corporation's Definitive Proxy Statement on Form 14A filed March 31, 2009, Commission File No. 0-26176\).**](#)
- 10.18* [Amended and Restated DISH Network Corporation 1999 Stock Incentive Plan \(incorporated by reference to Appendix C to DISH Network Corporation's Definitive Proxy Statement on Form 14A filed March 31, 2009, Commission File No. 0-26176\).**](#)

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- 10.19* [NIMIQ 5 Whole RF Channel Service Agreement, dated September 15, 2009, between Telesat Canada and EchoStar Corporation \(incorporated by reference from Exhibit 10.30 to the Annual Report on Form 10-K of EchoStar Corporation for the year ended December 31, 2009, Commission File No. 001-33807\),***](#)
- 10.20* [Professional Services Agreement, dated August 4, 2009, between EchoStar Corporation and DISH Network Corporation \(incorporated by reference from Exhibit 10.3 to the Quarterly Report on Form 10-Q of EchoStar Corporation for the quarter ended September 30, 2009, Commission File No. 001-33807\),***](#)
- 10.21* [Description of the 2013 Long-Term Incentive Plan dated November 30, 2012 \(incorporated by reference to the Current Report on Form 8-K of DISH Network Corporation filed December 6, 2012, Commission File No. 0-26176\),**](#)
- 10.22* [Share Exchange Agreement dated January 31, 2017, between 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. \(incorporated by reference in Exhibit 10.1 to the Quarterly Report on Form 10-Q of DISH Network Corporation for the quarter ended March 31, 2017, Commission File No. 0-26176\),***](#)
- 10.23* [Description of the 2017 Long-Term Incentive Plan dated December 2, 2016 \(incorporated by reference to the Current Report on Form 8-K of DISH Network Corporation filed December 8, 2016, Commission File No. 0-26176\),**](#)
- 10.24* [Description of the 2019 Long-Term Incentive Plan dated August 17, 2018 \(incorporated by reference to the Current Report on Form 8-K of DISH Network Corporation filed August 23, 2018, Commission File No. 0-26176\),**](#)
- 31.1 [Section 302 Certification of Chief Executive Officer.](#)
- 31.2 [Section 302 Certification of Chief Financial Officer.](#)
- 32.1 [Section 906 Certification of Chief Executive Officer.](#)
- 32.2 [Section 906 Certification of Chief Financial Officer.](#)
- 101 The following materials from the Annual Report on Form 10-K of DISH DBS Corporation for the year ended December 31, 2019, filed on February 25, 2020, formatted in Inline eXtensible Business Reporting Language (“iXBRL”): (i) Consolidated Balance Sheets, (ii) Consolidated Statements of Operations and Comprehensive Income (Loss), (iii) Consolidated Statement of Changes in Stockholder’s Equity (Deficit), (iv) Consolidated Statements of Cash Flows, and (v) related notes to these financial statements.
- 104 Cover Page Interactive Data File (the cover page XBRL tags are embedded in the Inline XBRL document).

Filed herewith.

* Incorporated by reference.

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

*** Certain portions of the exhibit have been omitted and separately filed with the Securities and Exchange Commission with a request for confidential treatment.

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.

DISH DBS CORPORATION

By: /s/ Paul W. Orban
Paul W. Orban
Executive Vice President and Chief Financial Officer

Date: February 25, 2020

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.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ W. Erik Carlson</u> W. Erik Carlson	President and Chief Executive Officer <i>(Principal Executive Officer)</i>	February 25, 2020
<u>/s/ Paul W. Orban</u> Paul W. Orban	Executive Vice President and Chief Financial Officer <i>(Principal Financial and Accounting Officer)</i>	February 25, 2020
<u>/s/ Charles W. Ergen</u> Charles W. Ergen	Chairman	February 25, 2020
<u>/s/ James DeFranco</u> James DeFranco	Director	February 25, 2020
<u>/s/ Timothy A. Messner</u> Timothy A. Messner	Director	February 25, 2020

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholder and Board of Directors
DISH DBS Corporation:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of DISH DBS Corporation and subsidiaries (the Company) as of December 31, 2019 and 2018, the related consolidated statements of operations and comprehensive income (loss), changes in stockholder's equity (deficit), and cash flows for each of the years in the three-year period ended December 31, 2019, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2019, in conformity with U.S. generally accepted accounting principles.

Change in Accounting Principle

As discussed in Note 2 to the consolidated financial statements, the Company has changed its method of accounting for revenue contracts with customers in 2018 due to the adoption of Accounting Standards Update No. 2014-09, Revenue from Contracts with Customers, as amended.

As discussed in Note 2 to the consolidated financial statements, the Company has changed its method of accounting for leases in 2019 due to the adoption of Accounting Standards Update No. 2016-02, Leases, as amended.

Basis for Opinion

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

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

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

/s/ KPMG LLP

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

Denver, Colorado
February 24, 2020

DISH DBS CORPORATION
CONSOLIDATED BALANCE SHEETS
(Dollars in thousands, except share amounts)

	As of December 31,	
	2019	2018
Assets		
<i>Current Assets:</i>		
Cash and cash equivalents	\$ 17,426	\$ 129,498
Marketable investment securities	—	149,740
Trade accounts receivable, net of allowance for doubtful accounts of \$19,280 and \$16,956, respectively	568,679	623,602
Inventory	321,983	290,697
Other current assets	164,767	234,054
Total current assets	1,072,855	1,427,591
<i>Noncurrent Assets:</i>		
Restricted cash, cash equivalents and marketable investment securities	61,067	67,597
Property and equipment, net	1,751,573	1,377,949
FCC authorizations	611,794	637,346
Other investment securities	106,874	108,308
Operating lease assets	553,576	—
Other noncurrent assets, net	228,820	286,753
Total noncurrent assets	3,313,704	2,477,953
Total assets	\$ 4,386,559	\$ 3,905,544
Liabilities and Stockholder's Equity (Deficit)		
<i>Current Liabilities:</i>		
Trade accounts payable	\$ 266,417	\$ 217,268
Advances from affiliates	82,415	—
Deferred revenue and other	674,079	644,920
Accrued programming	1,308,531	1,474,207
Accrued interest	189,039	222,996
Other accrued expenses	918,333	756,534
Current portion of long-term debt and finance lease obligations	1,151,108	1,338,527
Total current liabilities	4,589,922	4,654,452
<i>Long-Term Obligations, Net of Current Portion:</i>		
Long-term debt and finance lease obligations, net of current portion	9,671,255	10,632,960
Deferred tax liabilities	501,857	461,452
Operating lease liabilities	350,155	—
Long-term deferred revenue and other long-term liabilities	207,992	198,840
Total long-term obligations, net of current portion	10,731,259	11,293,252
Total liabilities	15,321,181	15,947,704
Commitments and Contingencies (Note 12)		
<i>Stockholder's Equity (Deficit):</i>		
Common stock, \$.01 par value, 1,000,000 shares authorized, 1,015 shares issued and outstanding	—	—
Additional paid-in capital	1,432,736	1,152,369
Accumulated other comprehensive income (loss)	(449)	(376)
Accumulated earnings (deficit)	(12,366,909)	(13,194,440)
Total DISH DBS stockholder's equity (deficit)	(10,934,622)	(12,042,447)
Noncontrolling interests	—	287
Total stockholder's equity (deficit)	(10,934,622)	(12,042,160)
Total liabilities and stockholder's equity (deficit)	\$ 4,386,559	\$ 3,905,544

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

DISH DBS CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME (LOSS)
(In thousands)

	For the Years Ended December 31,		
	2019	2018	2017
Revenue:			
Subscriber-related revenue	\$ 12,436,637	\$ 13,197,994	\$ 13,877,196
Equipment sales and other revenue	186,256	164,145	130,315
Total revenue	<u>12,622,893</u>	<u>13,362,139</u>	<u>14,007,511</u>
Costs and Expenses (exclusive of depreciation shown separately below - Note 6):			
Subscriber-related expenses	7,768,732	8,392,150	8,692,676
Satellite and transmission expenses	555,803	637,160	717,231
Cost of sales - equipment and other	172,700	143,671	95,116
<i>Subscriber acquisition costs:</i>			
Cost of sales - subscriber promotion subsidies	29,592	50,253	72,955
Other subscriber acquisition costs	444,993	292,824	563,952
Subscriber acquisition advertising	519,938	426,230	548,304
Total subscriber acquisition costs	994,523	769,307	1,185,211
General and administrative expenses	732,589	692,881	669,934
Litigation expense (Note 12)	—	—	295,695
Depreciation and amortization (Note 6)	577,348	660,460	741,772
Total costs and expenses	<u>10,801,695</u>	<u>11,295,629</u>	<u>12,397,635</u>
Operating income (loss)	<u>1,821,198</u>	<u>2,066,510</u>	<u>1,609,876</u>
Other Income (Expense):			
Interest income	30,041	8,923	9,855
Interest expense, net of amounts capitalized	(756,690)	(792,436)	(865,181)
Other, net	7,609	8,994	88,511
Total other income (expense)	<u>(719,040)</u>	<u>(774,519)</u>	<u>(766,815)</u>
Income (loss) before income taxes	1,102,158	1,291,991	843,061
Income tax (provision) benefit, net	(274,751)	(318,305)	(117,616)
Net income (loss)	827,407	973,686	725,445
Less: Net income (loss) attributable to noncontrolling interests, net of tax	(124)	2,399	1,919
Net income (loss) attributable to DISH DBS	<u>\$ 827,531</u>	<u>\$ 971,287</u>	<u>\$ 723,526</u>
Comprehensive Income (Loss):			
Net income (loss)	\$ 827,407	\$ 973,686	\$ 725,445
<i>Other comprehensive income (loss):</i>			
Foreign currency translation adjustments	(133)	(1,343)	1,027
Unrealized holding gains (losses) on available-for-sale securities	81	69	(33)
Deferred income tax (expense) benefit, net	(21)	(37)	57
Total other comprehensive income (loss), net of tax	<u>(73)</u>	<u>(1,311)</u>	<u>1,051</u>
Comprehensive income (loss)	827,334	972,375	726,496
Less: Comprehensive income (loss) attributable to noncontrolling interests, net of tax	(124)	2,399	1,919
Comprehensive income (loss) attributable to DISH DBS	<u>\$ 827,458</u>	<u>\$ 969,976</u>	<u>\$ 724,577</u>

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

DISH DBS CORPORATION
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDER'S EQUITY (DEFICIT)
(In thousands)

	Common Stock	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Earnings (Deficit)	Noncontrolling Interests	Total
Balance, December 31, 2016	\$ —	\$ 1,097,606	\$ (116)	\$ (14,891,573)	\$ 1,933	\$ (13,792,150)
Non-cash, stock-based compensation	—	29,941	—	—	—	29,941
Change in unrealized holding gains (losses) on available-for-sale securities, net	—	—	(33)	—	—	(33)
Deferred income tax (expense) benefit attributable to unrealized gains (losses) on available-for-sale securities	—	—	57	—	—	57
Foreign currency translation	—	—	1,027	—	—	1,027
Payments made to parent of transferred businesses	—	(7,372)	—	—	274	(7,098)
Net income (loss) attributable to noncontrolling interests	—	—	—	—	1,919	1,919
Net income (loss) attributable to DISH DBS	—	—	—	723,526	—	723,526
Other	—	(3,327)	—	—	(525)	(3,852)
Balance, December 31, 2017	\$ —	\$ 1,116,848	\$ 935	\$ (14,168,047)	\$ 3,601	\$ (13,046,663)
Non-cash, stock-based compensation	—	35,521	—	—	—	35,521
Change in unrealized holding gains (losses) on available-for-sale securities, net	—	—	69	—	—	69
Deferred income tax (expense) benefit attributable to unrealized gains (losses) on available-for-sale securities	—	—	(37)	—	—	(37)
Foreign currency translation	—	—	(1,343)	—	—	(1,343)
ASU 2014-09 cumulative catch-up adjustment	—	—	—	2,320	—	2,320
Net income (loss) attributable to noncontrolling interests	—	—	—	—	2,399	2,399
Net income (loss) attributable to DISH DBS	—	—	—	971,287	—	971,287
Other	—	—	—	—	(5,713)	(5,713)
Balance, December 31, 2018	\$ —	\$ 1,152,369	\$ (376)	\$ (13,194,440)	\$ 287	\$ (12,042,160)
Non-cash, stock-based compensation	—	13,853	—	—	—	13,853
Change in unrealized holding gains (losses) on available-for-sale securities, net	—	—	81	—	—	81
Deferred income tax (expense) benefit attributable to unrealized gains (losses) on available-for-sale securities	—	—	(21)	—	—	(21)
Foreign currency translation	—	—	(133)	—	—	(133)
Satellite and Spectrum Transaction, net of deferred taxes of \$29,075	—	267,437	—	—	(163)	267,274
Net income (loss) attributable to noncontrolling interests	—	—	—	—	(124)	(124)
Net income (loss) attributable to DISH DBS	—	—	—	827,531	—	827,531
Other	—	(923)	—	—	—	(923)
Balance, December 31, 2019	\$ —	\$ 1,432,736	\$ (449)	\$ (12,366,909)	\$ —	\$ (10,934,622)

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

DISH DBS CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	For the Years Ended December 31,		
	2019	2018	2017
Cash Flows From Operating Activities:			
Net income (loss)	\$ 827,407	\$ 973,686	\$ 725,445
<i>Adjustments to reconcile net income (loss) to net cash flows from operating activities:</i>			
Depreciation and amortization	577,348	660,460	741,772
Realized and unrealized losses (gains) on investments	(3,119)	(9,056)	(85,550)
Non-cash, stock-based compensation	13,853	35,521	29,941
Deferred tax expense (benefit)	11,310	(24,477)	(297,012)
Other, net	71,406	(67,672)	(3,431)
<i>Changes in current assets and current liabilities:</i>			
Trade accounts receivable	52,599	2,137	114,962
Allowance for doubtful accounts	2,324	1,900	(2,384)
Inventory	(78,216)	15,754	37,028
Other current assets	70,449	(39,822)	(76,735)
Trade accounts payable	49,149	(145,891)	(142,803)
Deferred revenue and other	29,159	(93,093)	(57,802)
Accrued programming and other accrued expenses	(238,969)	(111,987)	303,901
Net cash flows from operating activities	1,384,700	1,197,460	1,287,332
Cash Flows From Investing Activities:			
(Purchases) Sales and maturities of marketable investment securities, net	153,422	41,155	(88,346)
Purchases of property and equipment	(392,690)	(348,023)	(419,445)
Purchases of strategic investments	—	—	(90,381)
Other, net	73,352	24,816	19,996
Net cash flows from investing activities	(165,916)	(282,052)	(578,176)
Cash Flows From Financing Activities:			
Redemption and repurchases of senior notes	(1,317,372)	(1,108,489)	(1,074,139)
Payments made to parent of transferred businesses	—	—	(7,098)
Advances from affiliates	82,415	—	—
Repayment of long-term debt and finance lease obligations	(35,356)	(38,639)	(39,118)
Other, net	(444)	(3,270)	(1,994)
Net cash flows from financing activities	(1,270,757)	(1,150,398)	(1,122,349)
Net increase (decrease) in cash, cash equivalents, restricted cash and cash equivalents	(51,973)	(234,990)	(413,193)
Cash, cash equivalents, restricted cash and cash equivalents, beginning of period (Note 4)	130,076	365,066	778,259
Cash, cash equivalents, restricted cash and cash equivalents, end of period (Note 4)	<u>\$ 78,103</u>	<u>\$ 130,076</u>	<u>\$ 365,066</u>

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

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Organization and Business Activities

Principal Business

DISH DBS Corporation (which together with its subsidiaries is referred to as “DISH DBS,” the “Company,” “we,” “us” and/or “our,” unless otherwise required by the context) is a holding company and an indirect, wholly-owned subsidiary of DISH Network Corporation (“DISH Network”). DISH DBS was formed under Colorado law in January 1996 and its common stock is held by DISH Orbital Corporation (“DOC”), a direct subsidiary of DISH Network. Our subsidiaries operate one business segment.

Pay-TV

We offer pay-TV services under the DISH[®] brand and the Sling[®] brand (collectively “Pay-TV” services). The DISH branded pay-TV service consists of, among other things, Federal Communications Commission (“FCC”) licenses authorizing us to use direct broadcast satellite (“DBS”) and Fixed Satellite Service (“FSS”) spectrum, our owned and leased satellites, receiver systems, broadcast operations, customer service facilities, a leased fiber optic network, in-home service and call center operations, and certain other assets utilized in our operations (“DISH TV”). We also design, develop and distribute receiver systems and provide digital broadcast operations, including satellite uplinking/downlinking, transmission and other services to third-party pay-TV providers. The Sling branded pay-TV services consist of, among other things, multichannel, live-linear streaming over-the-top (“OTT”) Internet-based domestic, international and Latino video programming services (“Sling TV”). As of December 31, 2019, we had 11.986 million Pay-TV subscribers in the United States, including 9.394 million DISH TV subscribers and 2.592 million Sling TV subscribers.

Master Transaction Agreement

On May 19, 2019, DISH Network entered into a Master Transaction Agreement with EchoStar (the “Master Transaction Agreement”) pursuant to which, on September 10, 2019, EchoStar transferred to DISH Network certain assets and liabilities of its EchoStar Satellite Services segment. As a result of the Master Transaction Agreement, certain agreements that we had with EchoStar have been transferred to DISH Network. See Note 1 “*Recent Developments*” in the Notes to DISH Network’s Annual Report on Form 10-K for the year ended December 31, 2019 for further information on the Master Transaction Agreement.

2. Summary of Significant Accounting Policies

Principles of Consolidation and Basis of Presentation

We consolidate all majority owned subsidiaries, investments in entities in which we have controlling influence and variable interest entities where we have been determined to be the primary beneficiary. Minority interests are recorded as noncontrolling interests or redeemable noncontrolling interests. See below for further information. Non-consolidated investments are accounted for using the equity method when we have the ability to significantly influence the operating decisions of the investee. When we do not have the ability to significantly influence the operating decisions of an investee, these equity securities are classified as either marketable investment securities or other investments and recorded at fair value with changes recognized in “Other, net” within “Other Income (Expense)” on our Consolidated Statements of Operations and Comprehensive Income (Loss). All significant intercompany accounts and transactions have been eliminated in consolidation. Certain prior period amounts have been reclassified to conform to the current period presentation.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

On February 28, 2017, DISH Network and EchoStar and certain of their respective subsidiaries completed the transactions contemplated by the Share Exchange Agreement (the “Share Exchange Agreement”) that was previously entered into on January 31, 2017 (the “Share Exchange”). Pursuant to the Share Exchange Agreement, among other things, EchoStar transferred to us certain assets and liabilities of the EchoStar technologies and EchoStar broadcasting businesses, consisting primarily of the businesses that design, develop and distribute digital set-top boxes, provide satellite uplink services and develop and support streaming video technology, as well as certain investments in joint ventures, spectrum licenses, real estate properties and EchoStar’s ten percent non-voting interest in Sling TV Holding L.L.C. (the “Transferred Businesses”), and in exchange, we transferred to EchoStar the 6,290,499 shares of preferred tracking stock issued by EchoStar (the “EchoStar Tracking Stock”) and 81.128 shares of preferred tracking stock issued by Hughes Satellite Systems Corporation, a subsidiary of EchoStar (the “HSSC Tracking Stock,” and together with the EchoStar Tracking Stock, collectively, the “Tracking Stock”), that tracked the residential retail satellite broadband business of Hughes Network Systems, L.L.C. (“HNS”), a wholly-owned subsidiary of Hughes.

In connection with the Share Exchange, DISH Network and EchoStar and certain of their respective subsidiaries entered into certain agreements covering, among other things, tax matters, employee matters, intellectual property matters and the provision of transitional services. See Note 17 for further information.

As the Share Exchange was a transaction between entities that are under common control, accounting rules require that our Consolidated Financial Statements include the results of the Transferred Businesses for all periods presented, including periods prior to the completion of the Share Exchange. We initially recorded the Transferred Businesses at EchoStar’s historical cost basis. The difference between the historical cost basis of the Transferred Businesses and the net carrying value of the Tracking Stock was recorded in “Additional paid-in capital” on our Consolidated Balance Sheets. The results of the Transferred Businesses were prepared from separate records maintained by EchoStar for the periods prior to March 1, 2017, and may not necessarily be indicative of the conditions that would have existed, or the results of operations, if the Transferred Businesses had been operated on a combined basis with our subsidiaries. Our financial statements include the results of the Transferred Businesses as described above for all periods presented, including periods prior to the completion of the Share Exchange.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States (“GAAP”) requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expense for each reporting period. Estimates are used in accounting for, among other things, allowances for doubtful accounts, self-insurance obligations, deferred taxes and related valuation allowances, uncertain tax positions, loss contingencies, fair value of financial instruments, fair value of options granted under our stock-based compensation plans, fair value of assets and liabilities acquired in business combinations, relative standalone selling prices of performance obligations, finance leases, asset impairments, estimates of future cash flows used to evaluate impairments, useful lives of property, equipment and intangible assets, independent third-party retailer incentives, programming expenses and subscriber lives. Economic conditions may increase the inherent uncertainty in the estimates and assumptions indicated above. Actual results may differ from previously estimated amounts, and such differences may be material to our consolidated financial statements. Estimates and assumptions are reviewed periodically, and the effects of revisions are reflected prospectively in the period they occur.

Cash and Cash Equivalents

We consider all liquid investments purchased with a remaining maturity of 90 days or less at the date of acquisition to be cash equivalents. Cash equivalents as of December 31, 2019 and 2018 may consist of money market funds, government bonds, corporate notes and commercial paper. The cost of these investments approximates their fair value.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Marketable Investment Securities

Historically, we classified all marketable investment securities as available-for-sale, except for investments which were accounted for as trading securities, and adjusted the carrying amount of our available-for-sale securities to fair value and reported the related temporary unrealized gains and losses as a separate component of “Accumulated other comprehensive income (loss)” within “Total stockholder’s equity (deficit),” net of related deferred income tax on our Consolidated Balance Sheets. Our trading securities were carried at fair value, with changes in fair value recognized in “Other, net” within “Other Income (Expense)” on our Consolidated Statements of Operations and Comprehensive Income (Loss).

Subsequent to the adoption of ASU 2016-01 *Recognition and Measurement of Financial Assets and Financial Liabilities* (“ASU 2016-01”) during the first quarter 2018, all equity securities are carried at fair value, with changes in fair value recognized in “Other, net” within “Other Income (Expense)” on our Consolidated Statements of Operations and Comprehensive Income (Loss). All debt securities are classified as available-for-sale. We adjust the carrying amount of our debt securities to fair value and report the related temporary unrealized gains and losses as a separate component of “Accumulated other comprehensive income (loss)” within “Total stockholder’s equity (deficit),” net of related deferred income tax on our Consolidated Balance Sheets. Declines in the fair value of a marketable debt security which are determined to be “other-than-temporary” are recognized on our Consolidated Statements of Operations and Comprehensive Income (Loss), thus establishing a new cost basis for such investment.

We evaluate our debt investment portfolio on a quarterly basis to determine whether declines in the fair value of these securities are other-than-temporary. This quarterly evaluation consists of reviewing, among other things:

- the fair value of our debt investments compared to the carrying amount,
- the historical volatility of the price of each security, and
- any market and company specific factors related to each security.

Declines in the fair value of debt investments below cost basis are generally accounted for as follows:

Length of Time Investment Has Been In a Continuous Loss Position	Treatment of the Decline in Value (absent specific factors to the contrary)
Less than six months	Generally, considered temporary.
Six to nine months	Evaluated on a case by case basis to determine whether any company or market-specific factors exist indicating that such decline is other-than-temporary.
Greater than nine months	Generally, considered other-than-temporary. The decline in value is recorded as a charge to earnings.

Additionally, in situations where the fair value of a debt security is below its carrying amount, we consider the decline to be other-than-temporary and record a charge to earnings if any of the following factors apply:

- we have the intent to sell the security,
- it is more likely than not that we will be required to sell the security before maturity or recovery, or
- we do not expect to recover the security’s entire amortized cost basis, even if there is no intent to sell the security.

In general, we use the first in, first out method to determine the cost basis on sales of marketable investment securities.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Trade Accounts Receivable

Management estimates the amount of required allowances for the potential non-collectability of accounts receivable based upon past collection experience and consideration of other relevant factors. However, past experience may not be indicative of future collections and therefore additional charges could be incurred in the future to reflect differences between estimated and actual collections.

Inventory

Inventory is stated at the lower of cost or net realizable value. Cost is determined using the first-in, first-out method. The cost of manufactured inventory includes the cost of materials, labor, freight-in, royalties and manufacturing overhead. Net realizable value is calculated as the estimated selling price less reasonable costs necessary to complete, sell, transport and dispose of the inventory.

Property and Equipment

Property and equipment are stated at amortized cost less impairment losses, if any. Our set-top boxes are generally capitalized when they are installed in customers' homes. The costs of satellites under construction, including interest and certain amounts prepaid under our satellite service agreements, are capitalized during the construction phase, assuming the eventual successful launch and in-orbit operation of the satellite. If a satellite were to fail during launch or while in-orbit, the resultant loss would be charged to expense in the period such loss was incurred. The amount of any such loss would be reduced to the extent of insurance proceeds estimated to be received, if any. Depreciation is recorded on a straight-line basis over useful lives ranging from two to 40 years. Repair and maintenance costs are charged to expense when incurred. Renewals and improvements that add value or extend the asset's useful life are capitalized. 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.

Impairment of Long-Lived Assets

We review our long-lived assets and identifiable finite-lived intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. For assets which are held and used in operations, the asset would be impaired if the carrying amount of the asset (or asset group) exceeded its undiscounted future net cash flows. Once an impairment is determined, the actual impairment recognized is the difference between the carrying amount and the fair value as estimated using one of the following approaches: income, cost and/or market. Assets which are to be disposed of are reported at the lower of the carrying amount or fair value less costs to sell. The carrying amount of a long-lived asset or asset group is considered impaired when the anticipated undiscounted cash flows from such asset or asset group is less than its carrying amount. In that event, a loss is recorded in "Impairment of long-lived assets" on our Consolidated Statements of Operations and Comprehensive Income (Loss) based on the amount by which the carrying amount exceeds the fair value of the long-lived asset or asset group. Fair value, using the income approach, is determined primarily using a discounted cash flow model that uses the estimated cash flows associated with the asset or asset group under review, discounted at a rate commensurate with the risk involved. Fair value, utilizing the cost approach, is determined based on the replacement cost of the asset reduced for, among other things, depreciation and obsolescence. Fair value, utilizing the market approach, benchmarks the fair value against the carrying amount. See Note 6 for further information.

DBS Satellites. We currently evaluate our DBS satellite fleet for impairment as one asset group whenever events or changes in circumstances indicate that its carrying amount may not be recoverable. We do not believe any triggering event has occurred which would indicate impairment as of December 31, 2019.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Indefinite-Lived Intangible Assets and Goodwill

We do not amortize indefinite lived intangible assets and goodwill but test these assets for impairment annually during the fourth quarter or more often if indicators of impairment arise. We have the option to first perform a qualitative assessment to determine whether it is necessary to perform a quantitative impairment test. However, we may elect to bypass the qualitative assessment in any period and proceed directly to performing the quantitative impairment test. Intangible assets that have finite lives are amortized over their estimated useful lives and tested for impairment as described above for long-lived assets. Our intangible assets with indefinite lives primarily consist of FCC licenses. Generally, we have determined that our FCC licenses have indefinite useful lives due to the following:

- FCC licenses are a non-depleting asset;
- existing FCC licenses are integral to our business segments and will contribute to cash flows indefinitely;
- replacement DBS satellite applications are generally authorized by the FCC subject to certain conditions, without substantial cost under a stable regulatory, legislative and legal environment;
- maintenance expenditures to obtain future cash flows are not significant;
- FCC licenses are not technologically dependent; and
- we intend to use these assets indefinitely.

DBS Licenses. We combine all of our indefinite-lived DBS licenses that we currently utilize or plan to utilize in the future into a single unit of accounting. For 2019, 2018 and 2017, management performed a qualitative assessment to determine whether it is more likely than not that the fair value of the DBS licenses exceeds its carrying amount. In our assessment, we considered several factors, including, among others, overall financial performance, industry and market considerations, and relevant company specific events. In contemplating all factors in their totality, we concluded that it is more likely than not that the fair value of the DBS licenses exceeds its carrying amount. As such, no further analysis was required.

MVDDS Licenses. During 2018 and 2017, our multichannel video distribution and data service (“MVDDS”) wireless spectrum licenses were assessed as a single unit of accounting. For 2018 and 2017, management assessed these licenses quantitatively. Our quantitative assessment in each year for these licenses consisted of a market approach. The market approach uses prior transactions including auctions to estimate the fair value of the licenses. In conducting these quantitative assessments, we determined that the fair value of these licenses exceeded their carrying amount.

Business Combinations

When we acquire a business, we allocate the purchase price to the various components of the acquisition based upon the fair value of each component using various valuation techniques, including the market approach, income approach and/or cost approach. The accounting standard for business combinations requires most identifiable assets, liabilities, noncontrolling interests and goodwill acquired to be recorded at fair value. Transaction costs related to the acquisition of the business are expensed as incurred. Costs associated with the issuance of debt associated with a business combination are capitalized and included as a yield adjustment to the underlying debt’s stated rate. Acquired intangible assets other than goodwill are amortized over their estimated useful lives unless the lives are determined to be indefinite. Amortization of these intangible assets are recorded on a straight-line basis over an average finite useful life primarily ranging from approximately five to 20 years or in relation to the estimated discounted cash flows over the life of the intangible asset.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Long-Term Deferred Revenue and Other Long-Term Liabilities

Certain programmers provide us up-front payments. Such amounts are deferred and recognized as reductions to “Subscriber-related expenses” on a straight-line basis over the relevant remaining contract term (generally up to ten years). The current and long-term portions of these deferred credits are recorded on our Consolidated Balance Sheets in “Deferred revenue and other” and “Long-term deferred revenue and other long-term liabilities,” respectively.

Sales Taxes

We account for sales taxes imposed on our goods and services on a net basis on our Consolidated Statements of Operations and Comprehensive Income (Loss). Since we primarily act as an agent for the governmental authorities, the amount charged to the customer is collected and remitted directly to the appropriate jurisdictional entity.

Income Taxes

We establish a provision for income taxes currently payable or receivable and for income tax amounts deferred to future periods. Deferred tax assets and liabilities are recorded for the estimated future tax effects of differences that exist between the book and tax basis of assets and liabilities. Deferred tax assets are offset by valuation allowances when we believe it is more likely than not that such net deferred tax assets will not be realized.

From time to time, we engage in transactions where the tax consequences may be subject to uncertainty. We record a liability when, in management’s judgment, a tax filing position does not meet the more likely than not threshold. For tax positions that meet the more likely than not threshold, we may record a liability depending on management’s assessment of how the tax position will ultimately be settled. We adjust our estimates periodically for ongoing examinations by and settlements with various taxing authorities, as well as changes in tax laws, regulations and precedent. We classify interest and penalties, if any, associated with our uncertain tax positions as a component of “Interest expense, net of amounts capitalized” and “Other, net,” respectively, on our Consolidated Statements of Operations and Comprehensive Income (Loss).

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 apply 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; and quoted prices for identical or similar instruments in markets that are not active; and
- Level 3, defined as unobservable inputs for which little or no market data exists, consistent with reasonably available assumptions made by other participants therefore requiring assumptions based on the best information available.

As of December 31, 2019 and 2018, the carrying amount for cash and cash equivalents, trade accounts receivable (net of allowance for doubtful accounts) and current liabilities (excluding the “Current portion of long-term debt and finance lease obligations”) was equal to or approximated fair value due to their short-term nature or proximity to current market rates. See Note 4 for the fair value of our marketable investment securities.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Fair values for our publicly traded debt securities are based on quoted market prices, when available. The fair values of private debt are based on, among other things, available trade information, and/or an analysis in which we evaluate market conditions, related securities, various public and private offerings, and other publicly available information. In performing this analysis, we make various assumptions regarding, among other things, credit spreads, and the impact of these factors on the value of the debt securities. See Note 8 for the fair value of our long-term debt.

Deferred Debt Issuance Costs

Costs of issuing debt are generally deferred and amortized to interest expense using the effective interest rate method over the terms of the respective notes. See Note 8 for further information.

Revenue Recognition

Our revenue is primarily derived from Pay-TV programming services that we provide to our subscribers. We also generate revenue from equipment rental fees and other hardware related fees, including DVRs and fees from subscribers with multiple receivers; advertising services; fees earned from our in-home service operations; warranty services; sales of digital receivers and related equipment to third-party pay-TV providers; satellite uplink and telemetry, tracking and control (“TT&C”) services; and revenue from in-home services. See Note 14 for further information, including revenue disaggregated by major source.

Our residential video subscribers contract for individual services or combinations of services, as discussed above, the majority of which are generally distinct and are accounted for as separate performance obligations. We consider our installations for first time DISH TV subscribers to be a service. However, since we provide a significant integration service combining the installation with programming services, we have concluded that the installation is not distinct from programming and thus the installation and programming services are accounted for as a single performance obligation. We generally satisfy these performance obligations and recognize revenue as the services are provided, for example as the programming is broadcast to subscribers, as this best represents the transfer of control of the services to the subscriber.

In cases where a subscriber is charged certain nonrefundable upfront fees, those fees are generally considered to be material rights to the subscriber related to the subscriber’s option to renew without having to pay an additional fee upon renewal. These fees are deferred and recognized over the estimated period of time during which the fee remains material to the customer, which we estimate to be less than one year. Revenues arising from our in-home services that are separate from the initial installation, such as mounting a TV on a subscriber’s wall, are generally recognized when these services are performed.

For our residential video subscribers, we have concluded that the contract term under Accounting Standard Codification Topic 606 (“ASC 606”) is one month and as a result the revenue recognized for these subscribers for a given month is equal to the amount billed in that month, except for certain nonrefundable upfront fees that are accounted for as material rights, as discussed above.

Revenues from our advertising services are typically recognized as the advertisements are broadcast. Sales of equipment to subscribers or other third parties are recognized when control is transferred under the contract. Revenue from our commercial video subscribers typically follows the residential model described above, with the exception that the contract term for most of our commercial subscribers exceeds one month and can be multiple years in length. However, commercial subscribers typically do not receive time-limited discounts or free service periods and accordingly, while they may have multiple performance obligations, revenue is equal to the amount billed in a given month.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Contract Balances

The timing of revenue recognition generally differs from the timing of invoicing to customers. When revenue is recognized prior to invoicing, we record a receivable. When revenue is recognized subsequent to invoicing, we record deferred revenue. Our residential video subscribers are typically billed monthly, and the contract balances for those customers arise from the timing of the monthly billing cycle. We do not adjust the amount of consideration for financing impacts as we apply a practical expedient when we anticipate that the period between transfer of goods and services and eventual payment for those goods and services will be less than one year. See Note 15 for further information, including balance and activity detail about our allowance for doubtful accounts and deferred revenue related to contracts with subscribers.

Assets Recognized Related to the Costs to Obtain a Contract with a Subscriber

We recognize an asset for the incremental costs of obtaining a contract with a subscriber if we expect the benefit of those costs to be longer than one year. We have determined that certain sales incentive programs, including those with our independent third-party retailers, meet the requirements to be capitalized, and payments made under these programs are capitalized and amortized to expense over the estimated subscriber life. During the years ended December 31, 2019 and 2018, we capitalized \$207 million and \$183 million, respectively, under these programs. The amortization expense related to these programs was \$76 million and \$28 million for the years ended December 31, 2019 and 2018, respectively. As of December 31, 2019 and 2018, we had a total of \$300 million and \$169 million capitalized on our Consolidated Balance Sheets. These amounts are capitalized in “Other current assets” and “Other noncurrent assets, net” on our Consolidated Balance Sheets, and then amortized in “Other subscriber acquisition costs” on our Consolidated Statements of Operations and Comprehensive Income (Loss).

Impact of Adoption of ASU 2014-09

On May 28, 2014, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update 2014-09 *Revenue from Contracts with Customers* (“ASU 2014-09”) and modified the standard thereafter. We adopted ASU 2014-09, as modified, and now codified as ASC 606 and Accounting Standard Codification Topic 340-40 (“ASC 340-40”) on January 1, 2018, using the modified retrospective method. Under that method, we applied the new guidance to all open contracts existing as of January 1, 2018, recognizing in beginning retained earnings an adjustment for the cumulative effect of the change, which was \$2 million, net of deferred taxes of \$1 million.

Leases

We enter into operating and finance leases for, among other things, satellites, office space, warehouses and distribution centers, vehicles, and other equipment. Our leases have remaining lease terms from one to twelve years, some of which include renewal options, and some of which include options to terminate the leases within one year.

We determine if an arrangement is a lease and classify that lease as either an operating or finance lease at inception. Operating leases are included in “Operating lease assets,” “Other accrued expenses” and “Operating lease liabilities” on our Consolidated Balance Sheets. Finance leases are included in “Property and equipment, net,” “Current portion of long-term debt and finance lease obligations” and “Long-term debt and finance lease obligations, net of current portion” on our Consolidated Balance Sheets. Leases with an initial term of 12 months or less are not recorded on the balance sheet and we recognize lease expense for these leases on a straight-line basis over the lease term on our Consolidated Statements of Operations and Comprehensive Income (Loss). See Note 7 for further information on our lease expenses.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Right of use (“ROU”) assets represent our right to use an underlying asset for the lease term and lease liabilities represent the present value of our obligation to make lease payments arising from the lease. Operating lease ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. When our leases do not provide an implicit rate, we use our incremental borrowing rate based on the information available at commencement date in determining the present value of lease payments. The operating lease ROU asset also includes the impact of prepaid or deferred lease payments. The length of our lease term may include options to extend or terminate the lease when it is reasonably certain that we will exercise that option. Lease expense for operating lease payments is recognized on a straight-line basis over the lease term.

We currently lease and historically have leased certain assets from EchoStar, including, among other things, satellites, office space and data centers. See Note 17 for further information on our Related Party Transactions with EchoStar. On May 19, 2019, DISH Network entered into the Master Transaction Agreement with EchoStar and effective September 10, 2019, certain satellites and real estate assets leased from EchoStar were transferred to DISH Network. See Note 1 “Recent Developments” in the Notes to DISH Network’s Annual Report on Form 10-K for the year ended December 31, 2019 for further information on the Master Transaction Agreement.

We have lease agreements with lease and non-lease components, which are generally accounted for separately. Our variable lease payments are immaterial and our lease agreements do not contain any material residual value guarantees or material restrictive covenants.

DISH TV subscribers have the choice of leasing or purchasing the satellite receiver and other equipment necessary to receive our DISH TV services. Most of our new DISH TV subscribers choose to lease equipment and thus we retain title to such equipment. Equipment leased to new and existing DISH TV subscribers is capitalized and depreciated over their estimated useful lives.

For equipment leased to new and existing DISH TV subscribers we made an accounting policy election to combine the equipment with our programming services as a single performance obligation in accordance with the revenue recognition guidance as the programming services are the predominant component. The equipment leased to new and existing DISH TV subscribers would have otherwise been accounted for as an operating lease.

Impact of Adoption of ASU 2016-02

In February 2016, the Financial Accounting Standards Board (“FASB”) issued ASU 2016-02 *Leases* (“ASU 2016-02”) and has modified the standard thereafter. We adopted ASU 2016-02, as modified, on January 1, 2019 using the modified retrospective method. Under the modified retrospective method, we applied the new guidance to all leases that commenced before and were existing as of January 1, 2019.

The adoption of ASU 2016-02 had no impact on our Consolidated Statements of Operations and Comprehensive Income (Loss) and cash flows from operating, investing and financing activities on our Consolidated Statements of Cash Flows.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

The adoption of ASU 2016-02 impacted our December 31, 2019 Consolidated Balance Sheets, including the reclassification of our deferred rent liabilities to an operating lease asset, as follows:

Consolidated Balance Sheets	DISH DBS (as would have been reported under previous standards)	Impact of adopting ASU 2016-02	DISH DBS (as currently reported)
		(In thousands)	
As of December 31, 2019			
Operating lease assets	\$ —	\$ 553,576	\$ 553,576
Total assets	\$ 3,832,983	\$ 553,576	\$ 4,386,559
Other accrued expenses	\$ 715,361	\$ 202,972	\$ 918,333
Operating lease liabilities	\$ —	\$ 350,155	\$ 350,155
Long-term deferred revenue and other long-term liabilities	\$ 207,543	\$ 449	\$ 207,992
Total liabilities	\$ 14,767,605	\$ 553,576	\$ 15,321,181
Total stockholder's equity (deficit)	\$ (10,934,622)	\$ —	\$ (10,934,622)
Total liabilities and stockholder's equity (deficit)	\$ 3,832,983	\$ 553,576	\$ 4,386,559

Subscriber-Related Expenses

The cost of television programming distribution rights is generally incurred on a per subscriber basis and various upfront carriage payments are recognized when the related programming is distributed to subscribers. Long-term flat rate programming contracts are generally charged to expense using the straight-line method over the term of the agreement. The cost of television programming rights to distribute live sporting events for a season or tournament is charged to expense using the straight-line method over the course of the season or tournament. "Subscriber-related expenses" on our Consolidated Statements of Operations and Comprehensive Income (Loss) principally include programming expenses, costs for Pay-TV services incurred in connection with our in-home service and call center operations, billing costs, refurbishment and repair costs related to DBS receiver systems, subscriber retention and other variable subscriber expenses. These costs are recognized as the services are performed or as incurred.

Cost of Sales – Equipment and Other

Costs include the cost of non-subsidized sales of DBS accessories and the cost of sales of digital receivers and related components to third-party pay-TV providers, both of which include freight and royalties, costs associated with in-home services, and costs related to services and other agreements with EchoStar. Costs are generally recognized as products are delivered to customers and the related revenue is recognized.

Subscriber Acquisition Costs

Subscriber acquisition costs on our Consolidated Statements of Operations and Comprehensive Income (Loss) consist of costs incurred to acquire new Pay-TV subscribers through independent third-party retailers, third-party marketing agreements and our direct sales distribution channel. Subscriber acquisition costs include the following line items from our Consolidated Statements of Operations and Comprehensive Income (Loss):

- "Cost of sales - subscriber promotion subsidies" includes the cost of our DBS receiver systems sold to independent third-party retailers and other distributors of our equipment and DBS receiver systems sold directly by us to DISH TV subscribers.
- "Other subscriber acquisition costs" includes net costs related to promotional incentives and costs related to installation and other promotional subsidies for our DISH TV services as well as our direct sales efforts and commissions for our Sling TV services.
- "Subscriber acquisition advertising" includes advertising and marketing expenses related to the acquisition of new Pay-TV subscribers. Advertising costs are expensed as incurred.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

We characterize amounts paid to our independent third-party retailers as consideration for equipment installation services and for equipment buydowns (incentives and rebates) as a reduction of revenue. We expense payments for equipment installation services as “Other subscriber acquisition costs.” Our payments for equipment buydowns represent a partial or complete return of the independent third-party retailer’s purchase price and are, therefore, netted against the proceeds received from the independent third-party retailer. We report the net cost from our various sales promotions through our independent third-party retailer network as a component of “Other subscriber acquisition costs.”

Research and Development

Research and development costs are expensed as incurred. Research and development costs totaled \$21 million, \$24 million and \$33 million for the years ended December 31, 2019, 2018 and 2017, respectively.

New Accounting Pronouncements

Financial Instruments – Credit Losses. On June 16, 2016, the FASB issued ASU 2016-13 *Financial Instruments – Credit Losses, Measurement of Credit Losses on Financial Instruments* (“ASU 2016-13”), which changes the way entities measure credit losses for most financial assets and certain other instruments that are not measured at fair value through net earnings. This standard will be effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. Early adoption is permitted. We currently expect that the adoption of ASU 2016-13 will have an immaterial impact on our Consolidated Financial Statements and related disclosures.

Fair Value Measurement. On August 28, 2018, the FASB issued ASU 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurement* (“ASU 2018-13”), which modifies the disclosure requirements on fair value measurements by adding, modifying or removing certain disclosures. This standard will be effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. Early adoption is permitted. Certain disclosures in ASU 2018-13 are required to be applied on a retrospective basis and others on a prospective basis. We currently expect that the adoption of ASU 2018-13 will have an immaterial impact on our Consolidated Financial Statements and related disclosures.

3. Supplemental Data - Statements of Cash Flows

The following table presents certain supplemental cash flow and other non-cash data. See Note 7 for supplemental cash flow and non-cash data related to leases.

	For the Years Ended December 31,		
	2019	2018	2017
	(In thousands)		
Cash paid for interest	\$ 765,510	\$ 793,506	\$ 878,772
Cash received for interest	30,041	6,043	9,855
Cash paid for income taxes	19,485	18,683	29,961
Cash paid for income taxes to DISH Network	245,028	302,329	408,265
Capitalized interest	440	1,071	481

Our parent, DISH Network, provides a centralized system for the management of our cash and marketable investment securities as it does for all of its subsidiaries to, among other reasons, maximize yield of the portfolio. As a result, the cash and marketable investment securities included on our Consolidated Balance Sheets is a component or portion of the overall cash and marketable investment securities portfolio included on DISH Network’s Consolidated Balance Sheets and managed by DISH Network. We are reflecting the purchases and sales of marketable investment securities on a net basis for each year presented on our Consolidated Statements of Cash Flows as we believe the net presentation is more meaningful to our cash flows from investing activities.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

4. Marketable Investment Securities, Restricted Cash and Cash Equivalents, and Other Investment Securities

Our marketable investment securities, restricted cash and cash equivalents, and other investment securities consisted of the following:

	As of December 31,	
	2019	2018
	(In thousands)	
Marketable investment securities:		
Current marketable investment securities:		
Trading/equity	\$ —	\$ 2,370
Other	—	147,370
Total current marketable investment securities	—	149,740
Restricted marketable investment securities (1)	390	67,019
Total marketable investment securities	390	216,759
Restricted cash and cash equivalents (1)	60,677	578
Other investment securities:		
Other investment securities	106,874	108,308
Total other investment securities	106,874	108,308
Total marketable investment securities, restricted cash and cash equivalents, and other investment securities	\$ 167,941	\$ 325,645

(1) Restricted marketable investment securities and restricted cash and cash equivalents are included in “Restricted cash, cash equivalents and marketable investment securities” on our Consolidated Balance Sheets.

Marketable Investment Securities

Our marketable investment securities portfolio may consist of various debt and equity instruments. All debt securities are classified as available-for-sale. Subsequent to the adoption of ASU 2016-01 during the first quarter 2018, all equity securities are carried at fair value, with changes in fair value recognized in “Other, net” within “Other Income (Expense)” on our Consolidated Statements of Operations and Comprehensive Income (Loss). See Note 2 for further information.

Current Marketable Investment Securities - Trading

We had an investment in non-marketable preferred shares of a non-public company, which was received for no cash consideration and was previously accounted for as a cost method investment and included in “Other investment securities” on our Consolidated Balance Sheets. During the third quarter 2017, our non-marketable preferred shares converted into common shares in conjunction with the issuer’s initial public offering, and, accordingly, we classified the new equity securities as “Marketable investment securities” on our Consolidated Balance Sheets.

Current Marketable Investment Securities - Other

Our current other marketable investment securities portfolio can include investments in various debt instruments including, among others, commercial paper, corporate securities and United States treasury and/or agency securities.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Commercial paper consists mainly of unsecured short-term, promissory notes issued primarily by corporations with maturities ranging up to 365 days. Corporate securities consist of debt instruments issued by corporations with various maturities normally less than 18 months. U.S. Treasury and agency securities consist of debt instruments issued by the federal government and other government agencies.

Restricted Cash, Cash Equivalents and Marketable Investment Securities

As of December 31, 2019 and 2018, our restricted marketable investment securities, together with our restricted cash and cash equivalents, included amounts required as collateral for our letters of credit and trusts.

Other Investment Securities

We have strategic investments in certain debt and/or equity securities that are included in noncurrent “Other investment securities” on our Consolidated Balance Sheets. Our debt securities are classified as available-for-sale and our equity securities are accounted for using the equity method of accounting or recorded at fair value. Certain of our equity method investments are detailed below.

NagraStar L.L.C. As a result of the completion of the Share Exchange on February 28, 2017, we own a 50% interest in NagraStar L.L.C. (“NagraStar”), a joint venture that is our primary provider of encryption and related security systems intended to assure that only authorized customers have access to our programming.

Invidi Technologies Corporation. In November 2016, we, DIRECTV, LLC, a wholly-owned indirect subsidiary of AT&T Inc., and Cavendish Square Holding B.V., an affiliate of WPP plc, entered into a series of agreements to acquire Invidi Technologies Corporation (“Invidi”), an entity that provides proprietary software for the addressable advertising market. The transaction closed in January 2017.

Our ability to realize value from our strategic investments in securities that are not publicly traded depends on the success of the issuers’ businesses and their ability to obtain sufficient capital, on acceptable terms or at all, and 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 desire to sell them, we will not be able to obtain fair value for them.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Unrealized Gains (Losses) on Marketable Investment Securities

As of December 31, 2019 and 2018, we had accumulated net unrealized losses of zero and less than \$1 million, respectively. These amounts, net of related tax effect, were accumulated net unrealized losses of zero and less than \$1 million, respectively. All of these amounts are included in “Accumulated other comprehensive income (loss)” within “Total stockholder’s equity (deficit).” The components of our available-for-sale investments are summarized in the table below.

	As of December 31,							
	2019			2018				
	Marketable Investment Securities	Unrealized		Net	Marketable Investment Securities	Unrealized		Net
	Gains	Losses	Gains		Losses			
	(In thousands)							
Debt securities (including restricted):								
U.S. Treasury and agency securities	\$ 390	\$ —	\$ —	\$ —	\$ 66,823	\$ 40	\$ (19)	\$ 21
Commercial paper	—	—	—	—	45,938	—	—	—
Corporate securities	—	—	—	—	100,662	11	(113)	(102)
Other	—	—	—	—	966	—	—	—
Total	<u>\$ 390</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 214,389</u>	<u>\$ 51</u>	<u>\$ (132)</u>	<u>\$ (81)</u>

As of December 31, 2019, restricted and non-restricted marketable investment securities included debt securities of less than \$1 million with contractual maturities within one year. Actual maturities may differ from contractual maturities as a result of our ability to sell these securities prior to maturity.

Fair Value Measurements

Our investments measured at fair value on a recurring basis were as follows:

	As of December 31,							
	2019				2018			
	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3
	(In thousands)							
Cash equivalents (including restricted)	<u>\$ 60,677</u>	<u>\$ 60,677</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 114,464</u>	<u>\$ 12,493</u>	<u>\$ 101,971</u>	<u>\$ —</u>
Debt securities (including restricted):								
U.S. Treasury and agency securities	\$ 390	\$ 390	\$ —	\$ —	\$ 66,823	\$ 66,823	\$ —	\$ —
Commercial paper	—	—	—	—	45,938	—	45,938	—
Corporate securities	—	—	—	—	100,662	—	100,662	—
Other	—	—	—	—	966	—	966	—
Equity securities	—	—	—	—	2,370	2,370	—	—
Total	<u>\$ 390</u>	<u>\$ 390</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 216,759</u>	<u>\$ 69,193</u>	<u>\$ 147,566</u>	<u>\$ —</u>

During the years ended December 31, 2019 and 2018, we had no transfers in or out of Level 1 and Level 2 fair value measurements.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Gains and Losses on Sales and Changes in Carrying Amounts of Investments

“Other, net” within “Other Income (Expense)” included on our Consolidated Statements of Operations and Comprehensive Income (Loss) is as follows:

Other, net:	For the Years Ended December 31,		
	2019	2018	2017
	(In thousands)		
Marketable investment securities - realized and unrealized gains (losses)	\$ 3,119	\$ 5,313	\$ 87,020
Costs related to early redemption of debt	—	(3,261)	(1,470)
Gain (loss) on sale of subsidiary	—	7,004	—
Equity in earnings of affiliates	3,514	(2,110)	2,163
Other	976	2,048	798
Total	\$ 7,609	\$ 8,994	\$ 88,511

5. Inventory

Inventory consisted of the following:

	As of December 31,	
	2019	2018
	(In thousands)	
Finished goods	\$ 254,240	\$ 215,150
Work-in-process and service repairs	34,120	56,871
Raw materials	33,623	18,676
Total inventory	\$ 321,983	\$ 290,697

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

6. Property and Equipment and Intangible Assets

Property and Equipment

Property and equipment consisted of the following:

	Depreciable Life (In Years)	As of	
		December 31, 2019	December 31, 2018
(In thousands)			
Equipment leased to customers	2-5	\$ 1,837,503	\$ 1,980,808
EchoStar XV	15	277,658	277,658
EchoStar XVIII (1)	15	411,255	—
Satellites acquired under finance lease agreements (2)(3)	15	398,107	499,819
Furniture, fixtures, equipment and other	2-20	1,894,629	1,820,883
Buildings and improvements	5-40	289,421	289,244
Land	-	13,186	13,186
Construction in progress	-	70,081	47,077
Total property and equipment		5,191,840	4,928,675
Accumulated depreciation		(3,440,267)	(3,550,726)
Property and equipment, net		\$ 1,751,573	\$ 1,377,949

- (1) On May 14, 2019, we and DISH Orbital II L.L.C (“DOLLC II”), an indirect wholly-owned subsidiary of DISH Network, entered into an agreement to sell our interests in the Local Multipoint Distribution Service (“LMDS”) and MVDDS licenses in exchange for the EchoStar XVIII satellite, including its related in-orbit incentive obligations of approximately \$18 million (the “Satellite and Spectrum Transaction”). See Note 17 for further information.
- (2) The Ciel II satellite was previously classified as a finance lease, with a cost basis of \$277 million, however, as a result of an amendment, which was effective during the first quarter 2019, Ciel II is now accounted for as an operating lease.
- (3) The Nimiq 5 satellite, for which we have the option to renew on a year-to-year basis through September 2024 (when DISH Network’s lease term expires) was previously classified as an operating lease. As a result of the Master Transaction Agreement and expiration of the initial lease term, we now include our options to renew the lease through September 2024 in the lease term as we are reasonably certain to exercise those options. Accordingly, Nimiq 5 is now accounted for as a finance lease, with a cost basis of \$175 million.

Depreciation and amortization expense consisted of the following:

	For the Years Ended December 31,		
	2019	2018	2017
(In thousands)			
Equipment leased to customers	\$ 370,867	\$ 437,342	\$ 539,434
Satellites	65,441	61,045	61,045
Buildings, furniture, fixtures, equipment and other	141,040	162,073	141,293
Total depreciation and amortization	\$ 577,348	\$ 660,460	\$ 741,772

Cost of sales and operating expense categories included in our accompanying Consolidated Statements of Operations and Comprehensive Income (Loss) do not include depreciation expense related to satellites or equipment leased to customers.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Satellites

Pay-TV Satellites. We currently utilize 11 satellites in geostationary orbit approximately 22,300 miles above the equator, two of which we own and depreciate over their estimated useful life. We currently utilize certain capacity on six satellites that we lease from DISH Network, one satellite that we lease from EchoStar, and two satellites that we lease from third parties. All leased satellites are accounted for as operating leases except Nimiq 5 and Anik F3, which are accounted for as financing leases and are depreciated over their economic life.

As of December 31, 2019, our pay-TV satellite fleet consisted of the following:

Satellites	Launch Date	Degree Orbital Location	Lease Termination Date
Owned:			
EchoStar XV	July 2010	61.5	N/A
EchoStar XVIII	June 2016	61.5	N/A
Leased from EchoStar (1):			
EchoStar IX	August 2003	121	Month to month
Leased from DISH Network (2):			
EchoStar X (3)	February 2006	110	February 2021
EchoStar XI (3)	July 2008	110	September 2021
EchoStar XIV (3)	March 2010	119	February 2023
EchoStar XVI (3)	November 2012	61.5	January 2023
Nimiq 5 (3)(4)	September 2009	72.7	September 2020
QuetzSat-1 (3)	September 2011	77	November 2021
Leased from Other Third Party:			
Anik F3	April 2007	118.7	April 2022
Ciel II	December 2008	129	January 2021

- (1) See Note 17 for further information on our Related Party Transactions with EchoStar.
- (2) See Note 17 for further information on our Related Party Transactions with DISH Network.
- (3) On May 19, 2019, DISH Network entered into the Master Transaction Agreement with EchoStar. Upon the closing of the Master Transaction Agreement on September 10, 2019, these satellites and satellite service agreements leased from EchoStar were transferred to DISH Network. See Note 1 “Recent Developments” in the Notes to DISH Network’s Annual Report on Form 10-K for the year ended December 31, 2019 for further information on the Master Transaction Agreement.
- (4) The Nimiq 5 satellite, for which we have the option to renew on a year-to-year basis through September 2024 (when DISH Network’s lease term expires) was previously classified as an operating lease. As a result of the Master Transaction Agreement and expiration of the initial lease term, we now include our options to renew the lease through September 2024 in the lease term as we are reasonably certain to exercise those options. Accordingly, Nimiq 5 is now accounted for as a finance lease.

On May 14, 2019, we and DOLLC II entered into the Satellite and Spectrum Transaction, discussed above. As the Satellite and Spectrum Transaction is among entities under common control, we recorded the EchoStar XVIII Satellite at DOLLC II’s net historical cost basis of \$320 million. The difference between the net historical cost basis of EchoStar XVIII and our net carrying value of the LMDS and MVDDS licenses of \$26 million, resulted in a \$267 million capital transaction, net of tax, that was recorded in “Additional paid-in capital” on our Consolidated Balance Sheets during the second quarter of 2019.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Satellite Anomalies

Operation of our DISH TV services requires that we have adequate satellite transmission capacity for the programming that we offer. While we generally have had in-orbit satellite capacity sufficient to transmit our existing channels and some backup capacity to recover the transmission of certain critical programming, our backup capacity is limited.

In the event of a failure or loss of any of our owned or leased satellites, we may need to acquire or lease additional satellite capacity or relocate one of our other owned or leased satellites and use it as a replacement for the failed or lost satellite. Such a failure could result in a prolonged loss of critical programming or a significant delay in our plans to expand programming as necessary to remain competitive and thus may have a material adverse effect on our business, financial condition and results of operations.

In the past, certain of our owned and leased satellites have experienced anomalies, some of which have had a significant adverse impact on their remaining useful life and/or commercial operation. There can be no assurance that future anomalies will not impact the remaining useful life and/or commercial operation of any of the owned and leased satellites in our fleet. See Note 2 "Impairment of Long-Lived Assets" for further information on evaluation of impairment. There can be no assurance that we can recover critical transmission capacity in the event one or more of our owned or leased in-orbit satellites were to fail. We generally do not carry commercial launch or in-orbit insurance on any of the satellites that we own, and therefore, we will bear the risk associated with any uninsured launch or in-orbit satellite failures.

Intangible Assets

As of December 31, 2019 and 2018, our identifiable intangibles subject to amortization consisted of the following:

	As of December 31,			
	2019		2018	
	Intangible Assets	Accumulated Amortization	Intangible Assets	Accumulated Amortization
	(In thousands)			
Technology-based	\$ 58,162	\$ (53,447)	\$ 58,162	\$ (51,204)
Trademarks	35,010	(30,655)	35,010	(27,106)
Contract-based	4,500	(4,500)	4,500	(4,500)
Customer relationships	23,632	(23,632)	23,632	(23,632)
Total	\$ 121,304	\$ (112,234)	\$ 121,304	\$ (106,442)

These identifiable intangibles are included in "Other noncurrent assets, net" on our Consolidated Balance Sheets. Amortization of these intangible assets is recorded on a straight-line basis over an average finite useful life primarily ranging from approximately five to 20 years. Amortization was \$6 million, \$7 million and \$7 million for the years ended December 31, 2019, 2018 and 2017, respectively.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Estimated future amortization of our identifiable intangible assets as of December 31, 2019 is as follows (in thousands):

For the Years Ended December 31,

2020	\$	3,285
2021		835
2022		666
2023		654
2024		654
Thereafter		2,976
Total	\$	9,070

As of December 31, 2019 and 2018, we had goodwill of \$6 million, which is included in “Other noncurrent assets, net” on our Consolidated Balance Sheets.

FCC Authorizations

As of December 31, 2019 and 2018, our FCC Authorizations consisted of the following:

	As of December 31,	
	2019	2018
	(In thousands)	
DBS Licenses	\$ 611,794	\$ 611,794
MVDDS Licenses (1)	—	24,000
Capitalized Interest	—	1,552
Total	\$ 611,794	\$ 637,346

- (1) On May 14, 2019, we and DOLLC II entered into an agreement to sell our interests in the LMDS and MVDDS licenses in exchange for the EchoStar XVIII satellite.

7. Leases

We enter into operating and finance leases for, among other things, satellites, office space, warehouses and distribution centers, vehicles and other equipment. Our leases have remaining lease terms from one to twelve years, some of which include renewal options, and some of which include options to terminate the leases within one year.

Our Anik F3 and Nimiq 5 satellites are accounted for as financing leases. Substantially all of our remaining leases are accounted for as operating leases, including the remainder of our satellite fleet.

The components of lease expense were as follows:

	For the Year Ended December 31, 2019	
	(In thousands)	
Operating lease cost	\$	297,181
Short-term lease cost (1)		37,686
Finance lease cost:		
Amortization of right-of-use assets		29,134
Interest on lease liabilities		9,826
Total finance lease cost		38,960
Total lease costs	\$	373,827

- (1) Leases that have terms of 12 months or less.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Supplemental cash flow information related to leases was as follows:

	For the Year Ended December 31, 2019
	(In thousands)
Cash paid for amounts included in the measurement of lease liabilities:	
Operating cash flows from operating leases	\$ 301,524
Operating cash flows from finance leases	\$ 9,826
Financing cash flows from finance leases	\$ 31,841
Right-of-use assets obtained in exchange for lease obligations:	
Operating leases	\$ 81,198
Finance leases	\$ 175,311
Right-of-use assets and liabilities recognized at January 1, 2019 upon adoption of ASC 842	\$ 730,180

Supplemental balance sheet information related to leases was as follows:

	As of December 31, 2019
	(In thousands)
Operating Leases:	
Operating lease right-of-use assets	\$ 553,576
Other current liabilities	\$ 202,972
Operating lease liabilities	350,155
Total operating lease liabilities	\$ 553,127
Finance Leases:	
Property and equipment, gross	\$ 399,764
Accumulated depreciation	(201,873)
Property and equipment, net	\$ 197,891
Other current liabilities	\$ 48,678
Other long-term liabilities	163,939
Total finance lease liabilities	\$ 212,617
Weighted Average Remaining Lease Term:	
Operating leases	3.4 years
Finance leases	4.2 years
Weighted Average Discount Rate:	
Operating leases	9.1%
Finance leases	9.5%

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Maturities of lease liabilities as of December 31, 2019 were as follows:

For the Years Ending December 31,	Maturities of Lease Liabilities		
	Operating Leases	Finance Leases	Total
	(In thousands)		
2020	\$ 239,660	\$ 66,285	\$ 305,945
2021	199,062	66,279	265,341
2022	127,300	50,227	177,527
2023	24,571	42,862	67,433
2024	9,191	32,147	41,338
Thereafter	42,008		42,008
Total lease payments	641,792	257,800	899,592
Less: Imputed interest	(88,665)	(45,183)	(133,848)
Total	553,127	212,617	765,744
Less: Current portion	(202,972)	(48,678)	(251,650)
Long-term portion of lease obligations	<u>\$ 350,155</u>	<u>\$ 163,939</u>	<u>\$ 514,094</u>

8. Long-Term Debt and Finance Lease Obligations

Fair Value of our Long-Term Debt

The following table summarizes the carrying amount and fair value of our debt facilities as of December 31, 2019 and 2018:

	As of December 31,			
	2019		2018	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
	(In thousands)			
7 7/8% Senior Notes due 2019 (1)	—	—	1,317,372	1,343,298
5 1/8% Senior Notes due 2020 (2)	1,100,000	1,110,208	1,100,000	1,089,957
6 3/4% Senior Notes due 2021	2,000,000	2,109,420	2,000,000	1,974,940
5 7/8% Senior Notes due 2022	2,000,000	2,129,580	2,000,000	1,833,140
5 % Senior Notes due 2023	1,500,000	1,543,770	1,500,000	1,247,445
5 7/8% Senior Notes due 2024	2,000,000	2,049,080	2,000,000	1,611,960
7 3/4% Senior Notes due 2026	2,000,000	2,128,900	2,000,000	1,653,720
Other notes payable	25,996	25,996	10,346	10,346
Subtotal	<u>10,625,996</u>	<u>\$ 11,096,954</u>	<u>11,927,718</u>	<u>\$ 10,764,806</u>
Unamortized deferred financing costs and debt discounts, net	(16,250)		(23,215)	
Finance lease obligations (3)	<u>212,617</u>		<u>66,984</u>	
Total long-term debt and finance lease obligations (including current portion)	<u>\$ 10,822,363</u>		<u>\$ 11,971,487</u>	

- (1) On September 3, 2019, we redeemed the principal balance of our 7 7/8% Senior Notes due 2019.
- (2) Our 5 1/8% Senior Notes due 2020 mature on May 1, 2020 and have been reclassified to “Current portion of long-term debt and finance lease obligations” on our Consolidated Balance Sheets as of December 31, 2019. We will either fund this obligation from cash and marketable investment securities balances at that time and/or advances from our parent, DISH Network or, depending on market conditions, we may refinance this obligation, in whole or in part.
- (3) Disclosure regarding fair value of finance leases is not required.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

We estimated the fair value of our publicly traded long-term debt using market prices in less active markets (Level 2).

Our Senior Notes are:

- general unsecured senior obligations of DISH DBS;
- ranked equally in right of payment with all of DISH DBS' and the guarantors' existing and future unsecured senior debt; and
- ranked effectively junior to our and the guarantors' current and future secured senior indebtedness up to the value of the collateral securing such indebtedness.

The indentures related to our Senior Notes contain restrictive covenants that, among other things, impose limitations on the ability of DISH DBS and its restricted subsidiaries to:

- incur additional debt;
- pay dividends or make distributions on DISH DBS' capital stock or repurchase DISH DBS' 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; and
- transfer or sell assets.

In the event of a change of control, as defined in the related indentures, we would be required to make an offer to repurchase all or any part of a holder's Senior Notes at a purchase price equal to 101% of the aggregate principal amount thereof, together with accrued and unpaid interest thereon, to the date of repurchase.

5 1/8% Senior Notes due 2020

On April 5, 2013, we issued \$1.1 billion aggregate principal amount of our seven-year 5 1/8% Senior Notes due May 1, 2020. Interest accrues at an annual rate of 5 1/8% and is payable semi-annually in cash, in arrears on May 1 and November 1 of each year.

The 5 1/8% Senior Notes are redeemable, in whole or in part, at any time at a redemption price equal to 100% of the principal amount plus a "make-whole" premium, as defined in the related indenture, together with accrued and unpaid interest.

6 3/4% Senior Notes due 2021

On May 5, 2011, we issued \$2.0 billion aggregate principal amount of our ten-year 6 3/4% Senior Notes due June 1, 2021. Interest accrues at an annual rate of 6 3/4% and is payable semi-annually in cash, in arrears on June 1 and December 1 of each year.

The 6 3/4% Senior Notes are redeemable, in whole or in part, at any time at a redemption price equal to 100% of the principal amount plus a "make-whole" premium, as defined in the related indenture, together with accrued and unpaid interest.

5 7/8% Senior Notes due 2022

On May 16, 2012 and July 26, 2012, we issued \$1.0 billion and \$1.0 billion, respectively, aggregate principal amount of our ten-year 5 7/8% Senior Notes due July 15, 2022. Interest accrues at an annual rate of 5 7/8% and is payable semi-annually in cash, in arrears on January 15 and July 15 of each year.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

The 5 7/8% Senior Notes due 2022 are redeemable, in whole or in part, at any time at a redemption price equal to 100% of the principal amount plus a “make-whole” premium, as defined in the related indenture, together with accrued and unpaid interest.

5% Senior Notes due 2023

On December 27, 2012, we issued \$1.5 billion aggregate principal amount of our 5% Senior Notes due March 15, 2023. Interest accrues at an annual rate of 5% and is payable semi-annually in cash, in arrears on March 15 and September 15 of each year.

The 5% Senior Notes are redeemable, in whole or in part, at any time at a redemption price equal to 100% of the principal amount plus a “make-whole” premium, as defined in the related indenture, together with accrued and unpaid interest.

5 7/8% Senior Notes due 2024

On November 20, 2014, we issued \$2.0 billion aggregate principal amount of our ten-year 5 7/8% Senior Notes due November 15, 2024. Interest accrues at an annual rate of 5 7/8% and is payable semi-annually in cash, in arrears on May 15 and November 15 of each year.

The 5 7/8% Senior Notes due 2024 are redeemable, in whole or in part, at any time at a redemption price equal to 100% of the principal amount plus a “make-whole” premium, as defined in the related indenture, together with accrued and unpaid interest.

7 3/4% Senior Notes due 2026

On June 13, 2016, we issued \$2.0 billion aggregate principal amount of our ten-year 7 3/4% Senior Notes due July 1, 2026. Interest accrues at an annual rate of 7 3/4% and is payable semi-annually in cash, in arrears on January 1 and July 1 of each year.

The 7 3/4% Senior Notes are redeemable, in whole or in part, at any time at a redemption price equal to 100% of the principal amount plus a “make-whole” premium, as defined in the related indenture, together with accrued and unpaid interest.

Interest on Long-Term Debt

	Semi-Annual Payment Dates	Annual Debt Service Requirements
		(In thousands)
5 1/8% Senior Notes due 2020 (1)	May 1 and November 1	\$ 56,375
6 3/4% Senior Notes due 2021	June 1 and December 1	\$ 135,000
5 7/8% Senior Notes due 2022	January 15 and July 15	\$ 117,500
5% Senior Notes due 2023	March 15 and September 15	\$ 75,000
5 7/8% Senior Notes due 2024	May 15 and November 15	\$ 117,500
7 3/4% Senior Notes due 2026	January 1 and July 1	\$ 155,000

- (1) Our 5 1/8% Senior Notes due 2020 mature on May 1, 2020 and have been reclassified to “Current portion of long-term debt and finance lease obligations” on our Consolidated Balance Sheets as of December 31, 2019.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Our ability to meet our debt service requirements will depend on, among other factors, the successful execution of our business strategy, which is subject to uncertainties and contingencies beyond our control.

Other Long-Term Debt and Finance Lease Obligations

Other long-term debt and finance lease obligations consisted of the following:

	As of December 31,	
	2019	2018
	(In thousands)	
Satellites and other finance lease obligations	\$ 212,617	\$ 66,984
Notes payable related to satellite vendor financing and other debt payable in installments through 2025 with interest rates of approximately 6.0%	25,996	10,346
Total	238,613	77,330
Less: current portion	(51,108)	(21,155)
Other long-term debt and finance lease obligations, net of current portion	\$ 187,505	\$ 56,175

Finance Lease Obligations

Anik F3. Anik F3, an FSS satellite, was launched and commenced commercial operation in April 2007. This satellite is accounted for as a finance lease and depreciated over the term of the satellite service agreement. We have leased 100% of the Ku-band capacity on Anik F3 for a period of 15 years.

Nimiq 5. On May 19, 2019, DISH Network entered into a Master Transaction Agreement pursuant to which, on September 10, 2019, the satellite service agreement for Nimiq 5 was transferred to DISH Network and we began leasing it from an indirect wholly-owned subsidiary of DISH Network. Nimiq 5 was launched in September 2009 and commenced commercial operation at the 72.7 degree west longitude orbital location during October 2009. This satellite is accounted for as a finance lease and is being depreciated over the lease term which includes options to extend the lease that we are reasonably certain to exercise. We lease 100% of the capacity on Nimiq 5. See Note 17 for further discussion.

Ciel II. Ciel II, a Canadian DBS satellite, was launched in December 2008 and commenced commercial operation in February 2009. This satellite was previously accounted for as a finance lease and depreciated over the term of the satellite service agreement, however, as a result of an amendment, which was effective during the first quarter 2019, Ciel II is now accounted for as an operating lease. We lease 100% of the capacity on Ciel II. The initial 10-year term expired in January 2019 and as a result of an amendment, we renewed this lease through January 2021.

The summary of future maturities of our outstanding long-term debt as of December 31, 2019 is included in the commitments table in Note 12.

9. Income Taxes and Accounting for Uncertainty in Income Taxes

Income Taxes

DISH DBS and its domestic subsidiaries join with DISH Network in filing U.S. consolidated federal income tax returns and, in some states, combined or consolidated returns. The federal and state income tax provisions or benefits recorded by DISH DBS are generally those that would have been recorded if DISH DBS and its domestic subsidiaries had filed returns as a consolidated group independent of DISH Network. Cash is due and paid to DISH Network based on amounts that would be payable based on DISH DBS consolidated or combined group filings. Amounts are receivable from DISH Network on a basis similar to when they would be receivable from the IRS or other state taxing authorities. The amounts paid to DISH Network during the years ended December 31, 2019, 2018 and 2017 were \$245 million, \$302 million and \$408 million, respectively.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

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 on our Consolidated Balance Sheets, as well as probable operating loss, tax credit and other carryforwards. Deferred tax assets are offset by valuation allowances when we believe it is more likely than not that net deferred tax assets will not be realized. We periodically evaluate our need for a valuation allowance. Determining necessary valuation allowances requires us to make assessments about historical financial information as well as the timing of future events, including the probability of expected future taxable income and available tax planning opportunities.

As of December 31, 2019, we had no net operating loss carryforwards (“NOLs”) for federal and state income tax purposes. In addition, there are \$10 million of tax benefits related to credit carryforwards which are partially offset by a valuation allowance. Portions of the credit carryforwards will expire in 2020.

On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (the “Tax Reform Act”) was enacted making significant changes to the Internal Revenue Code. Such changes include, but are not limited to, a reduction in the corporate tax rate and certain limitations on corporate deductions (e.g., a limitation on the interest expense deduction available to companies). The Tax Reform Act, among other things, lowered the federal statutory corporate tax rate effective January 1, 2018 from 35% to 21%. Consequently, we remeasured our deferred tax assets and liabilities as of December 31, 2017 which positively impacted our “Income tax (provision) benefit, net” by approximately \$291 million.

The components of the (benefit from) provision for income taxes were as follows:

	For the Years Ended December 31,		
	2019	2018	2017
	(In thousands)		
Current (benefit) provision:			
Federal	\$ 208,821	\$ 273,632	\$ 356,759
State	48,417	64,534	54,133
Foreign	6,203	4,616	3,736
Total current (benefit) provision	263,441	342,782	414,628
Deferred (benefit) provision:			
Federal	11,243	(25,934)	(308,028)
State	(1,987)	(123)	11,954
Increase (decrease) in valuation allowance	2,054	1,580	(938)
Total deferred (benefit) provision	11,310	(24,477)	(297,012)
Total (benefit) provision	\$ 274,751	\$ 318,305	\$ 117,616

Our \$1.102 billion of “Income (loss) before income taxes” on our Consolidated Statements of Operations and Comprehensive Income (Loss) included income of \$13 million related to our foreign operations.

The following table shows the principal reasons for the difference between the effective income tax rate and the statutory federal tax rate:

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

	For the Years Ended December 31,		
	2019	2018	2017
	% of pre-tax income/(loss)		
Statutory rate	21.0	21.0	35.0
State income taxes, net of federal benefit	3.6	4.4	4.2
Tax Reform Act (1)	—	—	(34.5)
Nondeductible/Nontaxable items (2)	—	—	11.5
Other, net	0.3	(0.8)	(2.2)
Total (benefit) provision for income taxes	24.9	24.6	14.0

- (1) On December 22, 2017, the Tax Reform Act was enacted, which, among other things, lowered the federal statutory corporate tax rate effective January 1, 2018 from 35% to 21%. Consequently, we remeasured our deferred tax assets and liabilities as of December 31, 2017 which positively impacted our “Income tax (provision) benefit, net” by approximately \$291 million.
- (2) During the year ended December 31, 2017, we recorded \$255 million of “Litigation expense” related to the FTC Action on our Consolidated Statements of Operations and Comprehensive Income (Loss). Any eventual payments made with respect to the FTC Action may not be deductible for tax purposes, which had a negative impact on our effective tax rate for the year ended December 31, 2017. The tax deductibility of any eventual payments made with respect to the FTC Action may change, based upon, among other things, further developments in the FTC Action, including final adjudication of the FTC Action. See Note 12 for further information.

Deferred taxes arise because of the differences in the book and tax bases of certain assets and liabilities. Significant components of deferred tax assets and liabilities were as follows:

	As of December 31,	
	2019	2018
	(In thousands)	
Deferred tax assets:		
NOL, interest, credit and other carryforwards	\$ 12,323	\$ 10,915
Accrued and prepaid expenses	96,974	—
Stock-based compensation	19,719	21,198
Deferred revenue	17,238	18,361
Total deferred tax assets	146,254	50,474
Valuation allowance	(9,521)	(7,467)
Deferred tax asset after valuation allowance	136,733	43,007
Deferred tax liabilities:		
Depreciation	(458,811)	(345,358)
Accrued and prepaid expenses	—	(15,537)
FCC authorizations and other intangible amortization	(174,399)	(131,452)
Bases difference in partnerships and other investments	(5,380)	(12,112)
Other liabilities	—	—
Total deferred tax liabilities	(638,590)	(504,459)
Net deferred tax asset (liability)	\$ (501,857)	\$ (461,452)

Accounting for Uncertainty in Income Taxes

In addition to filing federal income tax returns, we and one or more of our subsidiaries file income tax returns in all states that impose an income tax and a small number of foreign jurisdictions where we have immaterial operations. We are subject to United States federal, state and local income tax examinations by tax authorities for the years beginning in

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

2008 due to the carryover of previously incurred NOLs. We are currently under a federal income tax examination for fiscal years 2008 through 2016.

A reconciliation of the beginning and ending amount of unrecognized tax benefits included in “Long-term deferred revenue and other long-term liabilities” on our Consolidated Balance Sheets was as follows:

Unrecognized tax benefit	For the Years Ended December 31,		
	2019	2018	2017
	(In thousands)		
Balance as of beginning of period	\$ 194,136	\$ 201,162	\$ 201,693
Additions based on tax positions related to the current year	3,232	10,550	684
Additions based on tax positions related to prior years	28,137	1,154	4,593
Reductions based on tax positions related to prior years	(13,028)	(4,479)	(1,061)
Reductions based on tax positions related to settlements with taxing authorities	(2,362)	(8,328)	(1,634)
Reductions based on tax positions related to the lapse of the statute of limitations	(1,963)	(5,923)	(3,113)
Balance as of end of period	<u>\$ 208,152</u>	<u>\$ 194,136</u>	<u>\$ 201,162</u>

We have \$179 million in unrecognized tax benefits that, if recognized, could favorably affect our effective tax rate. We do not expect any material portion of this amount to be paid or settled within the next twelve months.

Accrued interest and penalties on uncertain tax positions are recorded as a component of “Interest expense, net of amounts capitalized” and “Other, net,” respectively, on our Consolidated Statements of Operations and Comprehensive Income (Loss). During the years ended December 31, 2019, 2018 and 2017, we recorded \$7 million, \$2 million and \$4 million in net interest and penalty expense to earnings, respectively. Accrued interest and penalties were \$33 million and \$26 million at December 31, 2019 and 2018, respectively. The above table excludes these amounts.

10. Employee Benefit Plans

Employee Stock Purchase Plan

Our employees participate in the DISH Network employee stock purchase plan (the “ESPP”), in which DISH Network is authorized to issue up to 3.8 million shares of Class A common stock. At December 31, 2019, DISH Network had 0.2 million shares of Class A common stock which remain available for issuance under the ESPP. Substantially all full-time employees who have been employed by DISH Network 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, employees may not deduct an amount which would permit such employee to purchase DISH Network’s capital stock under all of DISH Network’s stock purchase plans at a rate which would exceed \$25,000 in fair value of capital stock in any one year. The purchase price of the stock is 85% of the closing price of DISH Network’s Class A common stock on the last business day of each calendar quarter in which such shares of DISH Network’s Class A common stock are deemed sold to an employee under the ESPP. During the years ended December 31, 2019, 2018 and 2017, employee purchases of DISH Network’s Class A common stock through the ESPP totaled approximately 0.6 million, 0.6 million and 0.3 million shares, respectively.

401(k) Employee Savings Plan

DISH Network sponsors a 401(k) Employee Savings Plan (the “401(k) Plan”) for eligible employees. Voluntary employee contributions to the 401(k) Plan may be matched 50% by DISH Network, subject to a maximum annual contribution of \$2,500 per employee. Forfeitures of unvested participant balances which are retained by the 401(k) Plan may be used to fund matching and discretionary contributions. DISH Network’s board of directors may also authorize an annual discretionary contribution to the 401(k) Plan with authorization by our Board of Directors, subject to the maximum deductible limit provided by the Internal Revenue Code of 1986, as amended. These contributions may be made in cash or in DISH Network’s stock.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

The following table summarizes the expense associated with our matching contributions and discretionary contributions:

Expense Recognized Related to the 401(k) Plan	For the Years Ended December 31,		
	2019	2018	2017
	(In thousands)		
Matching contributions, net of forfeitures	\$ 11,181	\$ 10,300	\$ 7,070
Discretionary stock contributions, net of forfeitures	\$ 28,774	\$ 27,048	\$ 27,969

11. Stock-Based Compensation

Stock Incentive Plans

DISH Network maintains stock incentive plans to attract and retain officers, directors and key employees. Our employees participate in the DISH Network stock incentive plans. Stock awards under these plans include both performance and non-performance based stock incentives. As of December 31, 2019, there were outstanding under these plans stock options to acquire 12.8 million shares of DISH Network's Class A common stock and 1.5 million restricted stock units and awards associated with our employees. Stock options granted on or prior to December 31, 2019 were granted with exercise prices equal to or greater than the market value of DISH Network Class A common stock at the date of grant and with a maximum term of approximately ten years. While historically DISH Network has issued stock awards subject to vesting, typically at the rate of 20% per year, some stock awards have been granted with immediate vesting and other stock awards vest only upon the achievement of certain DISH Network-specific subscriber, operational and/or financial goals. As of December 31, 2019, DISH Network had 80.3 million shares of its Class A common stock available for future grant under its stock incentive plans.

Exercise prices for DISH Network stock options outstanding and exercisable associated with our employees as of December 31, 2019 were as follows:

	Options Outstanding			Options Exercisable		
	Number Outstanding as of December 31, 2019	Weighted- Average Remaining Contractual Life	Weighted- Average Exercise Price	Number Exercisable as of December 31, 2019	Weighted- Average Remaining Contractual Life	Weighted- Average Exercise Price
\$ 10.01 - \$ 20.00	616,160	0.50	\$ 15.39	16,160	0.50	\$ 15.62
\$ 20.01 - \$ 30.00	826,983	3.37	\$ 26.74	124,233	3.25	\$ 24.02
\$ 30.01 - \$ 40.00	6,671,563	7.94	\$ 35.67	1,057,044	7.50	\$ 35.52
\$ 40.01 - \$ 50.00	1,468,628	7.59	\$ 47.52	384,800	7.10	\$ 47.24
\$ 50.01 - \$ 60.00	2,154,378	6.47	\$ 57.50	430,952	5.69	\$ 59.90
\$ 60.01 - \$ 70.00	1,040,100	6.29	\$ 64.22	304,300	5.50	\$ 65.23
\$ 70.01 - \$ 80.00	15,000	—	\$ 72.89	15,000	—	\$ 72.89
\$ — - \$ 80.00	12,792,812	6.85	\$ 41.52	2,332,489	6.51	\$ 44.77

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Stock Award Activity

DISH Network stock option activity associated with our employees was as follows:

	For the Years Ended December 31,					
	2019		2018		2017	
	Options	Weighted-Average Exercise Price	Options	Weighted-Average Exercise Price	Options	Weighted-Average Exercise Price
Total options outstanding, beginning of period	13,365,489	\$ 41.78	8,847,734	\$ 43.90	7,913,733	\$ 36.22
Granted	1,396,750	\$ 33.52	7,026,512	\$ 38.44	3,468,626	\$ 59.66
Exercised	(713,411)	\$ 27.46	(267,905)	\$ 16.43	(505,125)	\$ 28.73
Forfeited and cancelled (1)	(1,256,016)	\$ 43.40	(2,240,852)	\$ 39.73	(2,029,500)	\$ 44.64
Total options outstanding, end of period	12,792,812	\$ 41.52	13,365,489	\$ 41.78	8,847,734	\$ 43.90
Performance-based options outstanding, end of period (2)	7,608,446	\$ 39.78	8,671,886	\$ 39.95	5,490,626	\$ 42.81
Exercisable at end of period	2,332,489	\$ 44.93	1,705,103	\$ 40.87	1,772,608	\$ 35.13

- (1) Certain of these stock options include options that were granted to individuals who transferred to and/or from another DISH Network subsidiary not a part of DISH DBS.
- (2) These stock options are included in the caption "Total options outstanding, end of period." See discussion of the, 2013 LTIP, 2017 LTIP, 2019 LTIP and Other Employee Performance Awards below.

We realized tax benefits from stock awards exercised as follows:

	For the Years Ended December 31,		
	2019	2018	2017
	(In thousands)		
Tax benefit from stock awards exercised	\$ 1,239	\$ 1,664	\$ 9,347

Based on the closing market price of DISH Network Class A common stock on December 31, 2019, the aggregate intrinsic value of stock options associated with our employees was as follows:

	As of December 31, 2019	
	Options Outstanding	Options Exercisable
	(In thousands)	
Aggregate intrinsic value	\$ 21,829	\$ 2,136

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

DISH Network restricted stock unit and award activity associated with our employees was as follows:

	For the Years Ended December 31,					
	2019		2018		2017	
	Restricted Stock Units/Awards	Weighted- Average Grant Date Fair Value	Restricted Stock Units/Awards	Weighted- Average Grant Date Fair Value	Restricted Stock Units/Awards	Weighted- Average Grant Date Fair Value
Total restricted stock units/awards outstanding, beginning of period	1,718,945	\$ 52.16	2,484,720	\$ 51.16	1,336,000	\$ 32.11
Granted	—	\$ —	—	\$ —	1,871,375	\$ 63.87
Vested	(9,565)	\$ 63.49	(10,475)	\$ 63.49	(14,845)	\$ 62.58
Forfeited and cancelled (1)	(245,730)	\$ 59.86	(755,300)	\$ 48.51	(707,810)	\$ 48.59
Total restricted stock units/awards outstanding, end of period	1,463,650	\$ 50.82	1,718,945	\$ 52.16	2,484,720	\$ 51.16
Restricted Performance Units/Awards outstanding, end of period (2)	1,446,300	\$ 50.66	1,689,350	\$ 51.97	2,435,500	\$ 50.91

- (1) Certain of these restricted stock units/awards include restricted stock units/awards that were granted to individuals who transferred to and/or from another DISH Network subsidiary not a part of DISH DBS.
- (2) These stock units/awards are included in the caption “Total restricted stock units/awards outstanding, end of period.” See discussion of the 2013 LTIP and Other Employee Performance Awards below.

Long-Term Performance-Based Plans

2013 LTIP. During 2013, DISH Network adopted a long-term, performance-based stock incentive plan (the “2013 LTIP”). The 2013 LTIP provides stock options and restricted stock units in combination, which vest based on DISH Network-specific subscriber and financial performance conditions. Exercise of the stock awards is contingent on achieving these performance conditions by September 30, 2022.

Although no awards vest until DISH Network attains the performance conditions described above, compensation related to the 2013 LTIP will be recorded based on DISH Network’s assessment of the probability of meeting the remaining performance conditions. If the remaining performance conditions are probable of being achieved, we will begin recognizing the associated non-cash, stock-based compensation expense on our Consolidated Statements of Operations and Comprehensive Income (Loss) over the estimated period to achieve the performance condition.

During the years ended December 31, 2015, 2014, 2013, DISH Network determined that 30%, 10% and 20%, respectively, of the 2013 LTIP performance conditions were probable of achievement. During the years ended December 31, 2018, 2017 and 2016, no additional 2013 LTIP performance conditions were deemed probable of achievement. During 2018, management determined the 2013 LTIP performance conditions were neither probable nor improbable of achievement. As a result, we are no longer recording non-cash, stock-based compensation expense for the 2013 LTIP. We recorded non-cash, stock-based compensation expense for the years ended December 31, 2019, 2018 and 2017, as indicated in the table below titled “Non-Cash, Stock-Based Compensation Expense Recognized.” As of December 31, 2018, approximately 20% of the 2013 LTIP awards had vested.

2017 LTIP. On December 2, 2016, DISH Network adopted a long-term, performance-based stock incentive plan (the “2017 LTIP”). The 2017 LTIP provides stock options, which vest based on DISH Network-specific subscriber and financial performance conditions. Awards were initially granted under the 2017 LTIP as of January 1, 2017. Exercise of the stock awards is contingent on achieving these performance conditions by December 31, 2020.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Although no awards vest until DISH Network attains the performance conditions described above, compensation related to the 2017 LTIP will be recorded based on DISH Network's assessment of the probability of meeting the performance conditions. If the performance conditions are probable of being achieved, we will begin recognizing the associated non-cash, stock-based compensation expense on our Consolidated Statements of Operations and Comprehensive Income (Loss) over the estimated period to achieve the performance condition.

During both the years ended December 31, 2018 and 2017, DISH Network determined that 75% of the 2017 LTIP performance conditions were probable of achievement. During 2019, management determined the 2017 LTIP performance conditions were not probable of achievement and as a result, DISH Network reversed \$13 million of non-cash, stock-based compensation expense. As a result, we are no longer recording non-cash, stock-based compensation expense for the 2017 LTIP. We recorded non-cash, stock-based compensation expense for the years ended December 31, 2019, 2018 and 2017, as indicated in the table below titled "Non-Cash, Stock-Based Compensation Expense Recognized."

2019 LTIP. On August 17, 2018, DISH Network adopted a long-term, performance-based stock incentive plan (the "2019 LTIP"). The 2019 LTIP provides stock options, which vest based on certain DISH Network-specific subscriber, operational and/or financial performance conditions. Vesting of the stock awards is contingent on achieving these conditions by December 31, 2023.

Although no awards vest until the DISH Network attains the performance conditions described above, compensation related to the 2019 LTIP will be recorded based on management's assessment of the probability of meeting the performance conditions. If the performance conditions are probable of being achieved, DISH Network will begin recognizing the associated non-cash, stock-based compensation expense on its Consolidated Statements of Operations and Comprehensive Income (Loss) over the estimated period to achieve the performance condition.

During the year ended December 31, 2019 and 2018, DISH Network determined that 90% and 82%, respectively, of the 2019 LTIP performance conditions were probable of achievement. As a result, non-cash, stock-based compensation expense was recorded for the year ended December 31, 2019 and 2018, as indicated in the table below titled "Non-Cash, Stock-Based Compensation Expense Recognized." As of December 31, 2019, approximately 18% of the 2019 LTIP awards had vested.

Other Employee Performance Awards. In addition to the above long-term, performance stock incentive plans, DISH Network has other stock awards that vest based on certain other DISH Network-specific subscriber, operational and/or financial performance conditions. Exercise of these stock awards is contingent on achieving certain performance conditions.

Additional compensation related to these awards will be recorded based on DISH Network's assessment of the probability of meeting the remaining performance conditions. If the remaining performance conditions are probable of being achieved, we will begin recognizing the associated non-cash, stock-based compensation expense on our Consolidated Statements of Operations and Comprehensive Income (Loss) over the estimated period to achieve the performance condition. See the table below titled "Estimated Remaining Non-Cash, Stock-Based Compensation Expense."

Although no awards vest until the performance conditions are attained, DISH Network determined that certain performance conditions described above were probable of achievement and, as a result, we recorded non-cash, stock-based compensation expense for the years ended December 31, 2019, 2018 and 2017, as indicated in the table below titled "Non-Cash, Stock-Based Compensation Expense Recognized."

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

The non-cash, stock-based compensation expense associated with these awards for our employees was as follows:

Non-Cash, Stock-Based Compensation Expense Recognized (1)	For the Years Ended December 31,		
	2019	2018	2017
	(In thousands)		
2019 LTIP	\$ 14,946	\$ 3,475	\$ —
2017 LTIP	(12,902)	3,293	10,640
2013 LTIP	(1,021)	(2,471)	(321)
Other employee performance awards	(592)	17,888	7,549
Total non-cash, stock-based compensation expense recognized for performance-based awards	\$ 431	\$ 22,185	\$ 17,868

(1) “Non-Cash, Stock-Based Compensation Expense Recognized” includes forfeitures.

Estimated Remaining Non-Cash, Stock-Based Compensation Expense	2019 LTIP	2017 LTIP	2013 LTIP	Other Employee Performance Awards
	(In thousands)			
Expense estimated to be recognized during 2020	\$ 10,541	\$ —	\$ —	\$ —
Estimated contingent expense subsequent to 2020	12,682	29,341	29,766	61,322
Total estimated remaining expense over the term of the plan	\$ 23,223	\$ 29,341	\$ 29,766	\$ 61,322

Given the competitive nature of DISH Network’s business, small variations in subscriber churn, gross new subscriber activation rates and certain other factors can significantly impact subscriber growth. Consequently, while it was determined that achievement of certain DISH Network-specific subscriber, operational and/or financial performance conditions were not probable as of December 31, 2019, that assessment could change in the future.

Of the 12.8 million stock options and 1.5 million restricted stock units and awards outstanding under the DISH Network stock incentive plans associated with our employees as of December 31, 2019, the following awards were outstanding pursuant to the performance-based stock incentive plans:

Performance-Based Stock Options	As of December 31, 2019	
	Number of Awards	Weighted-Average Grant Price
2019 LTIP	3,510,375	\$ 35.16
2017 LTIP	2,083,071	\$ 57.12
2013 LTIP	875,000	\$ 41.08
Other employee performance awards	1,140,000	\$ 21.31
Total	7,608,446	\$ 39.78

Restricted Performance Units/Awards	
2013 LTIP	437,500
Other employee performance awards	1,008,800
Total	1,446,300

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Stock-Based Compensation

Total non-cash, stock-based compensation expense for all of our employees is shown in the following table for the years ended December 31, 2019, 2018 and 2017 and was allocated to the same expense categories as the base compensation for such employees:

	For the Years Ended December 31,		
	2019	2018	2017
	(In thousands)		
Subscriber-related	\$ 509	\$ 1,150	\$ 1,562
Satellite and transmission	329	262	1,761
General and administrative	13,015	34,109	26,618
Total non-cash, stock based compensation	\$ 13,853	\$ 35,521	\$ 29,941

As of December 31, 2019, our total unrecognized compensation cost related to the non-performance based unvested stock awards was \$26 million and will be recognized over a weighted-average period of approximately 2.8 years. Share-based compensation expense is recognized based on stock awards ultimately expected to vest.

Valuation

The fair value of each stock option granted for the years ended December 31, 2019, 2018 and 2017 was estimated at the date of the grant using a Black-Scholes option valuation model with the following assumptions:

Stock Options	For the Years Ended December 31,					
	2019		2018		2017	
Risk-free interest rate	1.51 % - 2.53 %	2.09 % - 2.98 %	1.34 % - 2.29 %			
Volatility factor	28.86 % - 32.08 %	23.33 % - 30.22 %	22.25 % - 26.15 %			
Expected term of options in years	4.3 - 5.5	2.8 - 5.5	3.8 - 5.5			
Fair value of options granted	\$ 7.58 - \$12.45	\$ 7.10 - \$ 12.53	\$ 11.95 - \$ 16.69			

While DISH Network currently does not intend to declare dividends on its common stock, it may elect to do so from time to time. Accordingly, the dividend yield percentage used in the Black-Scholes option valuation model was set at 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 other valuation models. Further, the Black-Scholes option valuation model requires the input of highly subjective assumptions. Changes in these subjective input assumptions can materially affect the fair value estimate.

We will continue to evaluate the assumptions used to derive the estimated fair value of DISH Network's stock options as new events or changes in circumstances become known.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

12. Commitments and Contingencies

Commitments

As of December 31, 2019, future maturities of our long-term debt, finance lease and contractual obligations are summarized as follows:

	Payments due by period						
	Total	2020	2021	2022	2023	2024	Thereafter
Long-term debt obligations	\$ 10,625,996	\$ 1,102,430	\$ 2,002,554	\$ 2,002,683	\$ 1,502,820	\$ 2,002,964	\$ 2,012,545
Interest expense on long-term debt	2,524,898	\$ 629,410	\$ 533,599	\$ 465,969	\$ 310,832	\$ 273,188	\$ 311,900
Finance lease obligations (1)	212,617	48,678	53,150	41,666	38,018	31,105	—
Interest expense on finance lease obligations (1)	45,183	17,607	13,129	8,561	4,844	1,042	—
Satellite-related and other obligations (2)	219,019	71,931	65,663	41,291	23,321	16,813	—
Operating lease obligations (1)	641,792	239,660	199,062	127,300	24,571	9,191	42,008
Purchase obligations	<u>1,241,340</u>	<u>1,200,025</u>	<u>29,284</u>	<u>12,031</u>	<u>—</u>	<u>—</u>	<u>—</u>
Total	<u>\$ 15,510,845</u>	<u>\$ 3,309,741</u>	<u>\$ 2,896,441</u>	<u>\$ 2,699,501</u>	<u>\$ 1,904,406</u>	<u>\$ 2,334,303</u>	<u>\$ 2,366,453</u>

(1) See Note 7 for further information on leases and the adoption of ASC 842.

(2) Represents obligations for satellite related executory costs, telemetry, tracking and control (“TT&C”) services and short-term leases.

In certain circumstances the dates on which we are obligated to make these payments could be delayed. These amounts will increase to the extent that we procure launch and/or in-orbit insurance on our owned satellites or contract for the construction, launch or lease of additional satellites.

The table above does not include \$208 million of liabilities associated with unrecognized tax benefits that were accrued, as discussed in Note 9, and are included on our Consolidated Balance Sheets as of December 31, 2019. We do not expect any portion of this amount to be paid or settled within the next twelve months.

DISH Network Spectrum

Since 2008, DISH Network has directly invested over \$11 billion to acquire certain wireless spectrum licenses and related assets and made over \$10 billion in non-controlling investments in certain entities, for a total of over \$21 billion, as described further below.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

DISH Network has directly invested over \$11 billion to acquire certain wireless spectrum licenses and related assets. These wireless spectrum licenses are subject to certain interim and final build-out requirements, as well as certain renewal requirements. In March 2017, DISH Network notified the FCC that it planned to deploy a narrowband IoT network on certain of these wireless licenses, which was to be the first phase of its network deployment (“First Phase”). DISH Network expected to complete the First Phase by March 2020, with subsequent phases to be completed thereafter. DISH Network has entered into vendor contracts with multiple parties for, among other things, base stations, chipsets, modules, tower leases, the core network, Radio Frequency (“RF”) design, and deployment services for the First Phase. Among other things, initial RF design in connection with the First Phase was complete, DISH Network had secured certain tower sites, and they were in the process of identifying and securing additional tower sites. The core network had been installed and commissioned. DISH Network installed the first base stations on sites in 2018 and were in the process of deploying the remaining base stations. During October 2019, DISH Network paused work on its narrowband IoT deployment due to its March 2020 build-out deadlines being tolled as discussed above. In addition, DISH Network has issued RFI/Ps to various vendors in the wireless industry as it moves forward with its 5G broadband network deployment (“5G Network Deployment”). DISH Network currently expects expenditures for its wireless projects to be between \$250 million and \$500 million during 2020, excluding capitalized interest. DISH Network currently expects expenditures for its 5G Network Deployment to be approximately \$10 billion, excluding capitalized interest.

DISH Network will need to make significant additional investments or partner with others to, among other things, commercialize, build-out, and integrate these licenses and related assets, and any additional acquired licenses and related assets; and comply with regulations applicable to such licenses. Depending on the nature and scope of such commercialization, build-out, integration efforts, and regulatory compliance, any such investments or partnerships could vary significantly. In addition, as DISH Network considers its options for the commercialization of its wireless spectrum, it will incur significant additional expenses and will have to make significant investments related to, among other things, research and development, wireless testing and wireless network infrastructure. DISH Network may also determine that additional wireless spectrum licenses may be required to commercialize its wireless business and to compete with other wireless service providers.

Asset Purchase Agreement. On July 26, 2019, DISH Network entered into an Asset Purchase Agreement (the “APA”) with T-Mobile US, Inc. (“TMUS”) and Sprint Corporation (“Sprint” and together with TMUS, the “Sellers” and after the consummation of the Sprint-TMUS merger, sometimes referred to as “NTM”).

Pursuant to the APA, after the consummation of the Sprint-TMUS merger and at the closing of the transaction, NTM will sell to DISH Network and DISH Network will acquire from NTM certain assets and liabilities associated with Sprint’s Boost Mobile, Virgin Mobile and Sprint-branded prepaid mobile services businesses (the “Prepaid Business”) for an aggregate purchase price of \$1.4 billion as adjusted for specific categories of net working capital on the Closing Date (the “Prepaid Business Sale”).

At the closing of the Prepaid Business Sale, DISH Network and NTM will enter into a transition services agreement under which DISH Network will receive certain transitional services (the “TSA”), a master network services agreement for the provision of network services by NTM to DISH Network (the “MNSA”), an option agreement entitling DISH Network to acquire certain decommissioned cell sites and retail stores of NTM (the “Option Agreement”) and an agreement under which DISH Network would purchase all of Sprint’s 800 MHz spectrum licenses, totaling approximately 13.5 MHz of nationwide wireless spectrum for an additional approximately \$3.59 billion (the “Spectrum Purchase Agreement” and together with the APA, the TSA, the MNSA and the Option Agreement, the “Transaction Agreements”). See Note 15 “*Commitments and Contingencies – Commitments – Sprint Asset Acquisition*” of DISH Network’s Annual Report on Form 10-K for the year ended December 31, 2019 for further information on the Transaction Agreements.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Beginning on November 5, 2019, and while the approval of the Sprint-TMUS merger is pending, the March 7, 2020 build-out deadline for both the AWS-4 and Lower 700 MHz E Block spectrum bands is tolled; however, if the Sprint-TMUS merger is not consummated, the original deadlines would be reinstated with extensions equal to the length of time the deadline was tolled. During October 2019, DISH Network paused work on its narrowband Internet of Things (“IoT”) deployment due to its March 2020 build-out deadlines being tolled. DISH Network has issued requests for information and proposals (“RFI/Ps”) to various vendors in the wireless industry as it moves forward with its 5G Network Deployment.

In connection with the development of DISH Network’s wireless business, including, without limitation, the efforts described above, we have made cash distributions to partially finance these efforts to date and may make additional cash distributions to finance, in whole or in part, DISH Network’s future efforts. There can be no assurance that DISH Network will be able to develop and implement a business model that will realize a return on these wireless spectrum licenses or that DISH Network will be able to profitably deploy the assets represented by these wireless spectrum licenses.

DISH Network Non-Controlling Investments in the Northstar Entities and the SNR Entities Related to AWS-3 Wireless Spectrum Licenses

During 2015, through its wholly-owned subsidiaries American AWS-3 Wireless II L.L.C. (“American II”) and American AWS-3 Wireless III L.L.C. (“American III”), DISH Network initially made over \$10 billion in certain non-controlling investments in Northstar Spectrum, LLC (“Northstar Spectrum”), the parent company of Northstar Wireless, LLC (“Northstar Wireless,” and collectively with Northstar Spectrum, the “Northstar Entities”), and in SNR Wireless HoldCo, LLC (“SNR HoldCo”), the parent company of SNR Wireless LicenseCo, LLC (“SNR Wireless,” and collectively with SNR HoldCo, the “SNR Entities”), respectively. On October 27, 2015, the FCC granted certain AWS-3 wireless spectrum licenses (the “AWS-3 Licenses”) to Northstar Wireless (the “Northstar Licenses”) and to SNR Wireless (the “SNR Licenses”), respectively. The Northstar Entities and/or the SNR Entities may need to raise significant additional capital in the future, which may be obtained from third party sources or from DISH Network, so that the Northstar Entities and the SNR Entities may commercialize, build-out and integrate these AWS-3 Licenses, comply with regulations applicable to such AWS-3 Licenses, and make any potential payments related to the re-auction of AWS-3 licenses retained by the FCC. Depending upon the nature and scope of such commercialization, build-out, integration efforts, regulatory compliance, and potential re-auction payments, any such loans, equity contributions or partnerships could vary significantly. For further information regarding the potential re-auction of AWS-3 licenses retained by the FCC, see Note 15 “*Commitments and Contingencies – Commitments – DISH Network Non-Controlling Investments in the Northstar Entities and the SNR Entities Related to AWS-3 Wireless Spectrum Licenses*” in the Notes to DISH Network’s Annual Report on Form 10-K for the year ended December 31, 2019.

In connection with certain funding obligations related to the investments by American II and American III discussed above, in February 2015, we paid a dividend of \$8.250 billion to DOC for, among other things, general corporate purposes, which included such funding obligations, and to fund other DISH Network cash needs. We may make additional cash distributions to finance, in whole or in part, loans that DISH Network may make to the Northstar Entities and the SNR Entities in the future related to DISH Network’s non-controlling investments in these entities. There can be no assurance that DISH Network will be able to obtain a profitable return on its non-controlling investments in the Northstar Entities and the SNR Entities.

We may need to raise significant additional capital in the future, which may not be available on acceptable terms or at all, to among other things, make additional cash distributions to DISH Network, continue investing in our business and to pursue acquisitions and other strategic transactions.

See Note 15 “*Commitments and Contingencies – Wireless*” in the Notes to DISH Network’s Annual Report on Form 10-K for the year ended December 31, 2019 for further information.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Purchase Obligations

Our 2020 purchase obligations primarily consist of binding purchase orders for certain fixed contractual commitments to purchase programming content, receiver systems and related equipment, broadband equipment, digital broadcast operations, transmission costs, streaming delivery technology and infrastructure, engineering services, and other products and services related to the operation of our Pay-TV services. Our purchase obligations can fluctuate significantly from period to period due to, among other things, management's timing of payments and inventory purchases, and can materially impact our future operating asset and liability balances, and our future working capital requirements.

Programming Contracts

In the normal course of business, we enter into contracts to purchase programming content in which our payment obligations are generally contingent on the number of Pay-TV subscribers to whom we provide the respective content. These programming commitments are not included in the "Commitments" table above. The terms of our contracts typically range from one to ten years with annual rate increases. Our programming expenses will increase to the extent we are successful in growing our Pay-TV subscriber base. In addition, programming costs per subscriber continue to increase due to contractual price increases and the renewal of long-term programming contracts on less favorable pricing terms.

Rent Expense

Total rent expense for operating leases was \$357 million, \$449 million and \$473 million in 2019, 2018 and 2017, respectively.

Patents and Intellectual Property

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

Contingencies

Separation Agreement

On January 1, 2008, DISH Network completed the distribution of its technology and set-top box business and certain infrastructure assets (the "Spin-off") into a separate publicly-traded company, EchoStar. In connection with the Spin-off, DISH Network entered into a separation agreement with EchoStar that provides, among other things, for the division of certain liabilities, including liabilities resulting from litigation. Under the terms of the separation agreement, EchoStar has assumed certain liabilities that relate to its 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, generally, EchoStar will only be liable for its acts or omissions following the Spin-off and DISH Network will indemnify EchoStar for any liabilities or damages resulting from intellectual property claims relating to the period prior to the Spin-off, as well as our acts or omissions following the Spin-off. On February 28, 2017, DISH Network and EchoStar completed the Share Exchange Agreement. The Share Exchange Agreement contains additional indemnification provisions between us and EchoStar for certain liabilities and legal proceedings.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Litigation

We are involved in a number of legal proceedings (including those described below) concerning matters arising in connection with the conduct of our business activities. Many of these proceedings are at preliminary stages, and many of these proceedings 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 or there is a reasonable possibility that a loss or an additional loss may have been incurred and to determine if accruals are appropriate. If accruals are not appropriate, we further evaluate each legal proceeding to assess whether an estimate of the possible loss or range of possible loss can be made.

For certain cases described on the following pages, management is unable to 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; (iii) damages are unsupported and/or exaggerated; (iv) there is uncertainty as to the outcome of pending appeals or motions; (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. For these cases, however, management does not believe, based on currently available information, that the outcomes of these proceedings will have a material adverse effect on our financial condition, though the outcomes could be material to our operating results for any particular period, depending, in part, upon the operating results for such period.

Blue Spike, LLC

On July 6, 2018, Blue Spike, LLC (“Blue Spike”) filed a complaint against DISH Network and our wholly-owned subsidiaries DISH Network L.L.C. and Dish Network Service L.L.C. in the United States District Court for the Eastern District of Texas. The complaint alleges infringement of Reissued United States Patent RE44,222E1 (the “222 patent”), entitled “Methods, systems and devices for packet watermarking and efficient provisioning of bandwidth”; Reissued United States Patent RE44,307 (the “307 patent”), entitled “Methods, systems and devices for packet watermarking and efficient provisioning of bandwidth”; and United States Patent Nos. 7,287,275B2 (the “275 patent”), entitled “Methods, systems and devices for packet watermarking and efficient provisioning of bandwidth”; 8,473,746 (the “746 patent”), entitled “Methods, systems and devices for packet watermarking and efficient provisioning of bandwidth”; 8,224,705 (the “705 patent”), entitled “Methods, systems and devices for packet watermarking and efficient provisioning of bandwidth”; 7,475,246 (the “246 patent”), entitled “Secure personal content server”; 8,739,295B2 (the “295 patent”), entitled “Secure personal content server”; 9,021,602 (the “602 patent”), entitled “Data Protection and Device”; 9,104,842 (the “842 patent”), entitled “Data Protection and Device”; 9,934,408 (the “408 patent”), entitled “Secure personal content server”; 7,159,116B2 (the “116 patent”), entitled “Systems, methods and devices for trusted transactions”; and 8,538,011B2 (the “011 patent”), entitled “Systems, methods and devices for trusted transactions.” On September 5, 2018, pursuant to a joint motion of the parties, the Court ordered the case transferred to the United States District Court for the District of Delaware. In a First Amended Complaint filed on October 12, 2018, Blue Spike dropped its claims for infringement of the 222 patent, the 307 patent, the 275 patent, the 705 patent, and the 746 patent. On November 11, 2018, Blue Spike dismissed its complaint.

On January 28, 2019, Blue Spike, along with Blue Spike International, Ltd. and Wistaria Trading Ltd., filed a new action against DISH Network and our wholly-owned subsidiaries DISH Network L.L.C. and Dish Network Service L.L.C. in the United States District Court for the District of Delaware. The complaint alleges infringement of the 246 patent, the 295 patent, the 408 patent, the 116 patent, the 011 patent, the 602 patent and the 842 patent, all of which were asserted in the prior action. On March 29, 2019, the plaintiffs filed a First Amended Complaint, which dropped their claims arising from the 116 patent and the 011 patent.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

On July 5 and July 8, 2019, respectively, DISH Network, DISH Network L.L.C. and Dish Network Service L.L.C. filed petitions with the United States Patent and Trademark Office challenging the validity of the asserted claims of the 295 and the 408 patents. On July 19, 2019, DISH Network, DISH Network L.L.C. and Dish Network Service L.L.C. filed petitions with the United States Patent and Trademark Office challenging the validity of the asserted claims of the 246 patent. On August 1, 2019, DISH Network, DISH Network L.L.C. and Dish Network Service L.L.C. filed petitions with the United States Patent and Trademark Office challenging the validity of the asserted claims of the 842 patent and the 602 patent.

On January 23, 2020, pursuant to the parties' joint motion, all proceedings on the petitions before the United States Patent and Trademark Office were terminated. On January 28, 2020, pursuant to a stipulation of the parties, the litigation in the United States District Court for the District of Delaware was dismissed with prejudice.

Broadband iTV

On December 19, 2019, Broadband iTV, Inc. filed a complaint against our wholly-owned subsidiary DISH Network L.L.C. in the United States District Court for the Western District of Texas. The complaint alleges infringement of United States Patent No. 10,028,026 (the "026 patent"), entitled "System for addressing on-demand TV program content on TV services platform of a digital TV services provider"; United States Patent No. 10,506,269 (the "269 patent"), entitled "System for addressing on-demand TV program content on TV services platform of a digital TV services provider"; United States Patent No. 9,998,791 ("the 791 patent"), entitled "Video-on-demand content delivery method for providing video-on-demand services to TV service subscribers"; and United States Patent No. 9,648,388 (the "388 patent"), entitled "Video-on-demand content delivery system for providing video-on-demand services to TV services subscribers." Generally, the asserted patents relate to providing video on demand content to subscribers.

We intend to vigorously defend this case. In the event that a court ultimately determines that we infringe the asserted patents, we may be subject to substantial damages, which may include treble damages, and/or an injunction that could require us to materially modify certain features that we currently offer to consumers. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages. Each of the plaintiffs is an entity that seeks to license a patent portfolio without itself practicing any of the claims recited therein.

City of Hallandale Beach Police Officers' and Firefighters' Personnel Retirement Trust

On July 2, 2019, a putative class action lawsuit was filed by a purported EchoStar stockholder in the District Court of Clark County, Nevada under the caption *City of Hallandale Beach Police Officers' and Firefighters' Personnel Retirement Trust v. Ergen, et al.*, Case No. A-19-797799-B. The lawsuit named as defendants Mr. Ergen, the other members of the EchoStar Board, as well as EchoStar, certain of its officers, DISH Network and certain of DISH Network's and EchoStar's affiliates. Plaintiff alleges, among other things, breach of fiduciary duties in approving the transactions contemplated under the Master Transaction Agreement for inadequate consideration and pursuant to an unfair and conflicted process, and that EchoStar, DISH Network and certain other defendants aided and abetted such breaches. In the operative First Amended Complaint, filed on October 11, 2019, the plaintiff dropped as defendants the EchoStar board members other than Mr. Ergen. See Note 1 "*Recent Developments*" in the Notes to DISH Network's Annual Report on Form 10-K for the year ended December 31, 2019 for further information on the Master Transaction Agreement. Plaintiff seeks equitable relief, including the issuance of additional DISH Network Class A Common Stock, monetary relief and other costs and disbursements, including attorneys' fees.

DISH Network intends to vigorously defend this case, but cannot predict with any degree of certainty the outcome of this suit or determine the extent of any potential liability or damages.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

ClearPlay, Inc.

On March 13, 2014, ClearPlay, Inc. (“ClearPlay”) filed a complaint against DISH Network, our wholly-owned subsidiary DISH Network L.L.C., EchoStar, and its then wholly-owned subsidiary EchoStar Technologies L.L.C., in the United States District Court for the District of Utah. The complaint alleges infringement of United States Patent Nos. 6,898,799 (the “799 patent”), entitled “Multimedia Content Navigation and Playback”; 7,526,784 (the “784 patent”), entitled “Delivery of Navigation Data for Playback of Audio and Video Content”; 7,543,318 (the “318 patent”), entitled “Delivery of Navigation Data for Playback of Audio and Video Content”; 7,577,970 (the “970 patent”), entitled “Multimedia Content Navigation and Playback”; and 8,117,282 (the “282 patent”), entitled “Media Player Configured to Receive Playback Filters From Alternative Storage Mediums.” ClearPlay alleges that the AutoHop™ feature of our Hopper set-top box infringes the asserted patents. On February 11, 2015, the case was stayed pending various third-party challenges before the United States Patent and Trademark Office regarding the validity of certain of the patents asserted in the action.

In those third-party challenges, the United States Patent and Trademark Office found that all claims of the 282 patent are unpatentable, and that certain claims of the 784 patent and 318 patent are unpatentable. ClearPlay appealed as to the 784 patent and the 318 patent, and on August 23, 2016, the United States Court of Appeals for the Federal Circuit affirmed the findings of the United States Patent and Trademark Office. On October 31, 2016, the stay was lifted. The trial has been set for October 26, 2020. The report issued by ClearPlay’s damages expert contends that ClearPlay is entitled to \$543 million in damages.

We intend to vigorously defend this case. In the event that a court ultimately determines that we infringe the asserted patents, we may be subject to substantial damages, which may include treble damages, and/or an injunction that could require us to materially modify certain features that we currently offer to consumers. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages.

Contemporary Display LLC

On June 4, 2018, Contemporary Display LLC (“Contemporary”) filed a complaint against DISH Network and our wholly-owned subsidiary DISH Network L.L.C. in the United States District Court for the Western District of Texas. The complaint alleges infringement of United States Patent No. 6,028,643 (the “643 patent”), entitled “Multiple-Screen Video Adapter with Television Tuner”; United States Patent No. 6,429,903 (the “903 patent”), entitled “Video Adapter for Supporting at Least One Television Monitor”; United States Patent No. 6,492,997 (the “997 patent”), entitled “Method and System for Providing Selectable Programming in a Multi-Screen Mode”; United States Patent No. 7,500,202 (the “202 patent”), “Remote Control for Navigating Through Content in an Organized and Categorized Fashion”; and United States Patent No. 7,809,842 (the “842 patent”), entitled “Transferring Sessions Between Devices.” The 643 patent and the 903 patent are directed to video adapters for use with multiple displays. The 997 patent is directed to a system for presenting multiple video programs on a display device simultaneously. The 202 patent is directed to a remote control for interacting with a set-top box having programmable features and “operational controls” on at least three sides of the remote control. The 842 patent is directed to a system for managing online communication sessions between multiple devices. Contemporary is an entity that seeks to license a patent portfolio without itself practicing any of the claims recited therein.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

In a First Amended Complaint filed on August 6, 2018, Contemporary added our wholly-owned subsidiary DISH Network L.L.C. as a defendant. In a Second Amended Complaint filed on October 9, 2018, Contemporary named only our wholly-owned subsidiary DISH Network L.L.C. as a defendant and dropped certain indirect infringement allegations. On June 10, 2019, DISH Network L.L.C. filed petitions with the United States Patent and Trademark Office challenging the validity of the asserted claims of the 842 patent, the 903 patent, the 643 patent and the 997 patent. On December 13, 2019 and January 7, 2020, the United States Patent and Trademark Office agreed to institute proceedings on each of our petitions. On July 11, 2019, the Court entered an order staying the case pending resolution of the petitions. On January 31, 2020, pursuant to the parties' joint motion, the Court dismissed all claims arising from the 202 patent, and extended its stay of the litigation pending non-appealable determinations on all of the petitions before the United States Patent and Trademark Office.

We intend to vigorously defend this case. In the event that a court ultimately determines that we infringe the asserted patents, we may be subject to substantial damages, which may include treble damages, and/or an injunction that could require us to materially modify certain features that we currently offer to consumers. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages.

Customedia Technologies, L.L.C.

On February 10, 2016, Customedia Technologies, L.L.C. ("Customedia") filed a complaint against DISH Network and our wholly-owned subsidiary DISH Network L.L.C. in the United States District Court for the Eastern District of Texas. The complaint alleges infringement of four patents: United States Patent No. 8,719,090 (the "090 patent"); United States Patent No. 9,053,494 (the "494 patent"); United States Patent No. 7,840,437 (the "437 patent"); and United States Patent No. 8,955,029 (the "029 patent"). Each patent is entitled "System for Data Management And On-Demand Rental And Purchase Of Digital Data Products." Customedia alleges infringement in connection with our addressable advertising services, our DISH Anywhere feature, and our Pay-Per-View and video-on-demand offerings. Customedia is an entity that seeks to license a patent portfolio without itself practicing any of the claims recited therein.

In December 2016 and January 2017, DISH Network L.L.C. filed petitions with the United States Patent and Trademark Office challenging the validity of the asserted claims of each of the asserted patents. On June 12, 2017, the United States Patent and Trademark Office agreed to institute proceedings on our petitions challenging the 090 patent and the 437 patent; on July 18, 2017, it agreed to institute proceedings on our petitions challenging the 029 patent; and on July 28, 2017, it agreed to institute proceedings on our petitions challenging the 494 patent. These instituted proceedings cover all asserted claims of each of the asserted patents. The litigation in the District Court has been stayed since August 8, 2017 pending resolution of the proceedings at the United States Patent and Trademark Office.

Pursuant to an agreement between the parties, on December 20, 2017, DISH Network L.L.C. dismissed its petitions challenging the 029 patent in the United States Patent and Trademark Office, and on January 9, 2018, the parties dismissed their claims, counterclaims and defenses as to that patent in the litigation. On March 5, 2018, the United States Patent and Trademark Office conducted a trial on the remaining petitions. On June 11, 2018, the United States Patent and Trademark Office issued final written decisions on DISH Network L.L.C.'s petitions challenging the 090 patent and it invalidated all of the asserted claims. On July 25, 2018, the United States Patent and Trademark Office issued final written decisions on DISH Network L.L.C.'s petitions challenging the 437 patent and the 494 patent and it invalidated all of the asserted claims. Customedia has filed notices of appeal from all of the final written decisions adverse to it, and DISH Network L.L.C. cross-appealed to the extent that its petitions were not successful. On February 6, 2019, the Court of Appeals granted DISH Network L.L.C.'s motion to dismiss its cross-appeals related to the 090 patent and, on February 26, 2019, granted DISH Network L.L.C.'s motion to dismiss its cross-appeals related to the 437 patent. The Court of Appeals for the Federal Circuit heard oral argument on November 6, 2019 on the appeal involving the 437 patent, and summarily affirmed the patent's invalidity on November 8, 2019. On January 7, 2020, Customedia petitioned the Court of Appeals for rehearing or rehearing en banc, raising issues about the constitutionality of the appointment of the administrative patent judges that heard the petition before the Patent and Trademark Office, and DISH Network L.L.C. filed a response to that petition on February 10, 2020. The Court of Appeals heard oral argument on the appeal involving the 090 patent and the 494 patent on December 3, 2019.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

We intend to vigorously defend this case. In the event that a court ultimately determines that we infringe the asserted patents, we may be subject to substantial damages, which may include treble damages, and/or an injunction that could require us to materially modify certain features that we currently offer to consumers. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages.

Innovative Foundry Technologies

On December 20, 2019, Innovative Foundry Technologies LLC filed a complaint against DISH Network (as well as Semiconductor Manufacturing International Corporation; Broadcom Incorporated; Broadcom Corporation; and Cypress Semiconductor Corporation) in the United States District Court for the Western District of Texas. The complaint alleges infringement of United States Patent No. 6,580,122 (the “122 patent”), entitled “Transistor Device Having an Enhanced Width Dimension and a Method of Making Same”; United States Patent No. 6,806,126 (the “126 patent”), entitled “Method of Manufacturing a Semiconductor Component”; United States Patent No. 6,933,620 (the “620 patent”), entitled “Semiconductor Component and Method of Manufacture”; and United States Patent No. 7,009,226 (the “226 patent”), entitled “In-Situ Nitride/Oxynitride Processing with Reduced Deposition Surface Pattern Sensitivity.”

DISH Network intends to vigorously defend this case. In the event that a court ultimately determines that we infringe the asserted patents, we may be subject to substantial damages, which may include treble damages, and/or an injunction that could require us to materially modify certain features that we currently offer to consumers. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages. Each of the plaintiffs is an entity that seeks to license a patent portfolio without itself practicing any of the claims recited therein.

Mobile Networking Solutions

On August 12, 2019, Mobile Networking Solutions, LLC filed a complaint against our wholly owned subsidiary Sling Media L.L.C. for infringement of two patents: U.S. Patent No. 7,543,177 (the “177 patent”) and U.S. Patent No. 7,958,388 (the “388 patent”), each entitled “Methods and Systems for a Storage System.” Mobile Networking Solutions alleges infringement in connection with Sling Media L.L.C.’s use of a Hadoop Distributed File System for storage and processing of large data files. Pursuant to a stipulation of the parties, on December 16, 2019, the Court entered an order staying the case for six months so the parties may discuss settling the case.

We intend to vigorously defend this case. In the event that a court ultimately determines that we infringe the asserted patents, we may be subject to substantial damages, which may include treble damages, and/or an injunction that could require us to materially modify certain features that we currently offer to consumers. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages.

Multimedia Content Management LLC

On July 25, 2018, Multimedia Content Management LLC (“Multimedia”) filed a complaint against DISH Network in the United States District Court for the Western District of Texas. Multimedia alleges that DISH Network infringes United States Patent No. 8,799,468 (the “468 patent”), entitled “System for Regulating Access to and Distributing Content in a Network,” and United States Patent No. 9,465,925 (the “925 patent”), entitled “System for Regulating Access to and Distributing Content in a Network,” in connection with impulse pay per view content offerings on certain set-top boxes. Multimedia is an entity that seeks to license a patent portfolio without itself practicing any of the claims recited therein. On March 7, 2019, pursuant to stipulation, the Court substituted our wholly owned subsidiary DISH Network L.L.C. as the defendant in our place. On April 23, 2019, DISH Network L.L.C. filed petitions with the United States Patent and Trademark Office challenging the validity of the asserted claims of each of the asserted patents. On November 13, 2019, the United States Patent and Trademark Office denied institution on both of the petitions. On December 13, 2019, DISH Network L.L.C. filed a motion for reconsideration. On January 6, 2020, pursuant to stipulation, the Court entered a stay of the litigation and vacated all upcoming deadlines.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

DISH Network intends to vigorously defend this case. In the event that a court ultimately determines that we infringe the asserted patents, we may be subject to substantial damages, which may include treble damages, and/or an injunction that could require us to materially modify certain features that we currently offer to consumers. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages.

Realtime Data LLC and Realtime Adaptive Streaming LLC

On June 6, 2017, Realtime Data LLC d/b/a IXO (“Realtime”) filed an amended complaint in the United States District Court for the Eastern District of Texas (the “Original Texas Action”) against DISH Network; our wholly-owned subsidiaries DISH Network L.L.C., DISH Technologies L.L.C. (then known as EchoStar Technologies L.L.C.), Sling TV L.L.C. and Sling Media L.L.C.; EchoStar, and EchoStar’s wholly-owned subsidiary Hughes Network Systems, L.L.C. (“HNS”); and Arris Group, Inc. Realtime’s initial complaint in the Original Texas Action, filed on February 14, 2017, had named only EchoStar and HNS as defendants. The amended complaint in the Original Texas Action alleges infringement of United States Patent No. 8,717,204 (the “204 patent”), entitled “Methods for encoding and decoding data”; United States Patent No. 9,054,728 (the “728 patent”), entitled “Data compression systems and methods”; United States Patent No. 7,358,867 (the “867 patent”), entitled “Content independent data compression method and system”; United States Patent No. 8,502,707 (the “707 patent”), entitled “Data compression systems and methods”; United States Patent No. 8,275,897 (the “897 patent”), entitled “System and methods for accelerated data storage and retrieval”; United States Patent No. 8,867,610 (the “610 patent”), entitled “System and methods for video and audio data distribution”; United States Patent No. 8,934,535 (the “535 patent”), entitled “Systems and methods for video and audio data storage and distribution”; and United States Patent No. 8,553,759 (the “759 patent”), entitled “Bandwidth sensitive data compression and decompression.”

Realtime alleges that DISH Network, Sling TV, Sling Media and Arris streaming video products and services compliant with various versions of the H.264 video compression standard infringe the 897 patent, the 610 patent and the 535 patent, and that the data compression system in Hughes’ products and services infringe the 204 patent, the 728 patent, the 867 patent, the 707 patent and the 759 patent.

On July 19, 2017, the Court severed Realtime’s claims against DISH Network, DISH Network L.L.C., Sling TV L.L.C., Sling Media L.L.C. and Arris Group, Inc. (alleging infringement of the 897 patent, the 610 patent and the 535 patent) from the Original Texas Action into a separate action in the United States District Court for the Eastern District of Texas (the “Second Texas Action”). On August 31, 2017, Realtime dismissed the claims against DISH Network, Sling TV L.L.C., Sling Media Inc., and Sling Media L.L.C. from the Second Texas Action and refiled these claims (alleging infringement of the 897 patent, the 610 patent and the 535 patent) against Sling TV L.L.C., Sling Media Inc., and Sling Media L.L.C. in a new action in the United States District Court for the District of Colorado (the “Colorado Action”). Also on August 31, 2017, Realtime dismissed DISH Technologies L.L.C. from the Original Texas Action, and on September 12, 2017, added it as a defendant in an amended complaint in the Second Texas Action. On November 6, 2017, Realtime filed a joint motion to dismiss the Second Texas Action without prejudice, which the Court entered on November 8, 2017.

On October 10, 2017, Realtime Adaptive Streaming LLC (“Realtime Adaptive Streaming”) filed suit against our wholly-owned subsidiaries DISH Network L.L.C. and DISH Technologies L.L.C., as well as Arris Group, Inc., in a new action in the United States District Court for the Eastern District of Texas (the “Third Texas Action”), alleging infringement of the 610 patent and the 535 patent. Also on October 10, 2017, an amended complaint was filed in the Colorado Action, substituting Realtime Adaptive Streaming as the plaintiff instead of Realtime, and alleging infringement of only the 610 patent and the 535 patent, but not the 897 patent. On November 6, 2017, Realtime Adaptive Streaming filed a joint motion to dismiss the Third Texas Action without prejudice, which the court entered on November 8, 2017. Also on November 6, 2017, Realtime Adaptive Streaming filed a second amended complaint in the Colorado Action, adding our wholly-owned subsidiaries DISH Network L.L.C. and DISH Technologies L.L.C., as well as Arris Group, Inc., as defendants.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

As a result, neither DISH Network nor any of its subsidiaries is a defendant in the Original Texas Action; the Court has dismissed without prejudice the Second Texas Action and the Third Texas Action; and our wholly-owned subsidiaries DISH Network L.L.C., DISH Technologies L.L.C., Sling TV L.L.C. and Sling Media L.L.C. as well as Arris Group, Inc., are defendants in the Colorado Action, which now has Realtime Adaptive Streaming as the named plaintiff.

On July 3, 2018, Sling TV L.L.C., Sling Media L.L.C., DISH Network L.L.C., and DISH Technologies L.L.C. filed petitions with the United States Patent and Trademark Office challenging the validity of each of the asserted patents. On January 31, 2019, the United States Patent and Trademark Office agreed to institute proceedings on our petitions challenging all asserted claims of each of the asserted patents, and it held trial on the petitions on December 5, 2019. On January 17, 2020, the United States Patent and Trademark Office terminated the petitions as time-barred. On February 26, 2019, the district court agreed to stay the Colorado Action pending resolution of the petitions.

Realtime Adaptive Streaming is an entity that seeks to license an acquired patent portfolio without itself practicing any of the claims recited therein.

We intend to vigorously defend this case. In the event that a court ultimately determines that we infringe the asserted patents, we may be subject to substantial damages, which may include treble damages, and/or an injunction that could require us to materially modify certain features that we currently offer to consumers. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages.

Sound View Innovations, LLC

On December 30, 2019, Sound View Innovations, LLC filed one complaint against our wholly owned subsidiaries DISH Network L.L.C. and DISH Technologies L.L.C. and a second complaint against our wholly owned subsidiary Sling TV L.L.C. in the United States District Court for the District of Colorado. The complaint against DISH Network L.L.C. and DISH Technologies L.L.C. alleges infringement of United States Patent No 6,502,133 (the “133 patent”), entitled Real-Time Event Processing System with Analysis Engine Using Recovery Information” and both complaints allege infringement of United States Patent No. 6,708,213 (the “213 patent”), entitled “Method for Streaming Multimedia Information Over Public Networks”; United States Patent No. 6,757,796 (the “796 patent”), entitled “Method and System for Caching Streaming Live Broadcasts transmitted Over a Network”; and United States Patent No. 6,725,456 (the “456 patent”), entitled “Methods and Apparatus for Ensuring Quality of Service in an Operating System.”

We intend to vigorously defend these cases. In the event that a court ultimately determines that we infringe the asserted patents, we may be subject to substantial damages, which may include treble damages, and/or an injunction that could require us to materially modify certain features that we currently offer to consumers. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages. Each of the plaintiffs is an entity that seeks to license a patent portfolio without itself practicing any of the claims recited therein.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Telemarketing Litigation

On March 25, 2009, our wholly-owned subsidiary DISH Network L.L.C. was sued in a civil action by the United States Attorney General and several states in the United States District Court for the Central District of Illinois (the “FTC Action”), alleging violations of the Telephone Consumer Protection Act (“TCPA”) and the Telemarketing Sales Rule (“TSR”), as well as analogous state statutes and state consumer protection laws. The plaintiffs alleged that we, directly and through certain independent third-party retailers and their affiliates, committed certain telemarketing violations. On December 23, 2013, the plaintiffs filed a motion for summary judgment, which indicated for the first time that the state plaintiffs were seeking civil penalties and damages of approximately \$270 million and that the federal plaintiff was seeking an unspecified amount of civil penalties (which could substantially exceed the civil penalties and damages being sought by the state plaintiffs). The plaintiffs were also seeking injunctive relief that if granted would, among other things, enjoin DISH Network L.L.C., whether acting directly or indirectly through authorized telemarketers or independent third-party retailers, from placing any outbound telemarketing calls to market or promote its goods or services for five years, and enjoin DISH Network L.L.C. from accepting activations or sales from certain existing independent third-party retailers and from certain new independent third-party retailers, except under certain circumstances. We also filed a motion for summary judgment, seeking dismissal of all claims. On December 12, 2014, the Court issued its opinion with respect to the parties’ summary judgment motions. The Court found that DISH Network L.L.C. was entitled to partial summary judgment with respect to one claim in the action. In addition, the Court found that the plaintiffs were entitled to partial summary judgment with respect to ten claims in the action, which included, among other things, findings by the Court establishing DISH Network L.L.C.’s liability for a substantial amount of the alleged outbound telemarketing calls by DISH Network L.L.C. and certain of its independent third-party retailers that were the subject of the plaintiffs’ motion. The Court did not issue any injunctive relief and did not make any determination on civil penalties or damages, ruling instead that the scope of any injunctive relief and the amount of any civil penalties or damages were questions for trial.

The first phase of the bench trial took place January 19, 2016 through February 11, 2016 and the second phase took place October 25, 2016 through November 2, 2016.

On June 5, 2017, the Court issued Findings of Fact and Conclusions of Law and entered Judgment ordering DISH Network L.L.C. to pay an aggregate amount of \$280 million to the federal and state plaintiffs. The Court also issued a Permanent Injunction (the “Injunction”) against DISH Network L.L.C. that imposes certain ongoing compliance requirements on DISH Network L.L.C., which include, among other things: (i) the retention of a telemarketing-compliance expert to prepare a plan to ensure that DISH Network L.L.C. and certain independent third-party retailers will continue to comply with telemarketing laws and the Injunction; (ii) certain telemarketing records retention and production requirements; and (iii) certain compliance reporting and monitoring requirements. In addition to the compliance requirements under the Injunction, within ninety (90) days after the effective date of the Injunction, DISH Network L.L.C. is required to demonstrate that it and certain independent third-party retailers are in compliance with the Safe Harbor Provisions of the TSR and TCPA and have made no prerecorded telemarketing calls during the five (5) years prior to the effective date of the Injunction (collectively, the “Demonstration Requirements”). If DISH Network L.L.C. fails to prove that it meets the Demonstration Requirements, it will be barred from conducting any outbound telemarketing for two (2) years. If DISH Network L.L.C. fails to prove that a particular independent third-party retailer meets the Demonstration Requirements, DISH Network L.L.C. will be barred from accepting orders from that independent third-party retailer for two (2) years. On July 3, 2017, DISH Network L.L.C. filed two motions with the Court: (1) to alter or amend the Judgment or in the alternative to amend the Findings of Fact and Conclusions of Law; and (2) to clarify, alter and amend the Injunction. On August 10, 2017, the Court: (a) denied the motion to alter or amend the Judgment or in the alternative to amend the Findings of Fact and Conclusions of Law; and (b) allowed, in part, the motion to clarify, alter and amend the Injunction, and entered an Amended Permanent Injunction (the “Amended Injunction”). Among other things, the Amended Injunction provided DISH Network L.L.C. a thirty (30) day extension to meet the Demonstration Requirements, expanded the exclusion of certain independent third-party retailers from the Demonstration Requirements, and clarified that, with regard to independent third-party retailers, the Amended Injunction only applied to their telemarketing of DISH TV goods and services. On October 10, 2017, DISH Network L.L.C. filed a notice of appeal to the United States Court of Appeals for the Seventh Circuit, which heard oral argument on September 17, 2018.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

During the second quarter 2017, we recorded \$255 million of “Litigation expense” related to the FTC Action on our Consolidated Statements of Operations and Comprehensive Income (Loss). We recorded \$25 million of “Litigation expense” related to the FTC Action during periods prior to 2017. Our total accrual at December 31, 2019 and 2018 related to the FTC Action was \$280 million and is included in “Other accrued expenses” on our Consolidated Balance Sheets. Any eventual payments made with respect to the FTC Action may not be deductible for tax purposes, which had a negative impact on our effective tax rate for the year ended December 31, 2017. The tax deductibility of any eventual payments made with respect to the FTC Action may change, based upon, among other things, further developments in the FTC Action, including final adjudication of the FTC Action.

We may also from time to time be subject to private civil litigation alleging telemarketing violations. For example, a portion of the alleged telemarketing violations by an independent third-party retailer at issue in the FTC Action are also the subject of a certified class action filed against DISH Network L.L.C. in the United States District Court for the Middle District of North Carolina (the “Krakauer Action”). Following a five-day trial, on January 19, 2017, a jury in that case found that the independent third-party retailer was acting as DISH Network L.L.C.’s agent when it made the 51,119 calls at issue in that case, and that class members are eligible to recover \$400 in damages for each call made in violation of the TCPA. On May 22, 2017, the Court ruled that the violations were willful and knowing, and trebled the damages award to \$1,200 for each call made in violation of TCPA. On April 5, 2018, the Court entered a \$61 million judgment in favor of the class. DISH Network L.L.C. appealed and on May 30, 2019, the United States Court of Appeals for the Fourth Circuit affirmed. On October 15, 2019, DISH Network L.L.C. filed a petition for writ of certiorari, requesting that the United States Supreme Court agree to hear a further appeal, but it denied the petition on December 16, 2019. On January 21, 2020, DISH Network L.L.C. filed a second notice of appeal relating to the district court’s orders on the claims administration process to identify, and disburse funds to, individual class members. During the second quarter 2017, we recorded \$41 million of “Litigation expense” related to the Krakauer Action on our Consolidated Statements of Operations and Comprehensive Income (Loss). We recorded \$20 million of “Litigation expense” related to the Krakauer Action during the fourth quarter 2016. Our total accrual related to the Krakauer Action at December 31, 2018 was \$61 million and was included in “Other accrued expenses” on our Consolidated Balance Sheets. During the third quarter 2019, the judgment was paid to the court.

We intend to vigorously defend these cases. We cannot predict with any degree of certainty the outcome of these suits.

Telemarketing Shareholder Derivative Litigation

On October 19, 2017, Plumbers Local Union No. 519 Pension Trust Fund (“Plumbers Local 519”), a purported shareholder of DISH Network, filed a putative shareholder derivative action in the District Court for Clark County, Nevada alleging, among other things, breach of fiduciary duty claims against the following current and former members of DISH Network’s Board of Directors: Charles W. Ergen; James DeFranco; Cantey M. Ergen; Steven R. Goodbarn; David K. Moskowitz; Tom A. Ortoff; Carl E. Vogel; George R. Brokaw; and Gary S. Howard (collectively, the “Director Defendants”). In its complaint, Plumbers Local 519 contends that, by virtue of their alleged failure to appropriately ensure DISH Network’s compliance with telemarketing laws, the Director Defendants exposed DISH Network to liability for telemarketing violations, including those in the Krakauer Action. It also contends that the Director Defendants caused DISH Network to pay improper compensation and benefits to themselves and others who allegedly breached their fiduciary duties to DISH Network. Plumbers Local 519 alleges causes of action for breach of fiduciary duties of loyalty and good faith, gross mismanagement, abuse of control, corporate waste and unjust enrichment. Plumbers Local 519 is seeking an unspecified amount of damages.

On November 13, 2017, City of Sterling Heights Police and Fire Retirement System (“Sterling Heights”), a purported shareholder of DISH Network, filed a putative shareholder derivative action in the District Court for Clark County, Nevada. Sterling Heights makes substantially the same allegations as Plumbers Union 519, and alleges causes of action against the Director Defendants for breach of fiduciary duty, waste of corporate assets and unjust enrichment. Sterling Heights is seeking an unspecified amount of damages.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Pursuant to a stipulation of the parties, on January 4, 2018, the District Court agreed to consolidate the Sterling Heights action with the Plumbers Local 519 action, and on January 12, 2018, the plaintiffs filed an amended consolidated complaint that largely duplicates the original Plumbers Local 519 complaint. DISH Network's Board of Directors has established a Special Litigation Committee to review the factual allegations and legal claims in this action. On May 15, 2018, the District Court granted the Special Litigation Committee's motion to stay the case pending its investigation. The Special Litigation Committee's report was filed on November 27, 2018, and recommended that the Company not pursue the claims asserted by the derivative plaintiffs. On December 20, 2018, the Special Litigation Committee filed a motion for summary judgment seeking deferral to its determination that the claims should be dismissed, which the Court has set for an evidentiary hearing on July 6-7, 2020.

DISH Network cannot predict with any degree of certainty the outcome of these suits or determine the extent of any potential liability or damages.

TQ Delta, LLC

On July 17, 2015, TQ Delta, LLC ("TQ Delta") filed a complaint against us, DISH Network and our wholly-owned subsidiary DISH Network L.L.C. in the United States District Court for the District of Delaware. The Complaint alleges infringement of United States Patent No. 6,961,369 (the "369 patent"), which is entitled "System and Method for Scrambling the Phase of the Carriers in a Multicarrier Communications System"; United States Patent No. 8,718,158 (the "158 patent"), which is entitled "System and Method for Scrambling the Phase of the Carriers in a Multicarrier Communications System"; United States Patent No. 9,014,243 (the "243 patent"), which is entitled "System and Method for Scrambling Using a Bit Scrambler and a Phase Scrambler"; United States Patent No. 7,835,430 (the "430 patent"), which is entitled "Multicarrier Modulation Messaging for Frequency Domain Received Idle Channel Noise Information"; United States Patent No. 8,238,412 (the "412 patent"), which is entitled "Multicarrier Modulation Messaging for Power Level per Subchannel Information"; United States Patent No. 8,432,956 (the "956 patent"), which is entitled "Multicarrier Modulation Messaging for Power Level per Subchannel Information"; and United States Patent No. 8,611,404 (the "404 patent"), which is entitled "Multicarrier Transmission System with Low Power Sleep Mode and Rapid-On Capability." On September 9, 2015, TQ Delta filed a first amended complaint that added allegations of infringement of United States Patent No. 9,094,268 (the "268 patent"), which is entitled "Multicarrier Transmission System With Low Power Sleep Mode and Rapid-On Capability." On May 16, 2016, TQ Delta filed a second amended complaint that added EchoStar Corporation and its then wholly-owned subsidiary EchoStar Technologies L.L.C. as defendants. TQ Delta alleges that our satellite TV service, Internet service, set-top boxes, gateways, routers, modems, adapters and networks that operate in accordance with one or more Multimedia over Coax Alliance Standards infringe the asserted patents. TQ Delta has filed actions in the same court alleging infringement of the same patents against Comcast Corp., Cox Communications, Inc., DirecTV, Time Warner Cable Inc. and Verizon Communications, Inc. TQ Delta is an entity that seeks to license an acquired patent portfolio without itself practicing any of the claims recited therein.

On July 14, 2016, TQ Delta stipulated to dismiss with prejudice all claims related to the 369 patent and the 956 patent. On July 20, 2016, we filed petitions with the United States Patent and Trademark Office challenging the validity of all of the patent claims of the 404 patent and the 268 patent that have been asserted against us. Third parties have filed petitions with the United States Patent and Trademark Office challenging the validity of all of the patent claims that have been asserted against us in the action. On November 4, 2016, the United States Patent and Trademark Office agreed to institute proceedings on the third-party petitions related to the 158 patent, the 243 patent, the 412 patent and the 430 patent. On December 20, 2016, pursuant to a stipulation of the parties, the Court stayed the case until the resolution of all petitions to the United States Patent and Trademark Office challenging the validity of all of the patent claims at issue. On January 19, 2017, the United States Patent and Trademark Office granted our motions to join the instituted petitions on the 430 and 158 patents.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

On February 9, 2017, the United States Patent and Trademark Office agreed to institute proceedings on our petition related to the 404 patent, and on February 13, 2017, the United States Patent and Trademark Office agreed to institute proceedings on our petition related to the 268 patent. On February 27, 2017, the United States Patent and Trademark Office granted our motions to join the instituted petitions on the 243 and 412 patents. On October 26, 2017, the United States Patent and Trademark Office issued final written decisions on the petitions challenging the 158 patent, the 243 patent, the 412 patent and the 430 patent, and it invalidated all of the asserted claims of those patents. On February 7, 2018, the United States Patent and Trademark Office issued final written decisions on the petitions challenging the 404 patent, and it invalidated all of the asserted claims of that patent on the basis of our petition. On February 10, 2018, the United States Patent and Trademark Office issued a final written decision on our petition challenging the 268 patent, and it invalidated all of the asserted claims. On March 12, 2018, the United States Patent and Trademark Office issued a final written decision on a third-party petition challenging the 268 patent, and it invalidated all of the asserted claims. All asserted claims have now been invalidated by the United States Patent and Trademark Office. TQ Delta has filed notices of appeal from the final written decisions adverse to it. On May 9, 2019, the United States Court of Appeals for the Federal Circuit affirmed the invalidity of the 430 patent and the 412 patent. On July 10, 2019, the United States Court of Appeals for the Federal Circuit affirmed the invalidity of the asserted claims of the 404 patent. On July 15, 2019, the United States Court of Appeals for the Federal Circuit affirmed the invalidity of the asserted claims of the 268 patent. On November 22, 2019, the United States Court of Appeals for the Federal Circuit reversed the invalidity finding on the 243 patent and the 158 patent, which is the subject of a petition for panel rehearing, which was filed on January 22, 2020.

We intend to vigorously defend this case. In the event that a court ultimately determines that we infringe the asserted patents, we may be subject to substantial damages, which may include treble damages, and/or an injunction that could require us to materially modify certain features that we currently offer to consumers. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages.

Turner Network Sales

On October 6, 2017, Turner Network Sales, Inc. (“Turner”) filed a complaint against our wholly-owned subsidiary DISH Network L.L.C. in the United States District Court for the Southern District of New York. The operative First Amended Complaint alleges that DISH Network L.L.C. improperly calculated and withheld licensing fees owing to Turner in connection with its carriage of CNN and other networks. On December 14, 2017, DISH Network L.L.C. filed its operative first amended counterclaims against Turner. In the counterclaims, DISH Network L.L.C. seeks a declaratory judgment that it properly calculated the licensing fees owed to Turner for carriage of CNN, and also alleges claims for unrelated breaches of the parties’ affiliation agreement. In its October 1, 2018 damage expert’s report, Turner claimed damages of \$159 million, plus \$24 million in interest. On September 27, 2019, the Court granted, in part, Turner’s motion for summary judgment, holding, in part, that Turner was entitled to recover approximately \$20 million in license fee payments that DISH Network L.L.C. had withheld after it discovered previous over-payments. On February 12, 2020, the parties filed a stipulation to dismiss certain of their respective claims. Trial on the remaining claims in this matter has been set for April 20, 2020, where DISH Network L.L.C.’s incremental exposure (per Turner’s damages expert) is approximately \$118 million in damages, plus approximately \$30 million in interest.

We intend to vigorously defend this case. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Uniloc

On January 31, 2019, Uniloc 2017 LLC (“Uniloc”) filed a complaint against our wholly-owned subsidiary Sling TV L.L.C. in the United States District Court for the District of Colorado. The Complaint alleges infringement of United States Patent No. 6,519,005 (the “005 patent”), which is entitled “Method of Concurrent Multiple-Mode Motion Estimation for Digital Video”; United States Patent No. 6,895,118 (the “118 patent”), which is entitled “Method of Coding Digital Image Based on Error Concealment”; United States Patent No. 9,721,273 (the “273 patent”), which is entitled “System and Method for Aggregating and Providing Audio and Visual Presentations Via a Computer Network”; and United States Patent No. 8,407,609 (the “609 patent”), which is entitled “System and Method for Providing and Tracking the Provision of Audio and Visual Presentations Via a Computer Network.” Uniloc is an entity that seeks to license an acquired patent portfolio without itself practicing any of the claims recited therein.

On June 25, 2019, Sling TV L.L.C. filed a petition with the United States Patent and Trademark Office challenging the validity of all of the asserted claims of the 005 patent. On July 19, 2019 and July 22, 2019, respectively, Sling TV L.L.C. filed petitions with the United States Patent and Trademark Office challenging the validity of all asserted claims of the 273 patent and the 609 patent. On August 12, 2019, Sling TV L.L.C. filed a petition with the United States Patent and Trademark Office challenging the validity of all of the asserted claims of the 118 patent. On October 18, 2019, pursuant to a stipulation of the parties, the Court entered a stay of the trial proceedings. On January 9, 2020, the United States Patent and Trademark Office agreed to institute proceedings on the petition challenging the 005 patent. On January 15, 2020, the United States Patent and Trademark Office agreed to institute proceedings on the petition challenging the 273 patent.

We intend to vigorously defend this case. In the event that a court ultimately determines that we infringe the asserted patents, we may be subject to substantial damages, which may include treble damages, and/or an injunction that could require us to materially modify certain features that we currently offer to consumers. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages.

Vermont National Telephone Company

On September 23, 2016, the United States District Court for the District of Columbia unsealed a qui tam complaint that was filed by Vermont National Telephone Company (“Vermont National”) against DISH Network; DISH Network’s wholly-owned subsidiaries, American AWS-3 Wireless I L.L.C., American II, American III, and DISH Wireless Holding L.L.C.; Charles W. Ergen (our Chairman) and Cantey M. Ergen (a member of our board of directors); Northstar Wireless; Northstar Spectrum; Northstar Manager, LLC; SNR Wireless; SNR HoldCo; SNR Wireless Management, LLC; and certain other parties. The complaint was unsealed after the United States Department of Justice notified the Court that it had declined to intervene in the action. The complaint is a civil action that was filed under seal on May 13, 2015 by Vermont National, which participated in the AWS-3 Auction through its wholly-owned subsidiary, VTel Wireless. The complaint alleges violations of the federal civil False Claims Act (the “FCA”) based on, among other things, allegations that Northstar Wireless and SNR Wireless falsely claimed bidding credits of 25% in the AWS-3 Auction when they were allegedly under the de facto control of DISH Network and, therefore, were not entitled to the bidding credits as designated entities under applicable FCC rules. Vermont National seeks to recover on behalf of the United States government approximately \$10 billion, which reflects the \$3.3 billion in bidding credits that Northstar Wireless and SNR Wireless claimed in the AWS-3 Auction, trebled under the FCA. Vermont National also seeks civil penalties of not less than \$5,500 and not more than \$11,000 for each violation of the FCA. On March 2, 2017, the United States District Court for the District of Columbia entered a stay of the litigation until such time as the United States Court of Appeals for the District of Columbia (the “D.C. Circuit”) issued its opinion in *SNR Wireless LicenseCo, LLC, et al. v. F.C.C.*

The D.C. Circuit issued its opinion on August 29, 2017 and remanded the matter to the FCC for further proceedings. See Note 15 “*Commitments and Contingencies – Commitments – DISH Network Non-Controlling Investments in the Northstar Entities and the SNR Entities Related to AWS-3 Wireless Spectrum Licenses*” in the Notes to DISH Network’s Annual Report on Form 10-K for the year ended December 31, 2019 for further information.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Thereafter, the Court maintained the stay until it was lifted on October 26, 2018. On February 11, 2019, the Court granted Vermont National's unopposed motion for leave to file an amended complaint. On March 28, 2019, the defendants filed a motion to dismiss Vermont National's amended complaint, which has been fully briefed since June 3, 2019.

DISH Network intends to vigorously defend this case. DISH Network cannot predict with any degree of certainty the outcome of this proceeding or determine the extent of any potential liability or damages.

Waste Disposal Inquiry

The California Attorney General and the Alameda County (California) District Attorney are investigating whether certain of our waste disposal policies, procedures and practices are in violation of the California Business and Professions Code and the California Health and Safety Code. We expect that these entities will seek injunctive and monetary relief. The investigation appears to be part of a broader effort to investigate waste handling and disposal processes of a number of industries. While we are unable to predict the outcome of this investigation, we do not believe that the outcome will have a material effect on our results of operations, financial condition or cash flows.

Other

In addition to the above actions, we are subject to various other legal proceedings and claims that arise in the ordinary course of business, including, among other things, disputes with programmers regarding fees. In our opinion, the amount of ultimate liability with respect to any of these actions is unlikely to materially affect our financial condition, results of operations or liquidity, though the outcomes could be material to our operating results for any particular period, depending, in part, upon the operating results for such period.

13. Financial Information for Subsidiary Guarantors

Our senior notes are fully, unconditionally and jointly and severally guaranteed by all of our subsidiaries other than minor subsidiaries and the stand-alone entity DISH DBS has no independent assets or operations. Therefore, supplemental financial information on a consolidating basis of the guarantor subsidiaries is not required. There are no restrictions on our ability to obtain cash dividends or other distributions of funds from the guarantor subsidiaries, except those imposed by applicable law.

14. Disaggregation of Revenue

Geographic Information. Revenue is attributed to geographic regions based upon the location where the goods and services are provided. All subscriber-related revenue was derived from the United States. Substantially all of our long-lived assets reside in the United States.

The following table summarizes revenue by geographic region:

Revenue:	For the Years Ended December 31,		
	2019	2018	2017
	(In thousands)		
United States	\$ 12,581,855	\$ 13,319,091	\$ 13,967,694
Canada and Mexico	41,038	43,048	39,817
Total revenue	\$ 12,622,893	\$ 13,362,139	\$ 14,007,511

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

The revenue from external customers disaggregated by major revenue source was as follows:

Category:	For the Years Ended December 31,		
	2019	2018	2017
	(In thousands)		
Pay-TV video and related revenue	\$ 12,436,637	\$ 13,197,994	\$ 13,877,196
Equipment sales and other revenue	186,256	164,145	130,315
Total	\$ 12,622,893	\$ 13,362,139	\$ 14,007,511

15. Contract Balances

Our valuation and qualifying accounts as of December 31, 2019, 2018 and 2017 were as follows:

Allowance for doubtful accounts	Balance at Beginning of Year	Charged to Costs and Expenses	Deductions	Balance at End of Year
	(In thousands)			
For the years ended:				
December 31, 2019	\$ 16,956	\$ 69,866	\$ (67,542)	\$ 19,280
December 31, 2018	\$ 15,056	\$ 98,461	\$ (96,561)	\$ 16,956
December 31, 2017	\$ 17,440	\$ 124,143	\$ (126,527)	\$ 15,056

Deferred revenue related to contracts with our customers is recorded in “Deferred revenue and other” and “Long-term deferred revenue and other long-term liabilities” on our Consolidated Balance Sheets. Changes in deferred revenue related to contracts with our customers were as follows:

	Contract Liabilities
	(In thousands)
Balance as of December 31, 2018	\$ 624,626
Recognition of unearned revenue	(7,086,252)
Deferral of revenue	7,070,680
Balance as of December 31, 2019	\$ 609,054

We apply a practical expedient and do not disclose the value of the remaining performance obligations for contracts that are less than one year in duration, which represent a substantial majority of our revenue. As such, the amount of revenue related to unsatisfied performance obligations is not necessarily indicative of our future revenue.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

16. Quarterly Financial Data (Unaudited)

Our quarterly results of operations are summarized as follows:

	For the Three Months Ended			
	March 31	June 30	September 30	December 31
	(In thousands)			
Year ended December 31, 2019:				
Total revenue	\$ 3,138,000	\$ 3,166,599	\$ 3,122,282	\$ 3,196,012
Operating income (loss)	430,735	435,966	438,498	515,999
Net income (loss) attributable to DISH DBS	177,760	185,368	204,858	259,545
Year ended December 31, 2018:				
Total revenue	\$ 3,383,222	\$ 3,393,307	\$ 3,334,444	\$ 3,251,166
Operating income (loss)	508,121	549,502	542,439	466,448
Net income (loss) attributable to DISH DBS	204,192	285,691	281,272	200,132

17. Related Party Transactions***Master Transaction Agreement***

On May 19, 2019, DISH Network entered into the Master Transaction Agreement pursuant to which, on September 10, 2019, EchoStar transferred to DISH Network certain assets and liabilities of its EchoStar Satellite Services segment. As a result of the Master Transaction Agreement, certain agreements that we had with EchoStar have been transferred to DISH Network. The following is a summary of the terms of our principal agreements with DISH Network that may have an impact on our financial condition and results of operations. See Note 1 “Recent Developments” in the Notes to DISH Network’s Annual Report on Form 10-K for the year ended December 31, 2019 for further information on the Master Transaction Agreement.

Related Party Transactions with DISH Network***“Satellite and transmission expenses”***

During the years ended December 31, 2019, 2018 and 2017, we incurred \$93 million, \$67 million and \$67 million, respectively, for satellite capacity leased from DISH Network and telemetry, tracking and control and other professional services provided to us by DISH Network. As a result of the Master Transaction Agreement, discussed above, DISH Network is now a supplier of the vast majority of our transponder capacity. These amounts are recorded in “Satellite and transmission expenses” on our Consolidated Statements of Operations and Comprehensive Income (Loss). The agreements pertaining to these expenses are discussed below.

Satellite Capacity Leased from DISH Network. On September 10, 2019, in connection with the Master Transaction Agreement DISH Network entered into with EchoStar on May 19, 2019, we began leasing satellite capacity on satellites owned or leased by DISH Network from a wholly-owned subsidiary of DISH Network. See “Pay-TV Satellites” in Note 6 for further information. The term of each lease is set forth below:

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

- *EchoStar X, XI and XIV.* On March 1, 2014, we began leasing all available capacity from EchoStar on the EchoStar, X, XI and XIV satellites. The term of each satellite capacity agreement generally terminates upon the earlier of: (i) the end-of-life of the satellite; (ii) the date the satellite fails; or (iii) a certain date, which depends upon, among other things, the estimated useful life of the satellite. We generally have the option to renew each satellite capacity agreement on a year-to-year basis through the end of the respective satellite's life. There can be no assurance that any options to renew such agreements will be exercised. Pursuant to the Master Transaction Agreement, discussed above, on September 10, 2019, the satellite capacity agreement we previously had with EchoStar for EchoStar X, XI and XIV was transferred to DISH Network and we began leasing satellite capacity on these satellites from a wholly-owned subsidiary of DISH Network as of the same date.

- *EchoStar XVI.* In December 2009, we entered into a transponder service agreement with EchoStar to lease all of the capacity on EchoStar XVI, a DBS satellite, after its service commencement date. EchoStar XVI was launched in November 2012 to replace EchoStar XV at the 61.5 degree orbital location and is currently in service. Effective December 21, 2012, we and EchoStar amended the transponder service agreement to, among other things, change the initial term to generally expire upon the earlier of: (i) the end-of-life or replacement of the satellite; (ii) the date the satellite fails; (iii) the date the transponder(s) on which service is being provided under the agreement fails; or (iv) four years following the actual service commencement date. In July 2016, we and EchoStar amended the transponder service agreement to, among other things, extend the initial term by one additional year and to reduce the term of the first renewal option by one year. Prior to expiration of the initial term, we had the option to renew for an additional five-year period. In May 2017, we exercised our first renewal option for an additional five-year period ending in January 2023. We also have the option to renew for an additional five-year period prior to expiration of the first renewal period in January 2023. There can be no assurance that the option to renew this agreement will be exercised. During 2018, we and EchoStar further amended the agreement to, among other things, allow us to place and use certain satellites at the 61.5 degree orbital location. Pursuant to the Master Transaction Agreement, discussed above, on September 10, 2019, the transponder service agreement we previously had with EchoStar for EchoStar XVI was transferred to DISH Network and we began receiving transponder services from a wholly-owned subsidiary of DISH Network as of the same date.

Nimiq 5 Agreement. During 2009, EchoStar entered into a fifteen-year satellite service agreement with Telesat Canada ("Telesat") to receive service on all 32 DBS transponders on the Nimiq 5 satellite at the 72.7 degree orbital location (the "Telesat Transponder Agreement"). During 2009, EchoStar also entered into a satellite service agreement (the "DISH Nimiq 5 Agreement") with us, pursuant to which we received service from EchoStar on all 32 of the DBS transponders covered by the Telesat Transponder Agreement. Under the terms of the DISH Nimiq 5 Agreement, we made certain monthly payments to EchoStar that commenced in 2009 when the Nimiq 5 satellite was placed into service and continued through the service term. Unless earlier terminated under the terms and conditions of the DISH Nimiq 5 Agreement, the service term would expire ten years following the date the Nimiq 5 satellite was placed into service. Upon expiration of the initial term in September 2019, we had the option to renew the DISH Nimiq 5 Agreement on a year-to-year basis through the end-of-life of the Nimiq 5 satellite. Upon in-orbit failure or end-of-life of the Nimiq 5 satellite, and in certain other circumstances, we had certain rights to receive service from EchoStar on a replacement satellite. Pursuant to the Master Transaction Agreement, discussed above, on September 10, 2019, the Telesat Transponder Agreement was transferred to DISH Network and we began receiving transponder services on the Nimiq 5 satellite from a wholly-owned subsidiary of DISH Network as of the same date and exercised our option to renew for a one-year period through September 2020. As discussed in Note 6, "Property and Equipment and Intangible Assets," the Nimiq 5 satellite lease has been accounted for as a finance lease since September 2019. Accordingly, expenses related to this lease are no longer recorded in "Satellite and transmission expenses," but rather in "Depreciation and amortization" and "Interest expense, net of amounts capitalized" on our Consolidated Statements of Operations and Comprehensive Income (Loss). During the year ended December 31, 2019, we recorded \$11 million of "Depreciation and amortization expense" and \$5 million of "Interest expense, net of amounts capitalized" related to Nimiq 5.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

QuetzSat-1 Lease Agreement. During 2008, EchoStar entered into a ten-year satellite service agreement with SES Latin America S.A. (“SES”), which provides, among other things, for the provision by SES to EchoStar of service on 32 DBS transponders on the QuetzSat-1 satellite. During 2008, EchoStar also entered into a transponder service agreement (“QuetzSat-1 Transponder Agreement”) with us pursuant to which we received service from EchoStar on 24 DBS transponders. QuetzSat-1 was launched on September 29, 2011 and was placed into service during the fourth quarter 2011 at the 67.1 degree orbital location while we and EchoStar explored alternative uses for the QuetzSat-1 satellite. In the interim, EchoStar provided us with alternate capacity at the 77 degree orbital location. In January 2013, QuetzSat-1 was moved to the 77 degree orbital location and we commenced commercial operations at that location in February 2013. Unless earlier terminated under the terms and conditions of the QuetzSat-1 Transponder Agreement, the initial service term will expire in November 2021. Upon expiration of the initial term, we have the option to renew the QuetzSat-1 Transponder Agreement on a year-to-year basis through the end-of-life of the QuetzSat-1 satellite. Upon an in-orbit failure or end-of-life of the QuetzSat-1 satellite, and in certain other circumstances, we have certain rights to receive service from DISH Network on a replacement satellite. There can be no assurance that any options to renew the QuetzSat-1 Transponder Agreement will be exercised or that we will exercise our option to receive service on a replacement satellite. Pursuant to the Master Transaction Agreement, discussed above, on September 10, 2019, the QuetzSat-1 Transponder Agreement was transferred to DISH Network and we began receiving transponder services on QuetzSat-1 from a wholly-owned subsidiary of DISH Network as of the same date. Our lease arrangement with DISH Network expires in November 2021.

EchoStar XVIII Satellite. The EchoStar XVIII satellite was launched on June 18, 2016 and became operational as an in-orbit spare at the 61.5 degree orbital location during the third quarter 2016, at which time we began leasing it from a wholly-owned subsidiary of DISH Network. On May 14, 2019, we and DOLLC II entered into an agreement to sell our interests in the LMDS and MVDDS licenses in exchange for the EchoStar XVIII satellite. See Note 6 for further information.

TT&C Agreement. Effective January 1, 2012, we entered into a TT&C agreement pursuant to which we receive TT&C services from EchoStar for certain satellites (the “TT&C Agreement”). In February 2018, we amended the TT&C Agreement to, among other things, extend the term for one-year with four automatic one-year renewal periods. The fees for services provided under the 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. We and EchoStar are able to terminate the TT&C Agreement for any reason upon 12 months’ notice. On May 19, 2019, DISH Network entered into a Master Transaction Agreement pursuant to which, on September 10, 2019, the assets and employees that provide these services were transferred to DISH Network. We began receiving TT&C services from a wholly-owned subsidiary of DISH Network as of the same date.

“General and administrative expenses”

During the year ended December 31, 2019, we incurred \$3 million for general and administrative expenses for services provided to us by DISH Network. These amounts are recorded in “General and administrative expenses” on our Consolidated Statements of Operations and Comprehensive Income (Loss). The agreements pertaining to these expenses are discussed below.

Real Estate Lease Agreements. On September 10, 2019, in connection with the Master Transaction Agreement DISH Network entered into with EchoStar on May 19, 2019 and we began leasing office space owned or leased by DISH Network from a wholly-owned subsidiary of DISH Network. The term of each lease is set forth below:

- *Santa Fe Lease Agreement.* The lease for all of 5701 S. Santa Fe Dr. in Littleton, Colorado originally from EchoStar to us was for a period ending on December 31, 2018. In December 2018, we and EchoStar amended this lease to, among other things, extend the term thereof for one additional year until December 31, 2019. Pursuant to the Master Transaction Agreement, discussed above, on September 10, 2019, this lease was transferred to DISH Network and we began leasing all of 5701 S. Santa Fe Dr. in Littleton, Colorado from a wholly-owned subsidiary of DISH Network as of the same date. In December 2019, we and DISH Network amended this lease to, among other things, extend the term thereof for one additional year until December 31, 2020.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

- *Cheyenne Lease Agreement.* The lease for certain space at 530 EchoStar Drive in Cheyenne, Wyoming is for a period ending on December 31, 2031. In connection with the completion of the Share Exchange, EchoStar transferred ownership of a portion of this property to DISH Network, and, effective March 1, 2017, DISH Network and EchoStar amended this lease agreement to (i) terminate the lease of certain space at the portion of the property that was transferred to us and (ii) provide for the continued lease to us of certain space at the portion of the property that EchoStar retained. Pursuant to the Master Transaction Agreement, discussed above, the portion of the property EchoStar retained was transferred to DISH Network, and on September 10, 2019, this lease was transferred to DISH Network and we began leasing certain space from a wholly-owned subsidiary of DISH Network as of the same date.

Other Agreements – DISH Network

Broadband, Wireless and Other Operations. We provide certain administrative, call center, installation, marketing and other services to DISH Network’s broadband, wireless and other operations. During the years ended December 31, 2019, 2018 and 2017, the costs associated with these services were \$54 million, \$40 million and \$48 million, respectively.

Related Party Transactions with EchoStar

Following the Spin-off, DISH Network and EchoStar have operated as separate publicly-traded companies and neither entity has any ownership interest in the other. However, a substantial majority of the voting power of the shares of both companies is owned beneficially by Charles W. Ergen, our Chairman, and by certain entities established by Mr. Ergen for the benefit of his family.

In connection with and following the Spin-off, we and EchoStar have entered into certain agreements pursuant to which we obtain certain products, services and rights from EchoStar, EchoStar obtains certain products, services and rights from us, and we and EchoStar have indemnified each other against certain liabilities arising from our respective businesses. Pursuant to the Share Exchange Agreement, among other things, EchoStar transferred to us certain assets and liabilities of the EchoStar technologies and EchoStar broadcasting businesses. Pursuant to the Master Transaction Agreement, among other things, EchoStar transferred to DISH Network certain assets and liabilities of its EchoStar Satellite Services segment. In connection with the Share Exchange and the Master Transaction Agreement, DISH Network and EchoStar and certain of their respective subsidiaries entered into certain agreements covering, among other things, tax matters, employee matters, intellectual property matters and the provision of transitional services. In addition, certain agreements that we had with EchoStar have terminated, and we entered into certain new agreements with EchoStar. We also may enter into additional agreements with EchoStar in the future. The following is a summary of the terms of our principal agreements with EchoStar that may have an impact on our financial condition and results of operations.

“Trade accounts receivable”

As of December 31, 2019 and 2018, trade accounts receivable from EchoStar was \$1 million and \$4 million, respectively. These amounts are recorded in “Trade accounts receivable” on our Consolidated Balance Sheets.

“Trade accounts payable”

As of December 31, 2019 and 2018, trade accounts payable to EchoStar was \$3 million and \$6 million, respectively. These amounts are recorded in “Trade accounts payable” on our Consolidated Balance Sheets.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

“Equipment sales and other revenue”

During the years ended December 31, 2019, 2018 and 2017, we received \$6 million, \$8 million and \$3 million, respectively, for services provided to EchoStar. These amounts are recorded in “Equipment sales and other revenue” on our Consolidated Statements of Operations and Comprehensive Income (Loss). The agreements pertaining to these revenues are discussed below.

Real Estate Lease Agreements. DISH Network has entered into lease agreements pursuant to which DISH Network leases certain real estate to EchoStar. 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 areas, and EchoStar is responsible for its portion of the taxes, insurance, utilities and maintenance of the premises. The term of each lease is set forth below:

- *El Paso Lease Agreement.* During 2012, DISH Network began leasing certain space at 1285 Joe Battle Blvd., El Paso, Texas to EchoStar for an initial period ending on August 1, 2015, which also provides EchoStar with renewal options for four consecutive three-year terms. During the second quarter 2015, EchoStar exercised its first renewal option for a period ending on August 1, 2018 and in April 2018 EchoStar exercised its second renewal option for a period ending in August 2021.
- *90 Inverness Lease Agreement.* In connection with the completion of the Share Exchange, effective March 1, 2017, EchoStar leases certain space from us at 90 Inverness Circle East, Englewood, Colorado for a period ending in February 2022. EchoStar has the option to renew this lease for four three-year periods.
- *Cheyenne Lease Agreement.* In connection with the completion of the Share Exchange, effective March 1, 2017, EchoStar leases certain space from us at 530 EchoStar Drive, Cheyenne, Wyoming for a period ending in February 2019. In August 2018, EchoStar exercised its option to renew this lease for a one-year period ending in February 2020. EchoStar has the option to renew this lease for twelve one-year periods. In connection with the Master Transaction Agreement, DISH Network and EchoStar amended this lease to provide EchoStar with certain space for a period ending in September 2021, with the option for EchoStar to renew for a one-year period upon 180 days’ written notice prior to the end of the term.
- *Gilbert Lease Agreement.* In connection with the completion of the Share Exchange, effective March 1, 2017, EchoStar leases certain space from us at 801 N. DISH Dr., Gilbert, Arizona for a period ending in March 2019. In August 2018, EchoStar exercised its option to renew this lease for a one-year period ending in February 2020. EchoStar has the option to renew this lease for twelve one-year periods. This lease was terminated effective September 10, 2019.
- *American Fork Occupancy License Agreement.* In connection with the completion of the Share Exchange, effective March 1, 2017, we acquired the lease for certain space at 796 East Utah Valley Drive, American Fork, Utah, and we sublease certain space at this location to EchoStar for a period ending in August 2017. In June 2017, EchoStar exercised its five-year renewal option for a period ending in August 2022. This lease was terminated effective March 2019.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Collocation and Antenna Space Agreements. In connection with the completion of the Share Exchange, effective March 1, 2017, we entered into certain agreements pursuant to which we will provide certain collocation and antenna space to HNS through February 2022 at the following locations: Cheyenne, Wyoming; Gilbert, Arizona; New Braunfels, Texas; Monee, Illinois; Englewood, Colorado and Spokane, Washington. During August 2017, we entered into certain other agreements pursuant to which we will provide certain collocation and antenna space to HNS through August 2022 at the following locations: Monee, Illinois and Spokane, Washington. HNS has the option to renew each of these agreements for four three-year periods. HNS may terminate certain of these agreements with 180 days' prior written notice to us at the following locations: New Braunfels, Texas; Englewood, Colorado; and Spokane, Washington. In September 2019, in connection with the Master Transaction Agreement, we entered into an agreement pursuant to which we provide HNS with certain additional collocation space in Cheyenne, Wyoming for a period ending in September 2020, with the option for HNS to renew for a one-year period, with prior written notice no more than 120 days but no less than 90 days prior to the end of the term. In October 2019, HNS provided a termination notice for its New Braunfels, Texas agreement to be effective May 2020. The fees for the services provided under these agreements depend, among other things, on the number of racks leased and/or antennas present at the location.

“Satellite and transmission expenses”

During the years ended December 31, 2019, 2018 and 2017, we incurred \$198 million, \$309 million and \$346 million, respectively, for satellite capacity leased from EchoStar and telemetry, tracking and control and other professional services provided to us by EchoStar. Historically, EchoStar was the supplier of the vast majority of our transponder capacity. On May 19, 2019, DISH Network entered into the Master Transaction Agreement pursuant to which, on September 10, 2019, certain of these satellites were transferred to DISH Network. We are now leasing this satellite capacity from DISH Network. These amounts are recorded in “Satellite and transmission expenses” on our Consolidated Statements of Operations and Comprehensive Income (Loss). The agreements pertaining to these expenses are discussed below.

Satellite Capacity Leased from EchoStar. We have entered into certain satellite capacity agreements pursuant to which we lease certain capacity on certain satellites owned or leased by EchoStar. The fees for the services provided under these satellite capacity agreements depend, among other things, upon the orbital location of the applicable satellite, the number of transponders that are leased on the applicable satellite and the length of the lease. See “Pay-TV Satellites” in Note 6 for further information. The term of each lease is set forth below:

- *EchoStar VII, X, XI and XIV.* On March 1, 2014, we began leasing all available capacity from EchoStar on the EchoStar VII, X, XI and XIV satellites. The term of each satellite capacity agreement generally terminates upon the earlier of: (i) the end-of-life of the satellite; (ii) the date the satellite fails; or (iii) a certain date, which depends upon, among other things, the estimated useful life of the satellite. We generally have the option to renew each satellite capacity agreement on a year-to-year basis through the end of the respective satellite's life. There can be no assurance that any options to renew such agreements will be exercised. The satellite capacity agreement for EchoStar VII expired on June 30, 2018. On May 19, 2019, DISH Network entered into the Master Transaction Agreement pursuant to which, on September 10, 2019, these satellites were transferred to DISH Network.
- *EchoStar IX.* We lease certain satellite capacity from EchoStar on EchoStar IX. Subject to availability, we generally have the right to continue to lease satellite capacity from EchoStar on EchoStar IX on a month-to-month basis.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

- *EchoStar XVI.* In December 2009, we entered into a transponder service agreement with EchoStar to lease all of the capacity on EchoStar XVI, a DBS satellite, after its service commencement date. EchoStar XVI was launched in November 2012 to replace EchoStar XV at the 61.5 degree orbital location and is currently in service. Effective December 21, 2012, we and EchoStar amended the transponder service agreement to, among other things, change the initial term to generally expire upon the earlier of: (i) the end-of-life or replacement of the satellite; (ii) the date the satellite fails; (iii) the date the transponder(s) on which service is being provided under the agreement fails; or (iv) four years following the actual service commencement date. In July 2016, we and EchoStar amended the transponder service agreement to, among other things, extend the initial term by one additional year and to reduce the term of the first renewal option by one year. Prior to expiration of the initial term, we had the option to renew for an additional five-year period. In May 2017, we exercised our first renewal option for an additional five-year period ending in January 2023. We also have the option to renew for an additional five-year period prior to expiration of the first renewal period in January 2023. There can be no assurance that the option to renew this agreement will be exercised. During 2018, we and EchoStar further amended the agreement to, among other things, allow us to place and use certain satellites at the 61.5 degree orbital location. On May 19, 2019, DISH Network entered into a Master Transaction Agreement pursuant to which, on September 10, 2019, this satellite was transferred to DISH Network.

Nimiq 5 Agreement. During 2009, EchoStar entered into a fifteen-year satellite service agreement with Telesat Canada (“Telesat”) to receive service on all 32 DBS transponders on the Nimiq 5 satellite at the 72.7 degree orbital location (the “Telesat Transponder Agreement”). During 2009, EchoStar also entered into a satellite service agreement (the “DISH Nimiq 5 Agreement”) with us, pursuant to which we received service from EchoStar on all 32 of the DBS transponders covered by the Telesat Transponder Agreement. Under the terms of the DISH Nimiq 5 Agreement, we made certain monthly payments to EchoStar that commenced in 2009 when the Nimiq 5 satellite was placed into service and continued through the service term. Unless earlier terminated under the terms and conditions of the DISH Nimiq 5 Agreement, the service term will expire ten years following the date the Nimiq 5 satellite was placed into service. Upon expiration of the initial term in September 2019, we have the option to renew the DISH Nimiq 5 Agreement on a year-to-year basis through the end-of-life of the Nimiq 5 satellite. Upon in-orbit failure or end-of-life of the Nimiq 5 satellite, and in certain other circumstances, we had certain rights to receive service from EchoStar on a replacement satellite. On May 19, 2019, DISH Network entered into the Master Transaction Agreement pursuant to which, on September 10, 2019, the Telesat Transponder Agreement was transferred to DISH Network and we began leasing it from an indirect wholly-owned subsidiary of DISH Network and we exercised our option to renew for a one-year period through September 2020.

QuetzSat-1 Lease Agreement. During 2008, EchoStar entered into a ten-year satellite service agreement with SES Latin America S.A. (“SES”), which provides, among other things, for the provision by SES to EchoStar of service on 32 DBS transponders on the QuetzSat-1 satellite. During 2008, EchoStar also entered into a transponder service agreement (“QuetzSat-1 Transponder Agreement”) with us pursuant to which we receive service from EchoStar on 24 DBS transponders. QuetzSat-1 was launched on September 29, 2011 and was placed into service during the fourth quarter 2011 at the 67.1 degree orbital location while we and EchoStar explored alternative uses for the QuetzSat-1 satellite. In the interim, EchoStar provided us with alternate capacity at the 77 degree orbital location. During the first quarter 2013, we and EchoStar entered into an agreement pursuant to which we sublease five DBS transponders back to EchoStar. In January 2013, QuetzSat-1 was moved to the 77 degree orbital location and we commenced commercial operations at that location in February 2013.

Unless earlier terminated under the terms and conditions of the QuetzSat-1 Transponder Agreement, the initial service term will expire in November 2021. Upon expiration of the initial term, we have the option to renew the QuetzSat-1 Transponder Agreement on a year-to-year basis through the end-of-life of the QuetzSat-1 satellite. Upon an in-orbit failure or end-of-life of the QuetzSat-1 satellite, and in certain other circumstances, we had certain rights to receive service from EchoStar on a replacement satellite. On May 19, 2019, DISH Network entered into the Master Transaction Agreement, discussed above, pursuant to which, on September 10, 2019, the QuetzSat-1 Transponder Agreement was transferred to DISH Network and we began leasing it from an indirect wholly-owned subsidiary of DISH Network.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

103 Degree Orbital Location/SES-3. In May 2012, EchoStar entered into a spectrum development agreement (the “103 Spectrum Development Agreement”) with Ciel Satellite Holdings Inc. (“Ciel”) to develop certain spectrum rights at the 103 degree orbital location (the “103 Spectrum Rights”). In June 2013, we and EchoStar entered into a spectrum development agreement (the “DISH 103 Spectrum Development Agreement”) pursuant to which we may use and develop the 103 Spectrum Rights. Both the 103 Spectrum Development Agreement and DISH 103 Spectrum Development Agreement were terminated on March 31, 2018.

In connection with the 103 Spectrum Development Agreement, in May 2012, EchoStar also entered into a ten-year service agreement with Ciel pursuant to which EchoStar leases certain satellite capacity from Ciel on the SES-3 satellite at the 103 degree orbital location (the “103 Service Agreement”). In June 2013, we and EchoStar entered into an agreement pursuant to which we lease certain satellite capacity from EchoStar on the SES-3 satellite (the “DISH 103 Service Agreement”). Under the terms of the DISH 103 Service Agreement, we make certain monthly payments to EchoStar through the service term. Both the 103 Service Agreement and DISH 103 Service Agreement were terminated on March 31, 2018.

TT&C Agreement. Effective January 1, 2012, we entered into a telemetry, tracking and control (“TT&C”) agreement pursuant to which we receive TT&C services from EchoStar for certain satellites (the “TT&C Agreement”). In February 2018, we amended the TT&C Agreement to, among other things, extend the term for one-year with four automatic one-year renewal periods. The fees for services provided under the 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. We and EchoStar are able to terminate the TT&C Agreement for any reason upon 12 months’ notice. On May 19, 2019, DISH Network entered into the Master Transaction Agreement, discussed above, pursuant to which, on September 10, 2019, the assets and employees that provide these services were transferred to DISH Network and now DISH Network provides these services to us.

“General and administrative expenses”

During the years ended December 31, 2019, 2018 and 2017, we incurred \$20 million, \$21 million and \$29 million, respectively, for general and administrative expenses for services provided to us by EchoStar. These amounts are recorded in “General and administrative expenses” on our Consolidated Statements of Operations and Comprehensive Income (Loss). The agreements pertaining to these expenses are discussed below.

Real Estate Lease Agreements. We have entered into lease agreements pursuant to which we lease certain real estate from EchoStar. 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, and EchoStar is responsible for its portion of the taxes, insurance, utilities and maintenance of the premises. The term of each lease is set forth below:

- *Meridian Lease Agreement.* The lease for all of 9601 S. Meridian Blvd. in Englewood, Colorado was for a period ending on December 31, 2019. In December 2019, we and EchoStar amended this lease to, among other things, extend the term thereof for one additional year until December 31, 2020.
- *Santa Fe Lease Agreement.* The lease for all of 5701 S. Santa Fe Dr. in Littleton, Colorado was for a period ending on December 31, 2018. In December 2018, we and EchoStar amended this lease to, among other things, extend the term thereof for one additional year until December 31, 2019. Pursuant to the Master Transaction Agreement, discussed above, on September 10, 2019, this lease was transferred to DISH Network and we now lease it from DISH Network. In December 2019, we and DISH Network amended this lease to, among other things, extend the term thereof for one additional year until December 31, 2020.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

- *Cheyenne Lease Agreement.* The lease for certain space at 530 EchoStar Drive in Cheyenne, Wyoming is for a period ending on December 31, 2031. In connection with the completion of the Share Exchange, EchoStar transferred ownership of a portion of this property to us, and, effective March 1, 2017, we and EchoStar amended this lease agreement to (i) terminate the lease of certain space at the portion of the property that was transferred to us and (ii) provide for the continued lease to us of certain space at the portion of the property that EchoStar retained. Pursuant to the Master Transaction Agreement, discussed above, the portion of the property EchoStar retained was transferred to DISH Network, and on September 10, 2019, this lease was transferred to DISH Network and we now lease it from DISH Network.

- *100 Inverness Lease Agreement.* In connection with the completion of the Share Exchange, effective March 1, 2017, we lease certain space from EchoStar at 100 Inverness Terrace East, Englewood, Colorado for a period ending in December 2020. This agreement may be terminated by either party upon 180 days' prior notice.

Professional Services Agreement. Prior to 2010, in connection with the Spin-off, DISH Network entered into various agreements with EchoStar including the Transition Services Agreement, Satellite Procurement Agreement and Services Agreement, which all expired on January 1, 2010 and were replaced by a Professional Services Agreement. During 2009, DISH Network and EchoStar agreed that EchoStar shall 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 the 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, DISH Network and EchoStar agreed that DISH Network shall continue to have the right, but not the obligation, to engage EchoStar to manage the process of procuring new satellite capacity for DISH Network (previously provided under the Satellite Procurement Agreement) and receive logistics, procurement and quality assurance services from EchoStar (previously provided under the Services Agreement) and other support services. The Professional Services Agreement renewed on January 1, 2020 for an additional one-year period until January 1, 2021 and renews automatically for successive one-year periods thereafter, unless terminated earlier by either party upon at least 60 days' notice. However, either party may terminate the Professional Services Agreement in part with respect to any particular service it receives for any reason upon at least 30 days' notice. In connection with the completion of the Share Exchange on February 28, 2017, DISH Network and EchoStar amended the Professional Services Agreement to, among other things, provide certain transition services to each other related to the Share Exchange Agreement. In addition, on May 19, 2019, DISH Network entered into a Master Transaction Agreement, pursuant to which, effective September 10, 2019, DISH Network and EchoStar amended the Professional Services Agreement to, among other things, provide certain transition services to each other related to the Master Transaction Agreement and to remove certain services no longer necessary as a result of the Master Transaction Agreement. Revenue for services provided by us to EchoStar under the Professional Services Agreement is recorded in "Equipment sales and other revenue" on our Consolidated Statements of Operations and Comprehensive Income (Loss).

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Other Agreements - EchoStar

Tax Sharing Agreement. In connection with the Spin-off, DISH Network entered into a tax sharing agreement (the “Tax Sharing Agreement”) with EchoStar which governs our 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 will indemnify EchoStar for such taxes. However, DISH Network is not liable for and will not indemnify EchoStar 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 EchoStar’s stock, stock options or assets; (ii) any action that EchoStar takes or fails to take; or (iii) any action that EchoStar takes that is inconsistent with the information and representations furnished to the Internal Revenue Service (“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, EchoStar is 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 only 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.

Tax Matters Agreement. In connection with the completion of the Share Exchange, DISH Network and EchoStar entered into a Tax Matters Agreement, which governs certain rights, responsibilities and obligations with respect to taxes of the Transferred Businesses pursuant to the Share Exchange. Generally, EchoStar is responsible for all tax returns and tax liabilities for the Transferred Businesses for periods prior to the Share Exchange, and DISH Network are responsible for all tax returns and tax liabilities for the Transferred Businesses from and after the Share Exchange. Both DISH Network and EchoStar have made certain tax-related representations and are subject to various tax-related covenants after the consummation of the Share Exchange. Both DISH Network and EchoStar 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 EchoStar 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 described above, which continues in full force and effect.

Patent Cross-License Agreements. In December 2011, DISH Network and EchoStar entered into separate patent cross-license agreements with the same third party whereby: (i) EchoStar and such third party licensed their respective patents to each other subject to certain conditions; and (ii) DISH Network and such third party licensed their respective patents to each other subject to certain conditions (each, a “Cross-License Agreement”). Each Cross License Agreement covers patents acquired by the respective party prior to January 1, 2017 and aggregate payments under both Cross-License Agreements total less than \$10 million. Each Cross License Agreement also contains an option to extend each Cross-License Agreement to include patents acquired by the respective party prior to January 1, 2022. In December 2016, DISH Network and EchoStar independently exercised their respective options to extend each Cross-License Agreement. The aggregate additional payments to such third-party was less than \$3 million. Since the aggregate payments under both Cross-License Agreements were based on the combined annual revenues of DISH Network and EchoStar, DISH Network and EchoStar agreed to allocate their respective payments to such third party based on their respective percentage of combined total revenue.

Rovi License Agreement. On August 19, 2016, we entered into a ten-year patent license agreement (the “Rovi License Agreement”) with Rovi Corporation (“Rovi”) and, for certain limited purposes, EchoStar. EchoStar is a party to the Rovi License Agreement solely with respect to certain provisions relating to the prior patent license agreement between EchoStar and Rovi. There are no payments between us and EchoStar under the Rovi License Agreement.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

Hughes Broadband Master Services Agreement. In March 2017, DISH Network L.L.C. (“DNLLC”) and HNS entered into a master service agreement (the “MSA”) pursuant to which DNLLC, among other things: (i) has the right, but not the obligation, to market, promote and solicit orders for the Hughes broadband satellite service and related equipment; and (ii) installs Hughes service equipment with respect to activations generated by DNLLC. Under the MSA, HNS will make certain payments to DNLLC for each Hughes service activation generated, and installation performed, by DNLLC. Payments from HNS for services provided are recorded in “Subscriber-related revenue” on our Consolidated Statements of Operations and Comprehensive Income (Loss). The MSA has an initial term of five years with automatic renewal for successive one year terms. After the first anniversary of the MSA, either party has the ability to terminate the 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 MSA, HNS will continue to provide the Hughes service to subscribers and make certain payments to DNLLC pursuant to the terms and conditions of the MSA. For the years ended December 31, 2019, 2018 and 2017, we purchased broadband equipment from HNS of \$14 million, \$21 million and \$22 million under the MSA, respectively.

Employee Matters Agreement – Share Exchange. In connection with the completion of the Share Exchange, effective March 1, 2017, DISH Network and EchoStar entered into an Employee Matters Agreement that addresses the transfer of employees from EchoStar 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 EchoStar will be responsible for certain existing employee-related litigation as well as certain pre-Share Exchange compensation and benefits for employees transferring to DISH Network in connection with the Share Exchange.

Intellectual Property and Technology License Agreement. In connection with the completion of the Share Exchange, effective March 1, 2017, DISH Network and EchoStar entered into an Intellectual Property and Technology License Agreement (“IPTLA”), pursuant to which DISH Network and EchoStar 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, EchoStar granted to DISH Network a license to its intellectual property and technology for use by DISH Network, among other things, in connection with its continued operation of the Transferred Businesses acquired pursuant to the Share Exchange Agreement, including a limited license to use the “EHOSTAR” trademark during a transition period. EchoStar retains full ownership of the “EHOSTAR” trademark. In addition, DISH Network granted a license back to EchoStar, among other things, for the continued use of all intellectual property and technology transferred to DISH Network pursuant to the Share Exchange Agreement that is used in EchoStar’s retained businesses.

Related Party Transactions with NagraStar L.L.C.

As a result of the completion of the Share Exchange on February 28, 2017, we own a 50% interest in NagraStar, a joint venture that is our primary provider of encryption and related security systems intended to assure that only authorized customers have access to our programming. Certain payments related to NagraStar are recorded in “Subscriber-related expenses” on our Consolidated Statements of Operations and Comprehensive Income (Loss). In addition, certain other payments are initially included in “Inventory” and are subsequently capitalized as “Property and equipment, net” on our Consolidated Balance Sheets or expensed as “Subscriber acquisition costs” or “Subscriber-related expenses” on our Consolidated Statements of Operations and Comprehensive Income (Loss) when the equipment is deployed. We record all payables in “Trade accounts payable” or “Other accrued expenses” on our Consolidated Balance Sheets. Our investment in NagraStar is accounted for using the equity method.

DISH DBS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued

The table below summarizes our transactions with NagraStar.

	For the Years Ended December 31,		
	2019	2018	2017
	(In thousands)		
Purchases (including fees):			
Purchases from NagraStar	\$ 56,284	\$ 72,162	\$ 71,167
	As of December 31,		
	2019	2018	
	(In thousands)		
Amounts Payable and Commitments:			
Amounts payable to NagraStar		\$ 9,630	\$ 9,871
Commitments to NagraStar		\$ 4,893	\$ 3,888

Related Party Transactions with Dish Mexico

Dish Mexico, S. de R.L. de C.V. (“Dish Mexico”) is an entity that provides direct-to-home satellite services in Mexico, which is owned 49% by EchoStar. We provide certain broadcast services, certain satellite services and sell hardware such as digital set-top boxes and related components to Dish Mexico, which are recorded in “Equipment sales and other revenue” on our Consolidated Statements of Operations and Comprehensive Income (Loss).

The table below summarizes our transactions with Dish Mexico:

	For the Years Ended December 31,		
	2019	2018	2017
	(In thousands)		
Sales:			
Digital receivers and related components	\$ —	\$ 1,227	\$ 1,891
Uplink services	5,620	5,426	3,994
Total	\$ 5,620	\$ 6,653	\$ 5,885
	As of December 31,		
	2019	2018	
	(In thousands)		
Amounts Receivable:			
Amounts receivable from Dish Mexico		\$ 1,191	\$ 1,370

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
Section 302 Certification

I, W. Erik Carlson, certify that:

1. I have reviewed this Annual Report on Form 10-K of DISH DBS Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 25, 2020

/s/ W. Erik Carlson
President and Chief Executive Officer

CERTIFICATION OF CHIEF FINANCIAL OFFICER
Section 302 Certification

I, Paul W. Orban, certify that:

1. I have reviewed this Annual Report on Form 10-K of DISH DBS Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 25, 2020

/s/ Paul W. Orban
Chief Financial Officer

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
Section 906 Certification

Pursuant to 18 U.S.C. § 1350, the undersigned officer of DISH DBS Corporation (the "Company") hereby certifies that to the best of his knowledge the Company's Annual Report on Form 10-K for the year ended December 31, 2019 (the "Report") fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: February 25, 2020

Name: /s/ W. Erik Carlson

Title: President and Chief Executive Officer

The foregoing certification is being furnished solely pursuant to 18 U.S.C. § 1350 and is not being filed as part of the Report or as a separate disclosure document.

A signed original of this written statement required by Section 906, or other document authenticating, acknowledging, or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

CERTIFICATION OF CHIEF FINANCIAL OFFICER
Section 906 Certification

Pursuant to 18 U.S.C. § 1350, the undersigned officer of DISH DBS Corporation (the "Company") hereby certifies that to the best of his knowledge the Company's Annual Report on Form 10-K for the year ended December 31, 2019 (the "Report") fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: February 25, 2020

Name: /s/ Paul W. Orban

Title: Chief Financial Officer

The foregoing certification is being furnished solely pursuant to 18 U.S.C. § 1350 and is not being filed as part of the Report or as a separate disclosure document.

A signed original of this written statement required by Section 906, or other document authenticating, acknowledging, or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.
