
SIRIUS XM RADIO INC.

(Exact name of company as specified in its charter)

QUARTERLY REPORT

For the Quarterly Period Ended June 30, 2020

Explanatory Note

Sirius XM Radio Inc. (“Sirius XM”) is furnishing this Quarterly Report for the quarterly period ended June 30, 2020 (the “Quarterly Report”) in order to comply with the reporting obligations in the indentures governing its 3.875% Senior Notes due 2022, 4.625% Senior Notes due 2023, 4.625% Senior Notes due 2024, 5.375% Senior Notes due 2025, 5.375% Senior Notes due 2026, 5.00% Senior Notes due 2027, 5.50% Senior Notes due 2029 and 4.125% Senior Notes due 2030 (collectively, the “Notes”).

Before making any investment decisions in Sirius XM or Sirius XM Holdings Inc. (“Holdings”), investors should read the following unaudited consolidated financial statements and Management’s Discussion and Analysis of Financial Condition and Results of Operations (“MD&A”) of Sirius XM in conjunction with Holdings’ Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2020 and Holdings’ other reports available through the Securities and Exchange Commission website at www.sec.gov and our website at www.siriusxm.com, and with Sirius XM’s other reports available through our website. Holdings’ Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2020 is hereby incorporated by reference except for Section 9A and Exhibits 31.1, 31.2, 32.1 and 32.2 contained therein. Sirius XM is a wholly-owned subsidiary of Holdings and Holdings has no operations independent of Sirius XM. Refer to Note 1 to the unaudited consolidated financial statements included within this Quarterly Report for an explanation of differences between Sirius XM and Holdings’ unaudited consolidated financial statements.

The terms “Sirius XM,” “we,” “us,” “our,” and the “Company,” as used herein and unless otherwise stated or indicated by context, refer to Sirius XM Radio Inc. and its subsidiaries. “Pandora” refers to Sirius XM’s wholly owned subsidiary Pandora Media, LLC (the successor to Pandora Media, Inc.) and its subsidiaries.

SIRIUS XM RADIO INC. AND SUBSIDIARIES
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SIRIUS XM RADIO INC. AND SUBSIDIARIES
(a wholly-owned subsidiary of Sirius XM Holdings Inc.)
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(UNAUDITED)

<i>(in millions)</i>	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
	2020	2019	2020	2019
Revenue:				
Subscriber revenue	\$ 1,578	\$ 1,537	\$ 3,163	\$ 2,995
Advertising revenue	236	358	521	567
Equipment revenue	25	41	66	82
Other revenue	35	41	76	77
Total revenue	1,874	1,977	3,826	3,721
Operating expenses:				
Cost of services:				
Revenue share and royalties	587	600	1,157	1,092
Programming and content	110	116	228	222
Customer service and billing	122	120	240	233
Transmission	43	40	83	71
Cost of equipment	4	6	8	12
Subscriber acquisition costs	48	104	147	212
Sales and marketing	217	232	442	415
Engineering, design and development	61	74	132	128
General and administrative	119	120	226	255
Depreciation and amortization	124	119	256	226
Acquisition and restructuring costs	24	7	24	83
Total operating expenses	1,459	1,538	2,943	2,949
Income from operations	415	439	883	772
Other (expense) income:				
Interest expense	(101)	(95)	(198)	(184)
Loss on extinguishment of debt	—	—	—	(1)
Other (expense) income	(14)	(2)	30	2
Total other (expense) income	(115)	(97)	(168)	(183)
Income before income taxes	300	342	715	589
Income tax expense	(69)	(76)	(158)	(157)
Net income attributable to Sirius XM Radio Inc.'s sole stockholder	\$ 231	\$ 266	\$ 557	\$ 432
Foreign currency translation adjustment, net of tax	10	7	(15)	14
Total comprehensive income attributable to Sirius XM Radio Inc.'s sole stockholder	\$ 241	\$ 273	\$ 542	\$ 446

See accompanying notes to the unaudited consolidated financial statements.

SIRIUS XM RADIO INC. AND SUBSIDIARIES
(a wholly-owned subsidiary of Sirius XM Holdings Inc.)
CONSOLIDATED BALANCE SHEETS

(in millions, except per share data)

ASSETS	June 30, 2020 (unaudited)	December 31, 2019
Current assets:		
Cash and cash equivalents	\$ 1,770	\$ 106
Receivables, net	497	670
Inventory, net	12	11
Related party current assets	11	22
Prepaid expenses and other current assets	205	194
Total current assets	2,495	1,003
Property and equipment, net	1,592	1,626
Intangible assets, net	3,398	3,467
Goodwill	3,845	3,828
Related party long-term assets	8,915	8,400
Deferred tax assets	50	166
Operating lease right-of-use assets	438	466
Other long-term assets	129	140
Total assets	\$ 20,862	\$ 19,096
LIABILITIES AND STOCKHOLDER EQUITY		
Current liabilities:		
Accounts payable and accrued expenses	\$ 1,022	\$ 1,151
Accrued interest	157	160
Current portion of deferred revenue	1,833	1,930
Current maturities of debt	1,492	2
Operating lease current liabilities	46	46
Related party current liabilities	2	4
Total current liabilities	4,552	3,293
Long-term deferred revenue	123	130
Long-term debt	7,892	7,917
Deferred tax liabilities	70	70
Operating lease liabilities	430	456
Other long-term liabilities	117	94
Total liabilities	13,184	11,960
Commitments and contingencies (Note 15)		
Stockholder equity:		
Common stock, par value \$0.001 per share; 9,000 shares authorized; 0.001 shares issued and outstanding at June 30, 2020 and December 31, 2019, respectively	—	—
Accumulated other comprehensive (loss) income, net of tax	(7)	8
Additional paid-in capital	8,680	8,680
Accumulated deficit	(995)	(1,552)
Total stockholder equity	7,678	7,136
Total liabilities and stockholder equity	\$ 20,862	\$ 19,096

See accompanying notes to the unaudited consolidated financial statements.

SIRIUS XM RADIO INC. AND SUBSIDIARIES
(a wholly-owned subsidiary of Sirius XM Holdings Inc.)
CONSOLIDATED STATEMENTS OF STOCKHOLDER EQUITY
(UNAUDITED)

For the Six Months Ended June 30, 2020

<i>(in millions)</i>	Common Stock		Accumulated Other Comprehensive Income (Loss)	Additional Paid-in Capital	Accumulated Deficit	Total Stockholder Equity
	Shares	Amount				
Balance at December 31, 2019	—	\$ —	\$ 8	\$ 8,680	\$ (1,552)	\$ 7,136
Comprehensive income, net of tax	—	—	(15)	—	557	542
Balance at June 30, 2020	—	\$ —	\$ (7)	\$ 8,680	\$ (995)	\$ 7,678

For the Three Months Ended June 30, 2020

<i>(in millions)</i>	Common Stock		Accumulated Other Comprehensive Income (Loss)	Additional Paid-in Capital	Accumulated Deficit	Total Stockholder Equity
	Shares	Amount				
Balance at March 31, 2020	—	\$ —	\$ (17)	\$ 8,680	\$ (1,226)	\$ 7,437
Comprehensive income, net of tax	—	—	10	—	231	241
Balance at June 30, 2020	—	\$ —	\$ (7)	\$ 8,680	\$ (995)	\$ 7,678

See accompanying notes to the unaudited consolidated financial statements.

SIRIUS XM RADIO INC. AND SUBSIDIARIES
(a wholly-owned subsidiary of Sirius XM Holdings Inc.)
CONSOLIDATED STATEMENTS OF STOCKHOLDER EQUITY - Continued
(UNAUDITED)

For the Six Months Ended June 30, 2019

<i>(in millions)</i>	Common Stock		Accumulated Other Comprehensive (Loss) Income	Additional Paid- in Capital	Accumulated Deficit	Total Stockholder Equity
	Shares	Amount				
Balance at December 31, 2018	—	\$ —	\$ (6)	\$ 8,680	\$ (2,450)	\$ 6,224
Comprehensive income, net of tax	—	—	14	—	432	446
Balance at June 30, 2019	—	\$ —	\$ 8	\$ 8,680	\$ (2,018)	\$ 6,670

For the Three Months Ended June 30, 2019

<i>(in millions)</i>	Common Stock		Accumulated Other Comprehensive (Loss) Income	Additional Paid- in Capital	Accumulated Deficit	Total Stockholder Equity
	Shares	Amount				
Balance at March 31, 2019	—	\$ —	\$ 1	\$ 8,680	\$ (2,284)	\$ 6,397
Comprehensive income, net of tax	—	—	7	—	266	273
Balance at June 30, 2019	—	\$ —	\$ 8	\$ 8,680	\$ (2,018)	\$ 6,670

See accompanying notes to the unaudited consolidated financial statements.

SIRIUS XM RADIO INC. AND SUBSIDIARIES
(a wholly-owned subsidiary of Sirius XM Holdings Inc.)
CONSOLIDATED STATEMENTS OF CASH FLOWS
(UNAUDITED)

<i>(in millions)</i>	For the Six Months Ended June 30,	
	2020	2019
Cash flows from operating activities:		
Net income	\$ 557	\$ 432
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	256	226
Non-cash interest expense, net of amortization of premium	7	5
Provision for doubtful accounts	38	27
Amortization of deferred income related to equity method investment	(1)	(1)
Loss on extinguishment of debt	—	1
Loss on unconsolidated entity investments, net	3	10
Gain on fair value instrument	(22)	(5)
Dividend received from unconsolidated entity investment	1	1
Loss on restructuring	24	—
Loss (gain) on other investments	1	(3)
Share-based payment expense	107	127
Deferred income taxes	119	146
Amortization of right-of-use assets	28	2
Changes in operating assets and liabilities:		
Receivables	134	(69)
Inventory	(4)	6
Related party, net	(42)	(75)
Prepaid expenses and other current assets	(13)	(20)
Other long-term assets	10	7
Accounts payable and accrued expenses	(136)	36
Accrued interest	(3)	6
Deferred revenue	(105)	(4)
Operating lease liabilities	(26)	7
Other long-term liabilities	22	5
Net cash provided by operating activities	955	867
Cash flows from investing activities:		
Additions to property and equipment	(149)	(160)
Purchases of other investments	(7)	(7)
Acquisition of business, net of cash acquired	(28)	313
Sale of short-term investments	—	72
Investments in related parties and other equity investees	(84)	(9)
Repayment from related party	3	—
Net cash (used in) provided by investing activities	(265)	209
Cash flows from financing activities:		
Intercompany financing activities	(507)	(1,556)
Revolving credit facility, net of deferred financing costs	—	(439)
Proceeds from long-term borrowings, net of costs	1,483	1,236
Principal payments of long-term borrowings	(5)	(156)
Net cash provided by (used in) financing activities	971	(915)
Net increase in cash, cash equivalents and restricted cash	1,661	161
Cash, cash equivalents and restricted cash at beginning of period	120	65
Cash, cash equivalents and restricted cash at end of period ⁽¹⁾	\$ 1,781	\$ 226

See accompanying notes to the unaudited consolidated financial statements.

SIRIUS XM RADIO INC. AND SUBSIDIARIES
(a wholly-owned subsidiary of Sirius XM Holdings Inc.)
CONSOLIDATED STATEMENTS OF CASH FLOWS - Continued
(UNAUDITED)

<i>(in millions)</i>	For the Six Months Ended June 30,	
	2020	2019
Supplemental Disclosure of Cash and Non-Cash Flow Information		
Cash paid during the period for:		
Interest, net of amounts capitalized	\$ 194	\$ 171
Income taxes paid	\$ 10	\$ 5
Non-cash investing and financing activities:		
Holdings' shares issued related to acquisition of a business	\$ —	\$ 2,355
Accumulated other comprehensive (loss) income, net of tax	\$ (15)	\$ 14

- (1) The following table reconciles cash, cash equivalents and restricted cash per the statement of cash flows to the balance sheet. The restricted cash balances are primarily due to letters of credit which have been issued to the landlords of leased office space. The terms of the letters of credit primarily extend beyond one year.

<i>(in millions)</i>	June 30, 2020	December 31, 2019	June 30, 2019	December 31, 2018
Cash and cash equivalents	\$ 1,770	\$ 106	\$ 215	\$ 54
Restricted cash included in Other long-term assets	11	14	11	11
Total cash, cash equivalents and restricted cash at end of period	\$ 1,781	\$ 120	\$ 226	\$ 65

See accompanying notes to the unaudited consolidated financial statements.

SIRIUS XM RADIO INC. AND SUBSIDIARIES
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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(UNAUDITED)
(Dollars and shares in millions, except per share amounts)

(1) Business & Basis of Presentation

Business

We operate two complementary audio entertainment businesses - our Sirius XM business and our Pandora business.

Sirius XM

Our Sirius XM business features music, sports, entertainment, comedy, talk, news, traffic and weather channels, as well as infotainment services, in the United States on a subscription fee basis. The Sirius XM service is distributed through our two proprietary satellite radio systems and through the internet via applications for mobile devices, home devices and other consumer electronic equipment. Satellite radios are primarily distributed through automakers, retailers and our website. Our Sirius XM service is also available through our user interface, which we call “360L,” that combines our satellite and streaming services into a single, cohesive in-vehicle entertainment experience. The primary source of revenue from our Sirius XM business is generated from subscription fees, with most of our customers subscribing to monthly, quarterly, semi-annual or annual plans. We also derive revenue from advertising on select non-music channels, direct sales of our satellite radios and accessories, and other ancillary services. As of June 30, 2020, our Sirius XM business had approximately 34.3 million subscribers.

In addition to our audio entertainment businesses, we provide connected vehicle services to several automakers. These services are designed to enhance the safety, security and driving experience of consumers. We also offer a suite of data services that includes graphical weather, fuel prices, sports schedules and scores and movie listings, a traffic information service that includes information as to road closings, traffic flow and incident data to consumers with compatible in-vehicle navigation systems, and real-time weather services in vehicles, boats and planes.

In May 2020, we terminated the Automatic Labs Inc. (“Automatic”) service, which was part of our connected services business. Automatic operated a service for consumers and auto dealers and offered an install-it-yourself adapter and mobile application, which transformed older vehicles into connected vehicles. During the three and six months ended June 30, 2020, we recorded \$24 of restructuring expenses in our unaudited consolidated statements of comprehensive income related to this termination of the service. Refer to Note 4 for more information.

Sirius XM also holds a 70% equity interest and 33% voting interest in Sirius XM Canada Holdings Inc. (“Sirius XM Canada”). Sirius XM Canada's subscribers are not included in our subscriber count or subscriber-based operating metrics.

Pandora

Our Pandora business operates a music, comedy and podcast streaming discovery platform, offering a personalized experience for each listener wherever and whenever they want to listen, whether through mobile devices, car speakers or connected devices. Pandora enables listeners to create personalized stations and playlists, discover new content, hear artist- and expert-curated playlists, podcasts and select Sirius XM content as well as search and play songs and albums on-demand. Pandora is available as an ad-supported radio service, a radio subscription service, called Pandora Plus, and an on-demand subscription service, called Pandora Premium. As of June 30, 2020, Pandora had approximately 6.3 million subscribers. The majority of revenue from our Pandora business is generated from advertising on our Pandora ad-supported radio service. In addition, Pandora has an arrangement with SoundCloud Holdings, LLC (“SoundCloud”) to be its exclusive US ad sales representative. Through this arrangement Pandora is able to offer advertisers the ability to execute campaigns in the US across the Pandora and SoundCloud listening platforms. In addition, through AdsWizz Inc., Pandora provides a comprehensive digital audio and programmatic advertising technology platform, which connects audio publishers and advertisers with a variety of ad insertion, campaign trafficking, yield optimization, programmatic buying, marketplace and podcast monetization solutions.

On June 16, 2020, Sirius XM acquired Simplecast for \$28 in cash. Simplecast is a podcast management and analytics platform, powering podcasts from creators and brands. Refer to Note 3 for more information on this acquisition.

On February 10, 2020, Sirius XM invested \$75 in SoundCloud. SoundCloud is the world’s largest open audio platform, with a connected community of creators, listeners, and curators. SoundCloud’s platform enables its users to upload, promote,

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
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share and create audio entertainment. The minority investment complements the existing ad sales relationship between SoundCloud and Pandora. Refer to Note 11 for more information on this investment.

Impact of the coronavirus (“COVID-19”) pandemic

The extent to which the COVID-19 pandemic and the related economic impact may affect our financial condition or results of operations is uncertain. The extent of the impact on our operational and financial performance will depend on various factors, including the duration and spread of the outbreak and its impact on vehicle sales, advertising and consumer spending. To date, the pandemic has not increased our costs of or access to capital under our revolving credit facility and debt markets, and we do not believe it is reasonably likely to in the future. In addition, we do not believe that the pandemic will affect our ongoing ability to meet the covenants in our debt instruments, including under our revolving credit facility. Due to the nature of our subscription business, the effect of the COVID-19 pandemic will not be fully reflected in our results of operations until future periods.

Liberty Media

As of June 30, 2020, Liberty Media Corporation (“Liberty Media”) beneficially owned, directly and indirectly, approximately 73% of the outstanding shares of Holdings' common stock. As a result, Holdings is a “controlled company” for the purposes of the NASDAQ corporate governance requirements.

Basis of Presentation

The accompanying unaudited consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles (“GAAP”). All significant intercompany transactions have been eliminated in consolidation. Certain numbers in our prior period consolidated financial statements and footnotes have been reclassified or consolidated to conform to our current period presentation.

The unaudited consolidated financial statements for Sirius XM for the quarterly period ended June 30, 2020 are essentially identical to the unaudited consolidated financial statements included in Holdings' Form 10-Q for the quarterly period ended June 30, 2020, filed with the SEC on July 30, 2020, with the following exceptions:

- As a result of our corporate reorganization effective November 15, 2013, all of the outstanding shares of Sirius XM's common stock were converted, on a share for share basis, into identical shares of common stock of Holdings and all equity-related transactions, including repurchases of Holdings' common stock, dividend payments on shares of Holdings' common stock, the issuance of equity related to stock-based compensation to Sirius XM employees, Holdings' directors and third parties, the issuance of Holdings' common stock related to the recapitalization of Sirius XM Canada and the issuance of Holdings' common stock related to the Pandora Acquisition have been reported as related party transactions within Sirius XM's unaudited consolidated financial statements. Refer to Note 11 for additional information related to related party transactions.
- As a result of the Pandora Acquisition effective February 1, 2019, we assumed Pandora's 1.75% Convertible Senior Notes due 2023 (the “Pandora 2023 Notes”). Upon the occurrence of certain events, the Pandora 2023 Notes can be convertible into shares of Holdings' common stock. Holdings allocates the principal amount of the Pandora 2023 Notes between liability and equity components. We have elected to measure the Pandora 2023 Notes at fair value with changes in fair value recorded within Sirius XM's unaudited consolidated statements of operations. Refer to Note 12 for more information regarding the Pandora 2023 Notes.

In the opinion of our management, all normal recurring adjustments necessary for a fair presentation of our unaudited consolidated financial statements as of June 30, 2020 and for the three and six months ended June 30, 2020 and 2019 have been made.

Interim results are not necessarily indicative of the results that may be expected for a full year. This Quarterly Report should be read together with our Annual Report for the year ended December 31, 2019, which is available on our website at <http://investor.siriusxm.com/investoroverview/default.aspx#dividend-tab2>, and with Holdings' Annual Report on Form 10-K for the year ended December 31, 2019, which was filed with the SEC on February 4, 2020.

SIRIUS XM RADIO INC. AND SUBSIDIARIES
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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
(UNAUDITED)
(Dollars and shares in millions, except per share amounts)

Public companies, including our parent Holdings, are required to disclose certain information about their reportable operating segments. Operating segments are defined as significant components of an enterprise for which separate financial information is available and is evaluated on a regular basis by the chief operating decision maker in deciding how to allocate resources to an individual segment and in assessing performance of the segment. We have determined that we have two reportable segments as our chief operating decision maker, our Chief Executive Officer, assesses performance and allocates resources based on the financial results of these segments. Refer to Note 17 for information related to our segments.

We have evaluated events subsequent to the balance sheet date and prior to the furnishing of this Quarterly Report for the three and six months ended June 30, 2020 and have determined that no events have occurred that would require adjustment to our unaudited consolidated financial statements. For a discussion of subsequent events that do not require adjustment to our unaudited consolidated financial statements refer to Note 18.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and footnotes. Estimates, by their nature, are based on judgment and available information. Actual results could differ materially from those estimates. Significant estimates inherent in the preparation of the accompanying unaudited consolidated financial statements include asset impairment, depreciable lives of our satellites, share-based payment expense and income taxes.

We are not presently aware of any events or circumstances arising from the COVID-19 pandemic that would require us to update our estimates, judgments or revise the carrying value of our assets or liabilities. Our estimates may change, however, as new events occur and additional information is obtained, any such changes will be recognized in the consolidated financial statements. Actual results could differ from estimates and any such differences may be material to our financial statements.

(2) Summary of Significant Accounting Policies

Fair Value Measurements

For assets and liabilities required to be reported at fair value, GAAP provides a hierarchy that prioritizes inputs to valuation techniques used to measure fair value into three broad levels. Level 1 inputs are based on unadjusted quoted prices in active markets for identical instruments. Level 2 inputs are inputs, other than quoted market prices included within Level 1, that are observable for the asset or liability, either directly or indirectly. Level 3 inputs are unobservable inputs for the asset or liability. As of June 30, 2020 and December 31, 2019, the carrying amounts of cash and cash equivalents, receivables, and accounts payable approximated fair value due to the short-term nature of these instruments.

Our liabilities measured at fair value were as follows:

	June 30, 2020				December 31, 2019			
	Level 1	Level 2	Level 3	Total Fair Value	Level 1	Level 2	Level 3	Total Fair Value
Liabilities:								
Debt ^(a)	—	\$ 9,655	—	\$ 9,655	—	\$ 8,378	—	\$ 8,378

(a) The fair value for non-publicly traded debt is based upon estimates from a market maker and brokerage firm. Refer to Note 12 for information related to the carrying value of our debt as of June 30, 2020 and December 31, 2019.

SIRIUS XM RADIO INC. AND SUBSIDIARIES
(a wholly-owned subsidiary of Sirius XM Holdings Inc.)
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
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Accumulated Other Comprehensive Income (Loss)

Accumulated other comprehensive loss of \$7 was primarily comprised of the cumulative foreign currency translation adjustments related to our investment in and loan to Sirius XM Canada (refer to Note 11 for additional information). During the three and six months ended June 30, 2020, we recorded foreign currency translation adjustment income (loss) of \$10 and \$(15), respectively, net of tax (expense) benefit of \$(3) and \$5, respectively. During the three and six months ended June 30, 2019, we recorded foreign currency translation adjustment income of \$7 and \$14, respectively, net of a tax expense of \$3 and \$5, respectively.

Recently Adopted Accounting Policies

In August 2018, the Financial Accounting Standards Board (“FASB”) issued ASU 2018-15, Intangibles—Goodwill and Other—Internal-Use Software (Subtopic 350-40): Customer’s Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract. This ASU aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. The implementation costs incurred in a hosting arrangement that is a service contract should be presented as a prepaid asset in the balance sheet and expensed over the term of the hosting arrangement to the same line item in the statement of income as the costs related to the hosting fees. The guidance in this ASU is effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years, and early adoption is permitted including adoption in any interim period. The amendments will be applied prospectively to all implementation costs incurred after adoption. This ASU did not, and is not expected to, have a material impact on our consolidated statements of operations.

(3) Acquisitions

Simplecast

On June 16, 2020, Sirius XM acquired Simplecast for \$28 in cash. Simplecast is a podcast management and analytics platform. In connection with the acquisition, we recognized goodwill of \$17, amortizable intangible assets of \$12, other assets of less than \$1 and deferred tax liabilities of \$1.

Pandora

On February 1, 2019, through a series of transactions, Pandora Media, Inc., became an indirect wholly owned subsidiary of Sirius XM and continues to operate as Pandora Media, LLC (the “Pandora Acquisition”). In connection with the Pandora Acquisition, Holdings purchased all of the outstanding shares of the capital stock of Pandora for \$2,355 by converting each outstanding share of Pandora common stock into 1.44 shares of Holdings' common stock and we also canceled our preferred stock investment in Pandora for \$524 for total consideration of \$2,879. Net cash acquired was \$313. As part of the Pandora Acquisition, Holdings unconditionally guaranteed all of the payment obligations of Pandora under its outstanding 1.75% convertible senior notes due 2020 and 1.75% convertible senior notes due 2023.

The table below shows the value of the consideration paid in connection with the Pandora Acquisition:

	Total
Pandora common stock outstanding	272
Exchange ratio	1.44
Holdings' common stock issued	392
Price per share of Holdings common stock	\$ 5.83
Value of Holdings' common stock issued to Pandora stockholders	\$ 2,285
Value of replacement equity awards attributable to pre-combination service	\$ 70
Consideration of Holdings' common stock and replacement equity awards for pre-combination service	\$ 2,355
Sirius XM's Pandora preferred stock investment (related party fair value instrument) canceled	\$ 524
Total consideration for Pandora Acquisition	\$ 2,879
Value attributed to par at \$0.001 par value	\$ 1
Balance to capital in excess of par value	\$ 2,354

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
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We recognized acquisition related costs of \$7 and \$83 that were expensed in Acquisition and restructuring costs in our unaudited consolidated statements of comprehensive income during the three and six months ended June 30, 2019, respectively.

Pro Forma Financial Information

Pandora was consolidated into our financial statements starting on the acquisition date, February 1, 2019. The aggregate revenue and net loss of Pandora consolidated into our financial statements was \$441 and \$56, respectively, for the three months ended June 30, 2019 and \$692 and \$178, respectively, for the six months ended June 30, 2019. The following pro forma financial information presents our results as if the Pandora Acquisition had occurred on January 1, 2019:

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
	2020	2019	2020	2019
Total revenue	\$ 1,876	\$ 1,979	\$ 3,830	\$ 3,839
Net income	\$ 231	\$ 268	\$ 557	\$ 453

These pro forma results are based on estimates and assumptions, which we believe are reasonable. They are not the results that would have been realized had the acquisition actually occurred on January 1, 2019 and are not indicative of our consolidated results of operations in future periods. The pro forma results primarily include adjustments related to amortization of acquired intangible assets, depreciation of property and equipment, acquisition costs, fair value gain or loss on the Pandora investment and associated tax impacts.

(4) Restructuring Costs

In May 2020, we terminated the Automatic service, which was part of our connected services business. During the three and six months ended June 30, 2020, we recorded \$24 of restructuring expenses primarily related to the write down of property and equipment, definite lived intangible assets and certain other assets in Acquisition and restructuring costs in our unaudited consolidated statements of comprehensive income. The termination of the Automatic service does not meet the requirements to be reported as a discontinued operation in our unaudited consolidated statements of comprehensive income because the termination of the service does not represent a strategic shift that will have a major effect on our operations and financial results.

(5) Receivables, net

Receivables, net, includes customer accounts receivable, receivables from distributors and other receivables. We do not have any customer receivables that individually represent more than ten percent of our receivables.

Customer accounts receivable, net, includes receivables from our subscribers, advertising customers and other customers, and is stated at amounts due, net of an allowance for doubtful accounts. Our allowance for doubtful accounts is based upon our assessment of various factors. We consider historical experience, the age of the receivable balances, current economic conditions, industry experience and other factors that may affect the counterparty's ability to pay. Bad debt expense is included in Customer service and billing expense in our unaudited consolidated statements of comprehensive income.

Receivables from distributors primarily include billed and unbilled amounts due from automakers for services included in the sale or lease price of vehicles, as well as billed amounts due from wholesale distributors of our satellite radios. Other receivables primarily include amounts due from manufacturers of our radios, modules and chipsets where we are entitled to subsidies and royalties based on the number of units produced. We have not established an allowance for doubtful accounts for our receivables from distributors or other receivables as we have historically not experienced any significant collection issues with automakers or other third parties.

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Receivables, net, consists of the following:

	June 30, 2020	December 31, 2019
Gross customer accounts receivable	\$ 413	\$ 546
Allowance for doubtful accounts	(18)	(14)
Customer accounts receivable, net	\$ 395	\$ 532
Receivables from distributors	82	113
Other receivables	20	25
Total receivables, net	<u>\$ 497</u>	<u>\$ 670</u>

(6) Inventory, net

Inventory consists of finished goods, refurbished goods, chipsets and other raw material components used in manufacturing radios. Inventory is stated at the lower of cost or market. We record an estimated allowance for inventory that is considered slow moving or obsolete or whose carrying value is in excess of net realizable value. The provision related to products purchased for resale in our direct to consumer distribution channel and components held for resale by us is reported as a component of Cost of equipment in our unaudited consolidated statements of comprehensive income. The provision related to inventory consumed in our OEM channel is reported as a component of Subscriber acquisition costs in our unaudited consolidated statements of comprehensive income.

Inventory, net, consists of the following:

	June 30, 2020	December 31, 2019
Raw materials	\$ —	\$ 3
Finished goods	15	13
Allowance for obsolescence	(3)	(5)
Total inventory, net	<u>\$ 12</u>	<u>\$ 11</u>

(7) Goodwill

Goodwill represents the excess of the purchase price over the estimated fair value of the net tangible and identifiable intangible assets acquired in business combinations. Our annual impairment assessment of our two reporting units is performed as of the fourth quarter of each year, and an assessment is performed at other times if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount. ASC 350, *Intangibles - Goodwill and Other*, states that an entity should perform its annual or interim goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount and recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value.

As of June 30, 2020, there were no indicators of impairment, and no impairment losses were recorded for goodwill during the three and six months ended June 30, 2020 and 2019. As of June 30, 2020, the cumulative balance of goodwill impairments recorded was \$4,766, which was recognized during the year ended December 31, 2008 and is included in the carrying value of the goodwill allocated to our Sirius XM reporting unit.

As of June 30, 2020, the carrying amount of goodwill for our Sirius XM and Pandora reporting units was \$2,290 and \$1,570, respectively. We recorded additional goodwill of \$17 during the three and six months ended June 30, 2020 related to the acquisition of Simplecast in June 2020 which was recorded to our Pandora reporting unit. As of December 31, 2019, the carrying amount of goodwill for our Sirius XM and Pandora reporting units was \$2,290 and \$1,553, respectively.

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(8) Intangible Assets

Our intangible assets include the following:

	Weighted Average Useful Lives	June 30, 2020			December 31, 2019		
		Gross Carrying Value	Accumulated Amortization	Net Carrying Value	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
Indefinite life intangible assets:							
FCC licenses	Indefinite	\$ 2,084	\$ —	\$ 2,084	\$ 2,084	\$ —	\$ 2,084
Trademarks	Indefinite	250	—	250	251	—	251
Definite life intangible assets:							
OEM relationships	15 years	220	(98)	122	220	(90)	130
Licensing agreements	12 years	45	(43)	2	45	(42)	3
Software and technology	7 years	30	(15)	15	35	(25)	10
Due to Pandora Acquisition:							
Indefinite life intangible assets:							
Trademarks	Indefinite	\$ 331	\$ —	\$ 331	\$ 331	\$ —	\$ 331
Definite life intangible assets:							
Customer relationships	8 years	403	(75)	328	403	(49)	354
Software and technology	5 years	373	(107)	266	373	(69)	304
Total intangible assets		<u>\$ 3,736</u>	<u>\$ (338)</u>	<u>\$ 3,398</u>	<u>\$ 3,742</u>	<u>\$ (275)</u>	<u>\$ 3,467</u>

Indefinite Life Intangible Assets

We have identified our FCC licenses and XM and Pandora trademarks as indefinite life intangible assets after considering the expected use of the assets, the regulatory and economic environment within which they are used and the effects of obsolescence on their use.

We hold FCC licenses to operate our satellite digital audio radio service and provide ancillary services. Each of the FCC licenses authorizes us to use radio spectrum, a reusable resource that does not deplete or exhaust over time.

Our annual impairment assessment of our identifiable indefinite lived intangible assets is performed as of the fourth quarter of each year. An assessment is performed at other times if an event occurs or circumstances change that would more likely than not reduce the fair value of the asset below its carrying value. If the carrying value of the intangible assets exceeds its fair value, an impairment loss is recognized in an amount equal to that excess. During the three and six months ended June 30, 2020, we recognized an impairment loss of less than \$1 for intangible assets with indefinite lives related to the termination of the Automatic service. As of June 30, 2020, there were no other indicators of impairment. No impairment loss was recognized for intangible assets with indefinite lives during the three and six months ended June 30, 2019.

Definite Life Intangible Assets

Amortization expense for all definite life intangible assets was \$38 for both the three months ended June 30, 2020 and 2019, and \$76 and \$65 for the six months ended June 30, 2020 and 2019, respectively. There were retirements of definite lived intangible assets of \$17, which included a loss of \$4, due to the termination of the Automatic service, during the six months ended June 30, 2020. As part of the Simplecast acquisition, \$12 was allocated to identifiable intangible assets subject to amortization and related to the assessed fair value of software and technology, which was determined by using the multi-period excess earnings method, as of the acquisition date.

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The expected amortization expense for each of the fiscal years 2020 through 2024 and for periods thereafter is as follows:

Years ending December 31,	Amount
2020 (remaining)	\$ 74
2021	146
2022	146
2023	136
2024	70
Thereafter	161
Total definite life intangible assets, net	<u>\$ 733</u>

(9) Property and Equipment

Property and equipment, net, consists of the following:

	June 30, 2020	December 31, 2019
Satellite system	\$ 1,587	\$ 1,587
Terrestrial repeater network	102	100
Leasehold improvements	106	105
Broadcast studio equipment	121	137
Capitalized software and hardware	1,175	1,086
Satellite telemetry, tracking and control facilities	92	87
Furniture, fixtures, equipment and other	91	89
Land	38	38
Building	63	63
Construction in progress	516	505
Total property and equipment	3,891	3,797
Accumulated depreciation and amortization	(2,299)	(2,171)
Property and equipment, net	<u>\$ 1,592</u>	<u>\$ 1,626</u>

Construction in progress consists of the following:

	June 30, 2020	December 31, 2019
Satellite system	\$ 390	\$ 371
Terrestrial repeater network	8	7
Capitalized software and hardware	109	107
Other	9	20
Construction in progress	<u>\$ 516</u>	<u>\$ 505</u>

Depreciation and amortization expense on property and equipment was \$86 and \$81 for the three months ended June 30, 2020 and 2019, respectively, and \$180 and \$161 for the six months ended June 30, 2020 and 2019, respectively. Property and equipment of \$36 and \$65, which included a loss of \$13 related to the termination of the Automatic service, was retired during the three and six months ended June 30, 2020, respectively. There were no retirements of property and equipment during the three and six months ended June 30, 2019.

We capitalize a portion of the interest on funds borrowed to finance the construction and launch of our satellites. Capitalized interest is recorded as part of the asset's cost and depreciated over the satellite's useful life. Capitalized interest costs were \$4 for both the three months ended June 30, 2020 and 2019, and \$9 and \$8 for the six months ended June 30, 2020

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and 2019, respectively, which related to the construction of our SXM-7 and SXM-8 satellites. We also capitalize a portion of share-based compensation related to employee time for capitalized software projects. Capitalized share-based compensation costs were \$5 and \$4 for the three months ended June 30, 2020 and 2019, respectively, and \$8 and \$7 for the six months ended June 30, 2020 and 2019, respectively.

Satellites

As of June 30, 2020, we owned a fleet of five satellites. Each satellite requires an FCC license, and prior to the expiration of each license, we are required to apply for a renewal of the FCC satellite license. The renewal and extension of our licenses is reasonably certain at minimal cost, which is expensed as incurred. The chart below provides certain information on our satellites as of June 30, 2020:

Satellite Description	Year Delivered	Estimated End of Depreciable Life	FCC License Expiration Year
SIRIUS FM-5	2009	2024	2025
SIRIUS FM-6	2013	2028	2022
XM-3	2005	2020	2021
XM-4	2006	2021	2022
XM-5	2010	2025	2026

(10) Leases

We have operating and finance leases for offices, terrestrial repeaters, data centers and certain equipment. Our leases have remaining lease terms of less than 1 year to 17 years, some of which may include options to extend the leases for up to 5 years, and some of which may include options to terminate the leases within 1 year. We elected the practical expedient to account for the lease and non-lease components as a single component. Additionally, we elected the practical expedient to not recognize right-of-use assets or lease liabilities for short-term leases, which are those leases with a term of twelve months or less at the lease commencement date.

The components of lease expense were as follows:

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
	2020	2019	2020	2019
Operating lease cost	\$ 21	\$ 21	\$ 41	\$ 38
Finance lease cost	1	2	1	3
Sublease income	(1)	(1)	(1)	(2)
Total lease cost	<u>\$ 21</u>	<u>\$ 22</u>	<u>\$ 41</u>	<u>\$ 39</u>

(11) Related Party Transactions

In the normal course of business, we enter into transactions with related parties such as Sirius XM Canada and SoundCloud.

Liberty Media

As of June 30, 2020, Liberty Media beneficially owned, directly and indirectly, approximately 73% of the outstanding shares of Holdings' common stock. Liberty Media has one executive, one senior advisor and one of its directors on our board of directors. Gregory B. Maffei, the President and Chief Executive Officer of Liberty Media, is the Chairman of our board of directors.

Sirius XM Holdings

Sirius XM is a wholly-owned subsidiary of Holdings. Holdings has no operations independent of Sirius XM. All equity-related transactions, including repurchases of Holdings' common stock, dividend payments on shares of Holdings'

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common stock, the issuance of equity related to share-based compensation for Sirius XM employees, Holdings' directors and third parties and the issuance of Holdings' common stock related to the recapitalization of Sirius XM Canada and the Pandora Acquisition have been reported as related party transactions within our unaudited consolidated financial statements. The share-based compensation for Sirius XM employees, Holdings' directors and third parties has been recorded in our unaudited consolidated financial statements. The Related party long-term assets balance as of June 30, 2020 and December 31, 2019 of Sirius XM includes \$8,403 and \$7,948 respectively, primarily for net amounts due from Holdings in connection with these equity-related transactions.

During the six months ended June 30, 2020, we used \$507 of our cash for the purchase and retirement of shares of Holdings' common stock under Holdings' repurchase program and payment of a cash dividend on Holdings' common stock. This amount is included in our Related party long-term asset balance as a receivable due from Holdings.

Sirius XM Canada

We hold a 70% equity interest and 33% voting interest in Sirius XM Canada, a privately held corporation. We own 591 shares of preferred stock of Sirius XM Canada, which has a liquidation preference of one Canadian dollar per share. Sirius XM also made a loan to Sirius XM Canada in the aggregate amount of \$131. The loan is denominated in Canadian dollars and is considered a long-term investment with any unrealized gains or losses reported within Accumulated other comprehensive (loss) income. During the six months ended June 30, 2020 and 2019, Sirius XM Canada repaid \$3 and less than \$1 of the principal amount of the loan, respectively.

We also entered into a Services Agreement and an Advisory Services Agreement with Sirius XM Canada. Each agreement has a thirty-year term. Pursuant to the Services Agreement, Sirius XM Canada currently pays Sirius XM 25% of its gross revenues on a monthly basis, and pursuant to the Advisory Services Agreement, Sirius XM Canada pays Sirius XM 5% of its gross revenues on a monthly basis.

Sirius XM Canada is accounted for as an equity method investment, and its results are not consolidated in our unaudited consolidated financial statements. Sirius XM Canada does not meet the requirements for consolidation as we do not have the ability to direct the most significant activities that impact Sirius XM Canada's economic performance.

Our related party long-term assets as of June 30, 2020 and December 31, 2019 included the carrying value of our investment balance in Sirius XM Canada of \$314 and \$321, respectively, and, as of June 30, 2020 and December 31, 2019, also included \$122 and \$131, respectively, for the long-term value of the outstanding loan to Sirius XM Canada.

Sirius XM Canada paid gross dividends to us of less than \$1 during both the three months ended June 30, 2020 and 2019, and \$1 during both the six months ended June 30, 2020 and 2019. Dividends are first recorded as a reduction to our investment balance in Sirius XM Canada to the extent a balance exists and then as Other (expense) income for any remaining portion.

We recorded revenue from Sirius XM Canada as Other revenue in our unaudited consolidated statements of comprehensive income of \$23 and \$24 for the three months ended June 30, 2020 and 2019, respectively, and \$48 for both the six months ended June 30, 2020 and 2019.

SoundCloud

In February 2020, we completed a \$75 investment in SoundCloud's Series G Membership Units ("Series G Units"). The Series G Units are convertible at the option of the holders at any time into shares of ordinary membership units of SoundCloud at a ratio of one ordinary membership unit for each Series G Unit. The investment in SoundCloud is accounted for as an equity method investment which is recorded in Related party long-term assets in our unaudited consolidated balance sheet. Sirius XM has appointed two individuals to serve on SoundCloud's nine-member board of managers. For both the three and six months ended June 30, 2020, we recorded \$1 representing our share of SoundCloud's net loss in Other income (expense) in our unaudited consolidated statement of comprehensive income.

In addition to our investment in SoundCloud, Pandora has an agreement with SoundCloud to be its exclusive US ad sales representative. Through this arrangement Pandora offers advertisers the ability to execute campaigns in the US across the Pandora and SoundCloud listening platforms. We recorded revenue share expense of \$10 and \$9 related to this agreement

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during the three months ended June 30, 2020 and 2019, respectively, and \$22 and \$12 for the six months ended June 30, 2020 and 2019, respectively. We also had related party liabilities of \$14 as of June 30, 2020 related to this agreement.

(12) Debt

Our debt as of June 30, 2020 and December 31, 2019 consisted of the following:

Issuer / Borrower	Issued	Debt	Maturity Date	Interest Payable	Principal Amount at June 30, 2020	Carrying value ^(a) at	
						June 30, 2020	December 31, 2019
Pandora (b) (c)	December 2015	1.75% Convertible Senior Notes	December 1, 2020	semi-annually on June 1 and December 1	\$ 1	\$ 1	\$ 1
Sirius XM (d)	July 2017	3.875% Senior Notes	August 1, 2022	semi-annually on February 1 and August 1	1,000	996	995
Sirius XM (d) (h)	May 2013	4.625% Senior Notes	May 15, 2023	semi-annually on May 15 and November 15	500	498	498
Pandora (b) (e)	June 2018	1.75% Convertible Senior Notes	December 1, 2023	semi-annually on June 1 and December 1	193	217	238
Sirius XM (d)	July 2019	4.625% Senior Notes	July 15, 2024	semi-annually on January 15 and July 15	1,500	1,486	1,485
Sirius XM (d) (h)	March 2015	5.375% Senior Notes	April 15, 2025	semi-annually on April 15 and October 15	1,000	994	993
Sirius XM (d)	May 2016	5.375% Senior Notes	July 15, 2026	semi-annually on January 15 and July 15	1,000	993	992
Sirius XM (d)	July 2017	5.00% Senior Notes	August 1, 2027	semi-annually on February 1 and August 1	1,500	1,489	1,488
Sirius XM (d)	June 2019	5.500% Senior Notes	July 1, 2029	semi-annually on January 1 and July 1	1,250	1,237	1,236
Sirius XM (d) (g)	June 2020	4.125% Senior Notes	July 1, 2030	semi-annually on January 1 and July 1	1,500	1,483	—
Sirius XM (f)	December 2012	Senior Secured Revolving Credit Facility (the "Credit Facility")	June 29, 2023	variable fee paid quarterly	—	—	—
Sirius XM	Various	Finance leases	Various	n/a	n/a	1	2
Total Debt						9,395	7,928
Less: total current maturities						1,492	2
Less: total deferred financing costs						11	9
Total long-term debt						\$ 7,892	\$ 7,917

- (a) The carrying value of the obligations is net of any remaining unamortized original issue discount.
- (b) Holdings has unconditionally guaranteed all of the payment obligations of Pandora under these notes.
- (c) We acquired \$152 in principal amount of the 1.75% Convertible Senior Notes due 2020 as part of the Pandora Acquisition. On February 14, 2019, Pandora announced a tender offer to repurchase for cash any and all of its outstanding 1.75% Convertible Senior Notes due 2020 at a price equal to 100% of the aggregate principal amount thereof plus accrued and unpaid interest thereon to, but not including, the repurchase date. On March 18, 2019, we purchased \$151 in aggregate principal amount of the 1.75% Convertible Senior Notes due 2020 that had been validly tendered and not validly withdrawn in the repurchase offer. We recorded a \$1 Loss on extinguishment of debt in connection with this transaction. In addition, we unwound a capped call security acquired as part of the Pandora Acquisition in March 2019 for \$3.
- (d) All material domestic subsidiaries, including Pandora and its subsidiaries, that guarantee the Credit Facility have guaranteed these notes.
- (e) We acquired \$193 in principal amount of the 1.75% Convertible Senior Notes due 2023 as part of the Pandora Acquisition. We elected to record the 1.75% Convertible Senior Notes due 2023 at fair value which will be remeasured each reporting period. The

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changes in fair value will be recorded in our consolidated statements of operations. The 1.75% Convertible Senior Notes due 2023 were not convertible into Holdings' common stock and not redeemable as of June 30, 2020. As a result, we have classified the debt as Long-term within our unaudited consolidated balance sheets.

- (f) The \$1,750 Credit Facility expires in June 2023. Our obligations under the Credit Facility are guaranteed by certain of our material domestic subsidiaries, including Pandora and its subsidiaries, and are secured by a lien on substantially all of our assets and the assets of our material domestic subsidiaries. Interest on borrowings is payable on a monthly basis and accrues at a rate based on LIBOR plus an applicable rate. We are also required to pay a variable fee on the average daily unused portion of the Credit Facility which is payable on a quarterly basis. The variable rate for the unused portion of the Credit Facility was 0.25% per annum as of June 30, 2020. Our outstanding borrowings under the Credit Facility are classified as Long-term debt within our unaudited consolidated balance sheets due to the long-term maturity of this debt. Additionally, the amount available for future borrowing under the Credit Facility is reduced by letters of credit issued for the benefit of Pandora, which were \$1 as of June 30, 2020.
- (g) On June 11, 2020, we issued \$1,500 aggregate principal amount of the 4.125% Senior Notes due 2030 with a net original issuance discount and deferred financing costs in the aggregate of \$19.
- (h) On June 8, 2020, we issued a redemption notice pursuant to the indentures governing its 4.625% Senior Notes due 2023 (the "4.625% Notes") and 5.375% Senior Notes due 2025 (the "5.375% Notes") to redeem all of the \$500 aggregate principal amount of outstanding 4.625% Notes and all of the \$1,000 aggregate principal amount of outstanding 5.375% Notes using the proceeds from the 4.125% Senior Notes due 2030. This redemption will result in a Loss on extinguishment of debt, net, of approximately \$40 in the third quarter of 2020. These Notes have been presented in Current maturities of debt in our June 30, 2020 unaudited consolidated balance sheet. For a discussion of subsequent events related to this debt refer to Note 19.

Covenants and Restrictions

Under the Credit Facility, we must comply with a debt maintenance covenant that it cannot exceed a total leverage ratio, calculated as consolidated total debt to consolidated operating cash flow, of 5.0 to 1.0. The Credit Facility generally requires compliance with certain covenants that restrict our ability to, among other things, (i) incur additional indebtedness, (ii) incur liens, (iii) pay dividends or make certain other restricted payments, investments or acquisitions, (iv) enter into certain transactions with affiliates, (v) merge or consolidate with another person, (vi) sell, assign, lease or otherwise dispose of all or substantially all of our assets, and (vii) make voluntary prepayments of certain debt, in each case subject to exceptions.

The indentures governing our notes restrict our non-guarantor subsidiaries' ability to create, assume, incur or guarantee additional indebtedness without such non-guarantor subsidiary guaranteeing each such series of notes on a pari passu basis. The indentures governing the notes also contain covenants that, among other things, limit our ability and the ability of its subsidiaries to create certain liens; enter into sale/leaseback transactions; and merge or consolidate.

Under our debt agreements, the following generally constitute an event of default: (i) a default in the payment of interest; (ii) a default in the payment of principal; (iii) failure to comply with covenants; (iv) failure to pay other indebtedness after final maturity or acceleration of other indebtedness exceeding a specified amount; (v) certain events of bankruptcy; (vi) a judgment for payment of money exceeding a specified aggregate amount; and (vii) voidance of subsidiary guarantees, subject to grace periods where applicable. If an event of default occurs and is continuing, our debt could become immediately due and payable.

The indentures governing the Pandora Convertible Notes contain covenants that limit Pandora's ability to merge or consolidate and provide for customary events of default, which include nonpayment of principal or interest, breach of covenants, payment defaults or acceleration of other indebtedness and certain events of bankruptcy.

At June 30, 2020 and December 31, 2019, we were in compliance with our debt covenants.

Pandora Convertible Notes

Pandora's 1.75% Convertible Senior Notes due 2020 (the "Pandora 2020 Notes") and Pandora's 1.75% Convertible Senior Notes due 2023 (the "Pandora 2023 Notes" and, together with the Pandora 2020 Notes, the "Pandora Convertible Notes") are unsecured, senior obligations of Pandora. Holdings has guaranteed the payment and performance obligations of Pandora under the Pandora Convertible Notes and the indentures governing the Pandora Convertible Notes.

The Pandora 2020 Notes will mature on December 1, 2020, unless earlier repurchased or redeemed by Pandora or converted in accordance with their terms. As of June 30, 2020, the conversion rate applicable to the Pandora 2020 Notes was 88.5816 shares of Holdings' common stock per one thousand principal amount of the Pandora 2020 Notes plus carryforward adjustments not yet effected pursuant to the terms of the indenture governing the Pandora 2020 Notes. Pandora has irrevocably

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elected and determined to settle all conversion obligations from and after February 1, 2019 with respect to the Pandora 2020 Notes solely in cash. During the six months ended June 30, 2019, we purchased \$151 in aggregate principal amount of the Pandora 2020 Notes. See footnote (c) to the table above.

The Pandora 2023 Notes will mature on December 1, 2023, unless earlier repurchased or redeemed by Pandora or converted in accordance with their terms. As of June 30, 2020, the conversion rate applicable to the Pandora 2023 Notes was 151.9533 shares of Holdings' common stock per one thousand principal amount of the Pandora 2023 Notes plus carryforward adjustments not yet effected pursuant to the terms of the indenture governing the Pandora 2023 Notes.

(13) Stockholder Equity

Common Stock, par value \$0.001 per share

We are authorized to issue up to 9,000 shares of common stock. There were 0.001 shares of common stock of Sirius XM issued and outstanding on June 30, 2020 and December 31, 2019, which were owned by Holdings.

Preferred Stock, par value \$0.001 per share

We are authorized to issue up to 50 shares of undesignated preferred stock with a liquidation preference of \$0.001 per share. There were no shares of preferred stock issued or outstanding as of June 30, 2020 and December 31, 2019.

(14) Benefit Plans

We recognized share-based payment expense of \$52 and \$57 for the three months ended June 30, 2020 and 2019, respectively, and \$107 and \$127 for the six months ended June 30, 2020 and 2019, respectively. This amount includes \$21 of share-based compensation expense recorded in Acquisition and restructuring costs in our unaudited consolidated statements of comprehensive income during the six months ended June 30, 2019.

2015 Long-Term Stock Incentive Plan

In May 2015, our stockholders approved the Sirius XM Holdings Inc. 2015 Long-Term Stock Incentive Plan (the "2015 Plan"). Employees, consultants and members of our board of directors are eligible to receive awards under the 2015 Plan. The 2015 Plan provides for the grant of stock options, restricted stock awards, restricted stock units and other stock-based awards that the compensation committee of our board of directors deems appropriate. Stock-based awards granted under the 2015 Plan are generally subject to a graded vesting requirement, which is generally three to four years from the grant date. Stock options generally expire ten years from the date of grant. Restricted stock units include performance-based restricted stock units ("PRSUs"), the vesting of which are subject to the achievement of performance goals and the employee's continued employment and generally cliff vest on the third anniversary of the grant date. Each restricted stock unit entitles the holder to receive one share of common stock upon vesting. As of June 30, 2020, 159 shares of common stock were available for future grants under the 2015 Plan.

In connection with the Pandora Acquisition, we assumed all shares available for issuance (including any shares that later become available for issuance in accordance with the terms of the applicable plans) under each of the 2014 Stock Incentive Plan of AdsWizz Inc., the Pandora Media, Inc. 2011 Equity Incentive Plan, the Pandora Media, Inc. 2004 Stock Plan and the TheSavageBeast.com, Inc. 2000 Stock Incentive Plan, which were previously approved by stockholders of Pandora or the applicable adopting entity. All shares available under these stock plans became additional shares available for grant pursuant to the terms of the 2015 Plan (as adjusted, to the extent appropriate, to reflect the application of the exchange ratio). Subject to certain limitations set forth in the 2015 Plan, such shares may be used for awards under the 2015 Plan.

Other Plans

We maintain six share-based benefit plans in addition to the 2015 Plan — the Sirius XM Radio Inc. 2009 Long-Term Stock Incentive Plan, the Amended and Restated Sirius Satellite Radio 2003 Long-Term Stock Incentive Plan, the 2014 Stock Incentive Plan of AdsWizz Inc., the Pandora Media, Inc. 2011 Equity Incentive Plan, the Pandora Media, Inc. 2004 Stock Plan and the TheSavageBeast.com, Inc. 2000 Stock Incentive Plan. Excluding dividend equivalent units granted as a result of a declared dividend, no further awards may be made under these plans.

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The following table summarizes the weighted-average assumptions used to compute the fair value of options granted to employees:

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
	2020	2019	2020	2019
Risk-free interest rate	0.3%	2.1%	1.3%	2.5%
Expected life of options — years	3.80	3.99	3.82	3.36
Expected stock price volatility	36%	34%	25%	26%
Expected dividend yield	0.9%	0.9%	0.7%	0.8%

The following table summarizes stock option activity under our share-based plans for the six months ended June 30, 2020:

	Options	Weighted-Average Exercise Price Per Share	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Outstanding as of December 31, 2019	208	\$ 4.46		
Granted	7	\$ 7.17		
Exercised	(13)	\$ 3.97		
Forfeited, cancelled or expired	(1)	\$ 6.10		
Outstanding as of June 30, 2020	201	\$ 4.58	5.28	\$ 294
Exercisable as of June 30, 2020	143	\$ 4.07	4.47	\$ 265

The weighted average grant date fair value per stock option granted during the six months ended June 30, 2020 was \$1.42. The total intrinsic value of stock options exercised during the six months ended June 30, 2020 and 2019 was \$39 and \$22, respectively.

We recognized share-based payment expense associated with stock options of \$12 and \$15 for the three months ended June 30, 2020 and 2019, respectively, and \$23 and \$35 for the six months ended June 30, 2020 and 2019, respectively.

The following table summarizes the restricted stock unit, including PRSU, activity under our share-based plans for the six months ended June 30, 2020:

	Shares	Grant Date Fair Value Per Share
Nonvested as of December 31, 2019	75	\$ 5.95
Granted	7	\$ 7.01
Vested	(12)	\$ 5.81
Forfeited	(3)	\$ 5.98
Nonvested as of June 30, 2020	67	\$ 6.08

The total intrinsic value of restricted stock units, including PRSUs, vesting during the six months ended June 30, 2020 and 2019 was \$77 and \$102, respectively. During the six months ended June 30, 2020, we granted 3 PRSUs to certain employees. We believe it is probable that the performance target applicable to these PRSUs will be achieved.

In connection with the cash dividends paid during the six months ended June 30, 2020, we granted less than 1 restricted stock units, including PRSUs, in accordance with the terms of existing award agreements. These grants did not result in any additional incremental share-based payment expense being recognized during the six months ended June 30, 2020.

We recognized share-based payment expense associated with restricted stock units, including PRSUs, of \$40 and \$42 for the three months ended June 30, 2020 and 2019, respectively, and \$84 and \$92 for the six months ended June 30, 2020 and 2019, respectively.

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Total unrecognized compensation costs related to unvested share-based payment awards for stock options and restricted stock units, including PRSUs, granted to employees, members of our board of directors and third parties at June 30, 2020 and December 31, 2019 was \$342 and \$415, respectively. The total unrecognized compensation costs at June 30, 2020 are expected to be recognized over a weighted-average period of 2.2 years.

401(k) Savings Plans

Sirius XM Radio Inc. 401(k) Savings Plan

We sponsor the Sirius XM Radio Inc. 401(k) Savings Plan (the “Sirius XM Plan”) for eligible employees. The Sirius XM Plan allows eligible employees to voluntarily contribute from 1% to 50% of their pre-tax eligible earnings, subject to certain defined limits. We match 50% of an employee’s voluntary contributions per pay period on the first 6% of an employee’s pre-tax salary up to a maximum of 3% of eligible compensation. We may also make additional discretionary matching, true-up matching and non-elective contributions to the Sirius XM Plan. Employer matching contributions under the Sirius XM Plan vest at a rate of 33.33% for each year of employment and are fully vested after three years of employment for all current and future contributions. Our cash employer matching contributions are not used to purchase shares of Holdings’ common stock on the open market, unless the employee elects Holdings’ common stock as their investment option for this contribution.

Pandora Media, LLC 401(k) Profit Sharing Plan and Trust

Pandora sponsors the Pandora Media, LLC 401(k) Profit Sharing Plan and Trust (the “Pandora Plan”) for eligible employees. The Pandora Plan allows eligible employees to voluntarily contribute from 1% to 75% of their pre-tax eligible earnings, subject to certain defined limits. Effective January 1, 2020, we began matching 50% of an employee’s voluntary contributions per pay period on the first 6% of an employee’s pre-tax salary up to a maximum of 3% of eligible compensation.

We recognized expenses of \$3 and \$2 for the three months ended June 30, 2020 and 2019, respectively, and \$8 and \$4 for the six months ended June 30, 2020 and 2019, respectively, in connection with the Sirius XM and Pandora Plans.

Sirius XM Holdings Inc. Deferred Compensation Plan

The Sirius XM Holdings Inc. Deferred Compensation Plan (the “DCP”) allows members of Holdings’ board of directors and certain eligible employees to defer all or a portion of their base salary, cash incentive compensation and/or board of directors’ cash compensation, as applicable. Pursuant to the terms of the DCP, Holdings or any of its subsidiaries may elect to make additional contributions beyond amounts deferred by participants, but is under no obligation to do so. Holdings has established a grantor (or “rabbi”) trust to facilitate the payment of its obligations under the DCP.

Contributions to the DCP, net of withdrawals, for the three months ended June 30, 2020 and 2019 were \$1 and less than \$1, respectively, and were \$7 for both six months ended June 30, 2020 and 2019. As of June 30, 2020 and December 31, 2019, the fair value of the investments held in the trust were \$41 and \$34, respectively, which is included in Other long-term assets in our unaudited consolidated balance sheets and classified as trading securities. Trading gains and losses associated with these investments are recorded in Other (expense) income within our unaudited consolidated statements of comprehensive income. The associated liability is recorded within Other long-term liabilities in our unaudited consolidated balance sheets, and any increase or decrease in the liability is recorded in General and administrative expense within our unaudited consolidated statements of comprehensive income. We recorded unrealized gains (losses) on investments held in the trust of \$4 and \$1 for the three months ended June 30, 2020 and 2019, respectively, and \$(1) and \$3 for the six months ended June 30, 2020 and 2019, respectively.

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(15) Commitments and Contingencies

The following table summarizes our expected contractual cash commitments as of June 30, 2020:

	2020	2021	2022	2023	2024	Thereafter	Total
Debt obligations	\$ 1,501	\$ 1	\$ 1,000	\$ 193	\$ 1,500	\$ 5,250	\$ 9,445
Cash interest payments	172	379	375	335	329	1,048	2,638
Satellite and transmission	30	48	2	1	1	1	83
Programming and content	157	235	151	87	43	97	770
Sales and marketing	47	35	25	9	3	8	127
Satellite incentive payments	3	8	9	9	9	47	85
Operating lease obligations	35	74	67	59	46	180	461
Advertising sales commitments	—	6	—	—	—	—	6
Royalties, minimum guarantees and other ⁽¹⁾	277	265	190	21	7	—	760
Total ⁽²⁾	<u>\$ 2,222</u>	<u>\$ 1,051</u>	<u>\$ 1,819</u>	<u>\$ 714</u>	<u>\$ 1,938</u>	<u>\$ 6,631</u>	<u>\$ 14,375</u>

- (1) Includes \$31 related to the debt premium paid in connection with the redemption of the 4.625% Notes and 5.375% Notes on July 9, 2020.
- (2) The table does not include our reserve for uncertain tax positions, which at June 30, 2020 totaled \$24.

Debt obligations. Debt obligations include principal payments on outstanding debt and finance lease obligations.

Cash interest payments. Cash interest payments include interest due on outstanding debt and capital lease payments through maturity.

Satellite and transmission. We have entered into agreements with several third parties to design, build, launch and insure two satellites, SXM-7 and SXM-8. We also have entered into agreements with third parties to operate and maintain satellite telemetry, tracking and control facilities and certain components of our terrestrial repeater networks.

Programming and content. We have entered into various programming and content agreements. Under the terms of these agreements, our obligations include fixed payments, advertising commitments and revenue sharing arrangements. In certain of these agreements, the future revenue sharing costs are dependent upon many factors and are difficult to estimate; therefore, they are not included in our minimum contractual cash commitments.

Sales and marketing. We have entered into various marketing, sponsorship and distribution agreements to promote our brands and are obligated to make payments to sponsors, retailers, automakers, radio manufacturers and other third parties under these agreements. Certain programming and content agreements also require us to purchase advertising on properties owned or controlled by the licensors.

Satellite incentive payments. Boeing Satellite Systems International, Inc., the manufacturer of certain of our in-orbit satellites, may be entitled to future in-orbit performance payments upon XM-3 and XM-4 meeting their fifteen-year design life, which we expect to occur. Boeing may also be entitled to up to \$10 of additional incentive payments if our XM-4 satellite continues to operate above baseline specifications during the five years beyond the satellite's fifteen-year design life.

Maxar Technologies (formerly Space Systems/Loral), the manufacturer of certain of our in-orbit satellites, may be entitled to future in-orbit performance payments upon XM-5, SIRIUS FM-5 and SIRIUS FM-6 meeting their fifteen-year design life, which we expect to occur.

Operating lease obligations. We have entered into both cancelable and non-cancelable operating leases for office space, terrestrial repeaters, data centers and equipment. These leases provide for minimum lease payments, additional operating expense charges, leasehold improvements and rent escalations that have initial terms ranging from one to fifteen years, and certain leases have options to renew.

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Advertising Sales Commitments. We have entered into agreements with third parties that contain minimum advertising sales guarantees and require that we make guaranteed payments. As of June 30, 2020, we had future minimum guarantee commitments of \$6. On a quarterly basis, we record the greater of the cumulative actual expense incurred or the cumulative minimum guarantee based on our forecast for the minimum guarantee period. The minimum guarantee period is the period of time that the minimum guarantee relates to, as specified in the agreement, which may be annual or a longer period.

Royalties, Minimum Guarantees and Other. We have entered into music royalty arrangements that include fixed payments. Certain of our content agreements also contain minimum guarantees and require that we make upfront minimum guaranteed payments. During the six months ended June 30, 2020, we prepaid \$5 in content costs related to minimum guarantees. As of June 30, 2020, we had future fixed minimum guarantee commitments of \$108, of which \$96 will be paid in 2020 and the remainder will be paid thereafter. On a quarterly basis, we record the greater of the cumulative actual content costs incurred or the cumulative minimum guarantee based on forecasted usage for the minimum guarantee period. The minimum guarantee period is the period of time that the minimum guarantee relates to, as specified in each agreement, which may be annual or a longer period. The cumulative minimum guarantee, based on forecasted usage, considers factors such as listening hours, revenue, subscribers and other terms of each agreement that impact our expected attainment or recoupment of the minimum guarantees based on the relative attribution method.

Several of our content agreements also include provisions related to the royalty payments and structures of those agreements relative to other content licensing arrangements, which, if triggered, could cause our payments under those agreements to escalate. In addition, record labels, publishers and performing rights organizations (“PROs”) with whom we have entered into direct license agreements have the right to audit our content payments, and any such audit could result in disputes over whether we have paid the proper content costs.

We have also entered into various agreements with third parties for general operating purposes.

In addition to the minimum contractual cash commitments described above, we have entered into other variable cost arrangements. These future costs are dependent upon many factors and are difficult to anticipate; however, these costs may be substantial. We may enter into additional programming, distribution, marketing and other agreements that contain similar variable cost provisions. We also have a surety bond of approximately \$45 primarily used as security against non-performance in the normal course of business. We do not have any other significant off-balance sheet financing arrangements that are reasonably likely to have a material effect on our financial condition, results of operations, liquidity, capital expenditures or capital resources.

Legal Proceedings

In the ordinary course of business, we are a defendant or party to various claims and lawsuits, including those discussed below.

We record a liability when we believe that it is both probable that a liability will be incurred, and the amount of loss can be reasonably estimated. We evaluate developments in legal matters that could affect the amount of liability that has been previously accrued and make adjustments as appropriate. Significant judgment is required to determine both probability and the estimated amount of a loss or potential loss. We may be unable to reasonably estimate the reasonably possible loss or range of loss for a particular legal contingency for various reasons, including, among others, because: (i) the damages sought are indeterminate; (ii) the proceedings are in the relative early stages; (iii) there is uncertainty as to the outcome of pending proceedings (including motions and appeals); (iv) there is uncertainty as to the likelihood of settlement and the outcome of any negotiations with respect thereto; (v) there remain significant factual issues to be determined or resolved; (vi) the relevant law is unsettled; or (vii) the proceedings involve novel or untested legal theories. In such instances, there may be considerable uncertainty regarding the ultimate resolution of such matters, including the likelihood or magnitude of a possible eventual loss, if any.

Pre-1972 Sound Recording Litigation. On October 2, 2014, Flo & Eddie Inc. filed a class action suit against Pandora in the federal district court for the Central District of California. The complaint alleges a violation of California Civil Code Section 980, unfair competition, misappropriation and conversion in connection with the public performance of sound recordings recorded prior to February 15, 1972 (which we refer to as, “pre-1972 recordings”). On December 19, 2014, Pandora

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filed a motion to strike the complaint pursuant to California's Anti-Strategic Lawsuit Against Public Participation ("Anti-SLAPP") statute, which following denial of Pandora's motion was appealed to the Ninth Circuit Court of Appeals. In March 2017, the Ninth Circuit requested certification to the California Supreme Court on the substantive legal questions. The California Supreme Court accepted certification. In May 2019, the California Supreme Court issued an order dismissing consideration of the certified questions on the basis that, following the enactment of the Orrin G. Hatch-Bob Goodlatte Music Modernization Act, Pub. L. No. 115-264, 132 Stat. 3676 (2018) (the "MMA"), resolution of the questions posed by the Ninth Circuit Court of Appeals was no longer "necessary to . . . settle an important question of law."

The MMA grants a potential federal preemption defense to the claims asserted in the aforementioned lawsuits. In July 2019, Pandora took steps to avail itself of this preemption defense, including making the required payments under the MMA for certain of its uses of pre-1972 recordings. Based on the federal preemption contained in the MMA (along with other considerations), Pandora asked the Ninth Circuit to order the dismissal of the *Flo & Eddie, Inc. v. Pandora Media, Inc.* case. On October 17, 2019, the Ninth Circuit Court of Appeals issued a memorandum disposition concluding that the question of whether the MMA preempts Flo and Eddie's claims challenging Pandora's performance of pre-1972 recordings "depends on various unanswered factual questions" and remanded the case to the District Court for further proceedings.

After Flo & Eddie filed its action in 2014 against Pandora, several other plaintiffs commenced separate actions, both on an individual and class action basis, alleging a variety of violations of common law and state copyright and other statutes arising from allegations that Pandora owed royalties for the public performance of pre-1972 recordings. Many of these separate actions have been dismissed or are in the process of being dismissed. None of the remaining pending actions is likely to have a material adverse effect on our business, financial condition or results of operations.

We believe we have substantial defenses to the claims asserted in these actions, and we intend to defend these actions vigorously.

Copyright Royalty Board Proceeding to Determine the Rate for Statutory Webcasting. Pursuant to Sections 112 and 114 of the Copyright Act, the Copyright Royalties Board (the "CRB") initiated a proceeding in January 2019 to set the rates and terms by which webcasters may perform sound recordings via digital transmission over the internet and make ephemeral reproductions of those recordings during the 2021-2025 rate period under the authority of statutory licenses provided under Sections 112 and 114 of the Copyright Act. We filed a petition to participate in the proceeding on behalf of our Sirius XM and Pandora businesses, as did other webcasters including Google Inc. and the National Association of Broadcasters. SoundExchange, a collective organization that collects and distributes digital performance royalties to artists and copyright holders, represents the various copyright owner participants in the proceeding, including Sony Music Entertainment, Universal Music Group and Warner Music Group. Because the proceeding focuses on setting statutory rates for non-interactive online music streaming (commonly identified as "webcasting"), the proceeding will set the rates that our Pandora business pays for music streaming on its free, ad-supported tier and that our Sirius XM business pays for streaming on its subscription internet radio service. This proceeding will not set the rates that we pay for our other music offerings (satellite radio, business establishment services) or that we pay for interactive streaming on our Pandora Plus and Pandora Premium services.

In September 2019, the participants filed written direct statements, including proposed rates and terms for the 2021-2025 period. We and other webcaster participants proposed rates below the existing statutory rates, which for commercial webcasters are currently set at \$0.0018 per performance for non-subscription transmissions (such as offered by our Pandora ad-supported business) and \$0.0024 per performance for subscription transmissions (such as offered by our Sirius XM internet radio service). SoundExchange has proposed increasing the commercial webcasting rates to \$0.0028 per performance for non-subscription transmissions and \$0.0031 per performance for subscription transmissions.

In January 2020, the participants filed written rebuttal statements, responding to each other's proposals. A multi-week hearing was scheduled to begin before the CRB in March 2020, but has been delayed as a result of the COVID-19 pandemic. We expect the hearing to begin before the CRB this summer.

Other Matters. In the ordinary course of business, we are a defendant in various other lawsuits and arbitration proceedings, including derivative actions; actions filed by subscribers, both on behalf of themselves and on a class action basis; former employees; parties to contracts or leases; and owners of patents, trademarks, copyrights or other intellectual property.

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None of these other matters, in our opinion, is likely to have a material adverse effect on our business, financial condition or results of operations.

(16) Income Taxes

For the three months ended June 30, 2020 and 2019, income tax expense was \$69 and \$76, respectively, and \$158 and \$157 for the six months ended June 30, 2020 and 2019, respectively.

Our effective tax rate for the three months ended June 30, 2020 and 2019 was 23.0% and 22.2%, respectively. Our effective tax rate for the six months ended June 30, 2020 and 2019 was 22.1% and 26.7%, respectively. The effective tax rates for the three and six months ended June 30, 2020 were primarily impacted by federal and state tax credits and the recognition of excess tax benefits related to share-based compensation. The effective tax rate for the three months ended June 30, 2019 was primarily impacted by the recognition of excess tax benefits related to share-based compensation. The effective tax rate for the six months ended June 30, 2019 was primarily impacted by the increase to the valuation allowance related to certain federal research and development credits that are no longer expected to be realizable. We estimate our effective tax rate for the year ending December 31, 2020 will be approximately 23%.

As of June 30, 2020 and December 31, 2019, we had a valuation allowance related to deferred tax assets of \$69 and \$70, respectively, that was not likely to be realized due to certain net operating loss limitations, including tax credits, and acquired net operating losses that were not more likely than not going to be utilized.

(17) Segments and Geographic Information

In accordance with FASB ASC Topic 280, *Segment Reporting*, we disaggregate our operations into two reportable segments: Sirius XM and Pandora. The financial results of these segments are utilized by the chief operating decision maker, who is our Chief Executive Officer, for evaluating segment performance and allocating resources. We report our segment information based on the "management" approach. The management approach designates the internal reporting used by management for making decisions and assessing performance as the source of our reportable segments. For additional information on our segments refer to Note 1.

Segment results include the revenues and cost of services which are directly attributable to each segment. There are no indirect revenues or costs incurred that are allocated to the segments. There are planned intersegment advertising campaigns which will be eliminated. We had less than \$1 of intersegment advertising revenue during both the three and six months ended June 30, 2020 and 2019.

Segment revenue and gross profit were as follows during the periods presented:

	For the Three Months Ended June 30, 2020		
	Sirius XM	Pandora	Total
Revenue			
Subscriber revenue	\$ 1,453	\$ 125	\$ 1,578
Advertising revenue	25	211	236
Equipment revenue	25	—	25
Other revenue	35	—	35
Total revenue	1,538	336	1,874
Cost of services ^(a)	(593)	(263)	(856)
Segment gross profit	\$ 945	\$ 73	\$ 1,018

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The reconciliation between reportable segment gross profit to consolidated income before income tax is as follows:

	For the Three Months Ended June 30, 2020
Segment Gross Profit	\$ 1,018
Subscriber acquisition costs	(48)
Sales and marketing ^(a)	(201)
Engineering, design and development ^(a)	(52)
General and administrative ^(a)	(102)
Depreciation and amortization	(124)
Share-based payment expense	(52)
Acquisition and restructuring costs	(24)
Total other (expense) income	(115)
Consolidated income before income taxes	\$ 300

(a) Share-based payment expense of \$10 related to cost of services, \$16 related to sales and marketing, \$9 related to engineering, design and development and \$17 related to general and administrative has been excluded.

	For the Three Months Ended June 30, 2019		
	Sirius XM	Pandora	Total
Revenue			
Subscriber revenue	\$ 1,402	\$ 135	\$ 1,537
Advertising revenue	52	306	358
Equipment revenue	41	—	41
Other revenue	41	—	41
Total revenue	1,536	441	1,977
Cost of services ^(b)	(594)	(278)	(872)
Segment gross profit	\$ 942	\$ 163	\$ 1,105

The reconciliation between reportable segment gross profit to consolidated income before income tax is as follows:

	For the Three Months Ended June 30, 2019
Segment Gross Profit	\$ 1,105
Subscriber acquisition costs	(104)
Sales and marketing ^(b)	(213)
Engineering, design and development ^(b)	(61)
General and administrative ^(b)	(105)
Depreciation and amortization	(119)
Share-based payment expense	(57)
Acquisition and restructuring costs	(7)
Total other (expense) income	(97)
Consolidated income before income taxes	\$ 342

(b) Share-based payment expense of \$10 related to cost of services, \$19 related to sales and marketing, \$13 related to engineering, design and development and \$15 related to general and administrative has been excluded.

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	For the Six Months Ended June 30, 2020		
	Sirius XM	Pandora	Total
Revenue			
Subscriber revenue	\$ 2,910	\$ 253	\$ 3,163
Advertising revenue	69	452	521
Equipment revenue	66	—	66
Other revenue	76	—	76
Total revenue	3,121	705	3,826
Cost of services ^(c)	(1,186)	(509)	(1,695)
Segment gross profit	<u>\$ 1,935</u>	<u>\$ 196</u>	<u>\$ 2,131</u>

The reconciliation between reportable segment gross profit to consolidated income before income tax is as follows:

	For the Six Months Ended June 30, 2020
Segment Gross Profit	\$ 2,131
Subscriber acquisition costs	(147)
Sales and marketing ^(c)	(409)
Engineering, design and development ^(c)	(112)
General and administrative ^(c)	(193)
Depreciation and amortization	(256)
Share-based payment expense	(107)
Acquisition and restructuring costs	(24)
Total other (expense) income	(168)
Consolidated income before income taxes	<u>\$ 715</u>

(c) Share-based payment expense of \$21 related to cost of services, \$33 related to sales and marketing, \$20 related to engineering, design and development and \$33 related to general and administrative has been excluded.

	For the Six Months Ended June 30, 2019		
	Sirius XM	Pandora	Total
Revenue			
Subscriber revenue	\$ 2,772	\$ 223	\$ 2,995
Advertising revenue	98	469	567
Equipment revenue	82	—	82
Other revenue	77	—	77
Total revenue	3,029	692	3,721
Cost of services ^(d)	(1,163)	(448)	(1,611)
Segment gross profit	<u>\$ 1,866</u>	<u>\$ 244</u>	<u>\$ 2,110</u>

The reconciliation between reportable segment gross profit to consolidated income before income tax is as follows:

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	For the Six Months Ended June 30, 2019
Segment Gross Profit	\$ 2,110
Subscriber acquisition costs	(212)
Sales and marketing ^(d)	(381)
Engineering, design and development ^(d)	(106)
General and administrative ^(d)	(224)
Depreciation and amortization	(226)
Share-based payment expense	(106)
Acquisition and restructuring costs	(83)
Total other (expense) income	(183)
Consolidated income before income taxes	\$ 589

(d) Share-based payment expense of \$19 related to cost of services, \$34 related to sales and marketing, \$22 related to engineering, design and development and \$31 related to general and administrative has been excluded.

A measure of segment assets is not currently provided to the Chief Executive Officer and has therefore not been provided.

As of June 30, 2020, long-lived assets were predominantly located in the United States. No individual foreign country represented a material portion of our consolidated revenue during the three and six months ended June 30, 2020 and 2019.

(18) Subsequent Events

Debt Transactions

On June 8, 2020, we issued a redemption notice pursuant to the indentures governing its 4.625% Senior Notes due 2023 (the "4.625% Notes") and 5.375% Senior Notes due 2025 (the "5.375% Notes") to redeem all of the \$500 aggregate principal amount of outstanding 4.625% Notes and all of the \$1,000 aggregate principal amount of outstanding 5.375% Notes. The 4.625% Notes and 5.375% Notes were redeemed on July 9, 2020 at a redemption price of 100.8% and 102.7% of the principal amount thereof, respectively, plus accrued and unpaid interest thereon to, but excluding, the date of redemption. This redemption will result in a Loss on extinguishment of debt, net, of approximately \$40 in the third quarter of 2020.

Holdings' Capital Return Program

On July 14, 2020, Holdings' board of directors approved an additional \$2,000 of common stock repurchases, increasing Holdings' total authorization to \$16,000 since the inception of the program. For the period from July 1, 2020 to July 28, 2020 we repurchased \$75 of Holdings' common stock on the open market, including fees and commissions.

On July 14, 2020, Holdings' board of directors declared a quarterly dividend on Holdings' common stock in the amount of \$0.01331 per share of Holdings' common stock payable on August 31, 2020 to Holdings' stockholders of record as of the close of business on August 7, 2020.

Stitcher Acquisition

On July 13, 2020, we entered into an agreement with The E.W. Scripps Company ("Scripps") and certain of its subsidiaries ("Scripps") to acquire the assets of Stitcher, a pioneer in podcast production, distribution, and ad sales. Under the terms of the asset purchase agreement, at the closing, we will make a cash payment of \$265 to Scripps. The agreement provides that we will potentially make up to \$60 in additional contingent payments based on Stitcher achieving certain financial metrics in 2020 and 2021. The transaction is expected to close in the third quarter of 2020, subject to receipt of required regulatory approvals and the satisfaction of other customary closing conditions.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

All amounts referenced in this discussion and analysis are in millions, except subscriber amounts are in thousands and per subscriber and per installation amounts are in ones, unless otherwise stated.

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our unaudited consolidated financial statements and related notes included elsewhere in this Quarterly Report and with Holdings' Annual Report on Form 10-K for the year ended December 31, 2019.

Special Note Regarding Forward-Looking Statements

The following cautionary statements identify important factors that could cause our actual results to differ materially from those projected in forward-looking statements made in this Quarterly Report and in other reports and documents published by us from time to time. Any statements about our beliefs, plans, objectives, expectations, assumptions, future events or performance are not historical facts and may be forward-looking. These statements are often, but not always, made through the use of words or phrases such as “will likely result,” “are expected to,” “will continue,” “is anticipated,” “estimated,” “intend,” “plan,” “projection” and “outlook.” Any forward-looking statements are qualified in their entirety by reference to the factors discussed throughout this Quarterly Report and in other reports and documents published by us from time to time, including the risk factors described under “Risk Factors” in Part I, Item 1A, of Holdings' Annual Report on Form 10-K for the year ended December 31, 2019, the risk factor described under “Risk Factors” in Part II, Item 1A of Holdings' Quarterly Report on Form 10-Q for the quarter ended March 31, 2020, and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” herein and in Part II, Item 7, of Holdings' Annual Report on Form 10-K for the year ended December 31, 2019.

Among the significant factors that could cause our actual results to differ materially from those expressed in the forward-looking statements are:

- The current COVID-19 pandemic has, and may continue to, adversely impact our business
- We face substantial competition and that competition is likely to increase over time
- If our efforts to attract and retain subscribers and listeners, or convert listeners into subscribers, are not successful, our business will be adversely affected
- Our Pandora ad-supported business has suffered a loss of monthly active users, which may adversely affect our Pandora business
- Privacy and data security laws and regulations may hinder our ability to market our services, sell advertising and impose legal liabilities
- We engage in extensive marketing efforts and the continued effectiveness of those efforts are an important part of our business
- Consumer protection laws and our failure to comply with them could damage our business
- A substantial number of our Sirius XM subscribers periodically cancel their subscriptions and we cannot predict how successful we will be at retaining customers
- Our ability to profitably attract and retain subscribers to our Sirius XM service as our marketing efforts reach more price-sensitive consumers is uncertain
- Our failure to convince advertisers of the benefits of our Pandora ad-supported service could harm our business
- If we are unable to maintain revenue growth from our advertising products, particularly in mobile advertising, our results of operations will be adversely affected
- If we fail to accurately predict and play music, comedy or other content that our Pandora listeners enjoy, we may fail to retain existing and attract new listeners
- If we fail to protect the security of personal information about our customers, we could be subject to costly government enforcement actions and private litigation and our reputation could suffer
- Interruption or failure of our information technology and communications systems could impair the delivery of our service and harm our business
- We rely on third parties for the operation of our business, and the failure of third parties to perform could adversely affect our business
- Our business depends in part upon the auto industry
- Our Pandora business depends in part upon consumer electronics manufacturers
- The market for music rights is changing and is subject to significant uncertainties
- Our ability to offer interactive features in our Pandora services depends upon maintaining licenses with copyright owners
- The rates we must pay for “mechanical rights” to use musical works on our Pandora service have increased substantially and these new rates may adversely affect our business
- Failure of our satellites would significantly damage our business
- Our Sirius XM service may experience harmful interference from wireless operations
- Failure to comply with FCC requirements could damage our business
- Economic conditions, including advertising budgets and discretionary spending, may adversely affect our business and operating results
- If we are unable to attract and retain qualified personnel, our business could be harmed
- We may not realize the benefits of acquisitions or other strategic investments and initiatives, including the acquisitions of Pandora and Simplecast
- Our use of pre-1972 sound recordings on our Pandora service could result in additional costs
- We may from time to time modify our business plan, and these changes could adversely affect us and our financial condition

- We have a significant amount of indebtedness, and our debt contains certain covenants that restrict our operations
- Our facilities could be damaged by natural catastrophes or terrorist activities
- The unfavorable outcome of pending or future litigation could have an adverse impact on our operations and financial condition
- Failure to protect our intellectual property or actions by third parties to enforce their intellectual property rights could substantially harm our business and operating results
- Some of our services and technologies may use “open source” software, which may restrict how we use or distribute our services or require that we release the source code subject to those licenses
- Rapid technological and industry changes and new entrants could adversely impact our services
- Existing or future laws and regulations could harm our business
- We may be exposed to liabilities that other entertainment service providers would not customarily be subject to
- Our business and prospects depend on the strength of our brands
- Holdings is a “controlled company” within the meaning of the NASDAQ listing rules and, as a result, qualify for, and rely on, exemptions from certain corporate governance requirements
- While Holdings currently pay a quarterly cash dividend to holders of Holdings' common stock, Holdings may change its dividend policy at any time
- Holdings' principal stockholder has significant influence, including over actions requiring stockholder approval, and its interests may differ from the interests of other holders of Holdings' common stock

Because the risk factors referred to above could cause actual results or outcomes to differ materially from those expressed in any forward-looking statements made by us or on our behalf, you should not place undue reliance on any of these forward-looking statements. In addition, any forward-looking statement speaks only as of the date on which it is made, and we undertake no obligation to update any forward-looking statement or statements to reflect events or circumstances after the date on which the statement is made, to reflect the occurrence of unanticipated events or otherwise, except as required by law. New factors emerge from time to time, and it is not possible for us to predict which will arise or to assess with any precision the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements.

Special Note Regarding the Impact of the COVID-19 Pandemic on Our Business and Operations

The statements set forth below should be read in combination with the information contained in this Item 2., “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” contained in this Quarterly Report.

General

In general, the COVID-19 pandemic, coupled with government issued stay-at-home orders, has had, and is continuing to have, a widespread and broad reaching effect on the economy. Beginning in late March, automakers idled plants and certain auto dealers have closed their retail operations. Vehicle sales have declined, sporting events have been cancelled, theaters remain closed and concerts have been postponed indefinitely. The impact of the COVID-19 pandemic on the travel industry has been far-reaching, adversely affecting airlines, hotels, cruise ships and theme parks. Unemployment rates, while improving, remain high as non-essential businesses have been closed and workers have been furloughed. Similarly, although media spending by businesses is recovering, spending continues to be down sharply compared to prior periods. While certain regions of the United States are in various phases of reopening, which includes the resumption of production for automakers and the reopening of many auto dealer locations, it is unclear what an economic recovery will look like after this historic shutdown of the economy as the United States continues to struggle with rolling outbreaks of the virus.

Against this background and these broad-based economic effects, the full extent to which the COVID-19 pandemic may negatively impact our business is still uncertain. The scope of the effects of the COVID-19 pandemic on our businesses depends on many factors beyond our control, and the effects are difficult to assess or predict with meaningful precision both generally and specifically as to our Sirius XM and Pandora businesses. The COVID-19 pandemic did not have a material effect on our revenues and expenses for the first quarter ended March 31, 2020, with the effects on our business first emerging in the quarter ended June 30, 2020, primarily as discussed below under “Business Performance Update”.

Liquidity

To date, the COVID-19 pandemic and its related economic impact has not affected our capital and financial resources, including our liquidity position. We believe that we have sufficient cash and cash equivalents, as well as debt capacity, to cover our estimated short-term and long-term funding needs, including amounts necessary to construct, launch and insure replacement satellites, as well as fund future stock repurchases, future dividend payments and pursue strategic opportunities. After initially halting our stock repurchase program, we resumed repurchasing of our common stock again during the quarter ended June 30,

2020 and expect to continue repurchasing our common stock subject to numerous factors, including but not limited to market conditions. We have not suspended our quarterly common stock dividend payments as a result of the COVID-19 pandemic. As of June 30, 2020, prior to the redemption of the \$500 aggregate principal amount of outstanding 4.625% Notes and the \$1,000 aggregate principal amount of outstanding 5.375% Notes on July 9, 2020, we had approximately \$1,770 of cash on hand and \$1,749 was available for future borrowing under our revolving credit facility (after giving effect to outstanding letters of credit).

The COVID-19 pandemic to date has not impacted our ability to access our traditional funding sources. The pandemic has not increased our costs of or reduced our access to capital under our revolving credit facility or the debt capital markets, and we do not believe it is reasonably likely to do so in the near-term. In addition, we do not expect the pandemic to affect our ongoing ability to meet the covenants in our debt instruments, including under our revolving credit facility. During the three months ended June 30, 2020, our subsidiary, Sirius XM, completed an offering of \$1,500 of 4.125% Senior Notes due 2030. Subsequent to quarter end, on July 9, 2020, Sirius XM used the net proceeds from this offering, together with cash on hand, to redeem all of its outstanding 5.375% Senior Notes due 2025 at a redemption price of 102.688% of the principal amount thereof plus accrued and unpaid interest thereon to, but excluding, the redemption date and to redeem all of its outstanding 4.625% Senior Notes due 2023 at a redemption price of 100.771% of the principal amount thereof plus accrued and unpaid interest thereon to, but excluding, the redemption date. This financing was executed consistent with our past practices to opportunistically extend the maturities of our existing debt and not in response to the COVID-19 pandemic.

Business Performance Update

We remain focused on the well-being of our employees, customers and all those we serve while also taking responsive measures to adapt to the current environment. We have undertaken and are generally in the process of making a diverse range of operational adjustments in response to the effects of COVID-19 pandemic. We have taken actions to help ensure the continuity of our audio entertainment service through the COVID-19 pandemic, including activating our business continuity plans and implementing measures to enable employees to work remotely. From a customer care and support perspective, we have adjusted our operations with call center vendors as a result of their inability to fully staff their operations. These adjustments have included shifting call center demand to “chat” platforms, activating interactive voice response (or “IVR”) systems and online capabilities, and working with call center vendors to increase the capability for customer service agents to work remotely. We are focused on optimizing customer support performance in this new environment.

Included below is information regarding certain trends related to our Sirius XM and Pandora businesses.

Sirius XM Business. Sales of new cars in the United States were down approximately 48% in April compared to April 2019, to a seasonally adjusted annual rate of 8.6, recovering to 12.2 in May, and 13.0 in June. Used vehicle trial starts were down 5% for the quarter ended June 30, 2020 compared to the quarter ended June 30, 2019, and up 15% for the month of June 2020 compared to June 2019. For the first time in our history used car trial starts exceeded new car trial starts in the second quarter. Our aggregate Sirius XM trial subscription starts in the second quarter declined and that will result in fewer opportunities in the third quarter to convert consumers from trial subscriptions to self-pay subscriptions.

During the second quarter, while we experienced some decline in the rate at which purchasers and lessees of new cars converted from trial subscribers to self-pay subscribers of our satellite radio service, the decline was less than we originally expected. Similarly, used car conversion rates showed only a small impact from the COVID-19 pandemic. After a temporary lull, consumer response to our marketing campaigns has rebounded.

Our average self-pay monthly subscriber churn rates decreased from 1.8% during the quarter ended March 31, 2020 to 1.6% for the three months ended June 30, 2020. Vehicle related churn (churn resulting from a vehicle transaction by a consumer) and non-pay churn decreased during the second quarter, partially offset by an increase in voluntary churn (that is, churn resulting from consumers proactively canceling).

Against this background, we reported 264 thousand net new self-pay subscribers for the quarter ended June 30, 2020.

During the quarter ended June 30, 2020, the penetration rate of satellite radios in new vehicle sales was approximately 77%, an increase of nearly 500 basis points compared to the prior year period. This increase was due to rising penetration rate at certain OEMs, a favorable model-mix and a reduction in fleet vehicle sales as a percentage of total sales. Installations decreased 57% for the quarter ended June 30, 2020 compared to the quarter ended June 30, 2019, but have begun to recover as installations were down approximately 81% in April, 75% in May and 26% in June, compared to the same periods last year, as automakers reopened factories in May and ramped up production.

Pandora Business. Advertising revenue from our Pandora business has declined markedly since mid-March 2020. Several categories of advertisers cancelled or paused orders during the second quarter, and while we have seen recent increases

in advertising orders, the outlook for future advertising revenue is uncertain. Pandora advertising revenue was down approximately 41% in April, 36% in May and 18% in June from the same periods last year.

Ad supported listener hours on our Pandora services decreased markedly following the implementation of stay-at-home orders in mid-March 2020, but improved during the second half of the quarter ended June 30, 2020 to modest declines on a year over year basis. Ad supported listener hours were down approximately 10% in April, 4% in May and 3% in June from the same periods last year.

Potential Impact on our Results of Operations

It is difficult to predict how the COVID-19 pandemic will affect our company in the long-term. Based on what we have observed to date, however, we have attempted below to provide an explanation of how the pandemic has affected, and will likely continue to affect, our business, including our revenue and expenses, over the next six months. We presently believe that the COVID-19 pandemic and its related economic impact has and will likely continue to:

- adversely affect our subscriber revenue due to the decline in sales of vehicles, reduced drive time, and the inability of our vendors to fully staff call centers;
- cause a decline in advertising revenues in our Pandora and Sirius XM businesses as third parties pull back on advertising spending generally;
- have an adverse effect on our equipment revenue and the sale of satellite radios, components and accessories;
- negatively impact our other revenue as the pandemic is anticipated to have similar adverse effects on Sirius XM Canada and its service as well as adversely affect our connected services business;
- reduce our revenue share and royalties expenses, although in our Pandora ad-supported service royalty reductions may not be commensurate with the decline in ad revenues;
- not significantly affect our programming and content expenses as we expect to continue to honor our agreements to acquire, create, promote and produce content, including our obligations in some cases to sports leagues that have cancelled significant portions of their seasons;
- reduce our customer service and billing costs as we may experience lower costs as a result of the inability of our vendors to fully staff the operation and management of customer service centers and the move of some customer service interactions to digital channels, although such cost reductions may be partially offset by increased bad debt expense;
- not significantly affect our transmission expenses and costs of equipment expenses;
- reduce subscriber acquisition costs as hardware subsidies paid to radio manufacturers, distributors and automakers and subsidies paid for chipsets and certain other components used in manufacturing radios are expected to decline as a result of a reduction in vehicle production;
- decrease sales and marketing expenses as the reduction in auto sales is anticipated to reduce trial subscription starts, the volume of our marketing campaigns and the associated expenses related to direct mail, outbound telemarketing and email communications, and as we may reduce our spending on marketing, advertising, media and production, and digital performance media;
- reduce our engineering, design and development expenses as a slower pace of hiring may slow the development of new products and services, including streaming and connected vehicle services, and research and development efforts in the ordinary course;
- reduce our general and administrative expenses as a result of reductions in compensation, travel and entertainment and other costs; and
- not affect our depreciation and amortization expenses.

Other Potential Impacts

We have taken actions to help ensure that our audio entertainment service will continue uninterrupted through the COVID-19 pandemic, including activating our business continuity plans and implementing steps to enable employees to work remotely. The impact of these actions on our workforce are also difficult to assess, but the experience has presented new challenges for our employees as they balance the demands of the pandemic with their daily operational role. To date, however, we do not believe that these remote work arrangements have adversely affected our ability to maintain our financial reporting systems, internal control over financial reporting and disclosure controls and procedures. In addition, we do not expect to encounter any significant challenges to our ability to maintain these systems and controls.

We also do not expect the pandemic to affect the assets on our balance sheet and our ability to timely account for those assets. For example, we do not anticipate making any significant changes as a result of the pandemic in judgments in determining the fair-value of assets measured in accordance with generally accepted accounting principles.

In addition, we do not anticipate any material impairments with respect to goodwill, indefinite life and definite life intangible assets, right of use assets or investments, increases in allowances for credit losses, restructuring charges, other expenses, or changes in accounting judgments that would have an adverse impact on our financial statements.

We are taking advantage of recent Federal tax relief to defer our portion of the social security payroll tax. This tax relief will not have a material impact on our liquidity position in either the short- or long-term. We have not received any financial assistance in the form of loans under the CARES Act.

You should not place undue reliance on any of our forward-looking statements. In addition, any forward-looking statement speaks only as of the date on which it is made, and we undertake no obligation to update any forward-looking statement or statements to reflect events or circumstances after the date on which the statement is made, to reflect the occurrence of unanticipated events or otherwise, except as required by law. New factors emerge from time to time, and it is not possible for us to predict which will arise or to assess with any precision the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements.

For additional discussion of the risks to our business related to the COVID-19 pandemic, see “Risk factors—Risks related to our business—The current coronavirus (COVID-19) pandemic is adversely impacting our business” contained in our Quarterly Report on Form 10-Q for the three months ended March 31, 2020. To the extent the COVID-19 pandemic or any other global health crisis does adversely impact our business or financial condition, it may also have the effect of heightening many of the other “Risk factors” included in our Annual Report on Form 10-K for the year ended December 31, 2019 and in our Quarterly Report on Form 10-Q for the three months ended March 31, 2020.

Executive Summary

We operate two complementary audio entertainment businesses - our Sirius XM business and our Pandora business.

Sirius XM

Our Sirius XM business features music, sports, entertainment, comedy, talk, news, traffic and weather channels, as well as infotainment services, in the United States on a subscription fee basis. The Sirius XM service is distributed through our two proprietary satellite radio systems and through the internet via applications for mobile devices, home devices and other consumer electronic equipment. Satellite radios are primarily distributed through automakers, retailers and our website. Our Sirius XM service is also available through our user interface, which we call “360L,” that combines our satellite and streaming services into a single, cohesive in-vehicle entertainment experience. The primary source of revenue from our Sirius XM business is generated from subscription fees, with most of our customers subscribing to monthly, quarterly, semi-annual or annual plans. We also derive revenue from advertising on select non-music channels, direct sales of our satellite radios and accessories, and other ancillary services. As of June 30, 2020, our Sirius XM business had approximately 34.3 million subscribers.

In addition to our audio entertainment businesses, we provide connected vehicle services to several automakers. These services are designed to enhance the safety, security and driving experience of consumers. We also offer a suite of data services that includes graphical weather, fuel prices, sports schedules and scores and movie listings, a traffic information service that includes information as to road closings, traffic flow and incident data to consumers with compatible in-vehicle navigation systems, and real-time weather services in vehicles, boats and planes.

In May 2020, we terminated the Automatic Labs Inc. (“Automatic”) service, which was part of our connected services business. Automatic operated a service for consumers and auto dealers and offered an install-it-yourself adapter and mobile application, which transformed older vehicles into connected vehicles. During the three and six months ended June 30, 2020, we recorded \$24 of restructuring expenses in our unaudited consolidated statements of comprehensive income related to this termination of the service.

Sirius XM also holds a 70% equity interest and 33% voting interest in Sirius XM Canada Holdings Inc. (“Sirius XM Canada”). Sirius XM Canada's subscribers are not included in our subscriber count or subscriber-based operating metrics.

Pandora

Our Pandora business operates a music, comedy and podcast streaming discovery platform, offering a personalized experience for each listener wherever and whenever they want to listen, whether through mobile devices, car speakers or connected devices. Pandora enables listeners to create personalized stations and playlists, discover new content, hear artist- and expert-curated playlists, podcasts and select Sirius XM content as well as search and play songs and albums on-demand. Pandora is available as an ad-supported radio service, a radio subscription service, called Pandora Plus, and an on-demand subscription service, called Pandora Premium. As of June 30, 2020, Pandora had approximately 6.3 million subscribers. The majority of revenue from our Pandora business is generated from advertising on our Pandora ad-supported radio service. Pandora is the exclusive US ad sales representative for SoundCloud. Through this arrangement Pandora offers advertisers the ability to execute campaigns in the US across the Pandora and SoundCloud listening platforms. In addition, through AdsWizz, Pandora provides a comprehensive digital audio advertising technology platform, which connects audio publishers and advertisers with a variety of ad insertion, campaign trafficking, yield optimization, programmatic buying, marketplace and podcast monetization solutions. As of June 30, 2020, our Pandora business had approximately 59.6 million monthly active users.

On June 16, 2020, Sirius XM acquired Simplecast for \$28 in cash. Simplecast is a podcast management and analytics platform, powering podcasts from creators and brands. Refer to Note 3 to our unaudited consolidated financial statements of this Quarterly Report for more information on this acquisition.

In February 2020, Sirius XM completed a \$75 investment in SoundCloud. SoundCloud is the world's largest open audio platform, with a connected community of creators, listeners, and curators. SoundCloud's platform enables its users to upload, promote, share and create audio entertainment. The minority investment complements the existing ad sales relationship between SoundCloud and Pandora.

Liberty Media

As of June 30, 2020, Liberty Media beneficially owned, directly and indirectly, approximately 73% of the outstanding shares of Holdings' common stock. As a result, we are a "controlled company" for the purposes of the NASDAQ corporate governance requirements.

Results of Operations

Actual Results

Set forth below are our results of operations for the three and six months ended June 30, 2020 compared with the three and six months ended June 30, 2019. The discussion of our results of operations for the three and six months ended June 30, 2020 and the three months ended June 30, 2019 includes the financial results of Pandora for the entire period, while the results of operations for the six months ended June 30, 2019 includes the financial results of Pandora from the date of the Pandora Acquisition, February 1, 2019. The inclusion of Pandora's results in the six months ended June 30, 2020 for the entire period may render direct comparisons with results for prior year period less meaningful. The results of operations are presented for each of our reporting segments for revenue and cost of services and on a consolidated basis for all other items.

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	For the Three Months Ended June 30,		For the Six Months Ended June 30,		2020 vs 2019 Change			
	2020	2019	2020	2019	Three Months		Six Months	
					Amount	%	Amount	%
<i>Revenue</i>								
Sirius XM:								
Subscriber revenue	\$ 1,453	\$ 1,402	\$ 2,910	\$ 2,772	\$ 51	4 %	\$ 138	5 %
Advertising revenue	25	52	69	98	(27)	(52)%	(29)	(30)%
Equipment revenue	25	41	66	82	(16)	(39)%	(16)	(20)%
Other revenue	35	41	76	77	(6)	(15)%	(1)	(1)%
Total Sirius XM revenue	1,538	1,536	3,121	3,029	2	— %	92	3 %
Pandora:								
Subscriber revenue	125	135	253	223	(10)	(7)%	30	13 %
Advertising revenue	211	306	452	469	(95)	(31)%	(17)	(4)%
Total Pandora revenue	336	441	705	692	(105)	(24)%	13	2 %
Total consolidated revenue	1,874	1,977	3,826	3,721	(103)	(5)%	105	3 %
<i>Cost of services</i>								
Sirius XM:								
Revenue share and royalties	365	360	731	707	5	1 %	24	3 %
Programming and content	104	113	216	215	(9)	(8)%	1	— %
Customer service and billing	99	99	192	197	—	— %	(5)	(3)%
Transmission	30	25	57	50	5	20 %	7	14 %
Cost of equipment	4	6	8	12	(2)	(33)%	(4)	(33)%
Total Sirius XM cost of services	602	603	1,204	1,181	(1)	— %	23	2 %
Pandora:								
Revenue share and royalties	222	240	426	385	(18)	(8)%	41	11 %
Programming and content	6	3	12	7	3	100 %	5	71 %
Customer service and billing	23	21	48	36	2	10 %	12	33 %
Transmission	13	15	26	21	(2)	(13)%	5	24 %
Total Pandora cost of services	264	279	512	449	(15)	(5)%	63	14 %
Total consolidated cost of services	866	882	1,716	1,630	(16)	(2)%	86	5 %
Subscriber acquisition costs	48	104	147	212	(56)	(54)%	(65)	(31)%
Sales and marketing	217	232	442	415	(15)	(6)%	27	7 %
Engineering, design and development	61	74	132	128	(13)	(18)%	4	3 %
General and administrative	119	120	226	255	(1)	(1)%	(29)	(11)%
Depreciation and amortization	124	119	256	226	5	4 %	30	13 %
Acquisition and restructuring costs	24	7	24	83	17	243 %	(59)	(71)%
Total operating expenses	1,459	1,538	2,943	2,949	(79)	(5)%	(6)	— %
Income from operations	415	439	883	772	(24)	(5)%	111	14 %
Other (expense) income:								
Interest expense	(101)	(95)	(198)	(184)	(6)	(6)%	(14)	(8)%
Loss on extinguishment of debt	—	—	—	(1)	—	nm	1	nm
Other income (expense)	(14)	(2)	30	2	(12)	600 %	28	1400 %
Total other (expense) income	(115)	(97)	(168)	(183)	(18)	19 %	15	8 %
Income before income taxes	300	342	715	589	(42)	(12)%	126	21 %
Income tax expense	(69)	(76)	(158)	(157)	7	9 %	(1)	(1)%
Net income	\$ 231	\$ 266	\$ 557	\$ 432	\$ (35)	(13)%	\$ 125	29 %

nm - not meaningful

Sirius XM Revenue

Refer to page 42 for our discussion on Sirius XM revenue.

Pandora Revenue

The six months ended June 30, 2020 includes Pandora's revenue for the entire period while the six months ended June 30, 2019 includes Pandora's revenue from the acquisition date, February 1, 2019. Refer to page 42 for our discussion on Pandora revenue.

Sirius XM Cost of Services

Refer to page 43 for our discussion on Sirius XM cost of services.

Pandora Cost of Services

The six months ended June 30, 2020 includes Pandora's cost of services for the entire period while the six months ended June 30, 2019 includes Pandora's cost of services from the acquisition date, February 1, 2019. Refer to page 43 for our discussion on Pandora cost of services.

Operating Costs

Subscriber Acquisition Costs are costs associated with our satellite radio service and include hardware subsidies paid to radio manufacturers, distributors and automakers; subsidies paid for chipsets and certain other components used in manufacturing radios; device royalties for certain radios and chipsets; product warranty obligations; and freight. The majority of subscriber acquisition costs are incurred and expensed in advance of acquiring a subscriber. Subscriber acquisition costs do not include advertising costs, marketing, loyalty payments to distributors and dealers of satellite radios or revenue share payments to automakers and retailers of satellite radios.

For the three months ended June 30, 2020 and 2019, subscriber acquisition costs were \$48 and \$104, respectively, a decrease of 54%, or \$56, and decreased as a percentage of total revenue. For the six months ended June 30, 2020 and 2019, subscriber acquisition costs were \$147 and \$212, respectively, a decrease of 31% or \$65, and decreased as a percentage of total revenue. The decreases were driven by a decline in OEM installations as a result of the COVID-19 pandemic as well as lower hardware subsidies as certain subsidy rates decreased.

Sales and Marketing includes costs for marketing, advertising, media and production, including promotional events and sponsorships; cooperative and artist marketing; and personnel related costs including salaries, commissions, and sales support. Marketing costs include expenses related to direct mail, outbound telemarketing, email communications, and digital performance media.

For the three months ended June 30, 2020 and 2019, sales and marketing expenses were \$217 and \$232, respectively, a decrease of 6%, or \$15, and decreased as a percentage of total revenue. For the six months ended June 30, 2020 and 2019, sales and marketing expenses were \$442 and \$415, respectively, an increase of 7% or \$27, and increased as a percentage of total revenue. The decrease for the three-month period was primarily due to lower personnel-related costs and lower travel and entertainment costs; partially offset by additional subscriber communications and acquisition campaigns. The increase for the six-month period was primarily due to the inclusion of Pandora for a full six months in the 2020 period, and additional subscriber communications, streaming services and products, retention programs and acquisition campaigns; partially offset by lower travel and entertainment costs.

Engineering, Design and Development consists primarily of compensation and related costs to develop chipsets and new products and services, including streaming and connected vehicle services, research and development for broadcast information systems and the design and development costs to incorporate Sirius XM radios into new vehicles manufactured by automakers.

For the three months ended June 30, 2020 and 2019, engineering, design and development expenses were \$61 and \$74, respectively, a decrease of 18%, or \$13, and decreased as a percentage of total revenue. For the six months ended June 30, 2020 and 2019, engineering, design and development expenses were \$132 and \$128, respectively, an increase of 3% or \$4, and increased as a percentage of total revenue. The decrease for the three-month period was driven by lower

personnel-related costs. The increase for the six-month period was primarily due to the inclusion of Pandora for a full six months in the 2020 period as well as higher data costs.

General and Administrative primarily consists of compensation and related costs for personnel and facilities, and include costs related to our finance, legal, human resources and information technologies departments.

For the three months ended June 30, 2020 and 2019, general and administrative expenses were \$119 and \$120, respectively, a decrease of 1%, or \$1, but increased as a percentage of total revenue. For the six months ended June 30, 2020 and 2019, general and administrative expenses were \$226 and \$255, respectively, a decrease of 11% or \$29, and decreased as a percentage of total revenue. The decrease for the three-month period was driven by the closure of a sales and use tax audit, offset by higher legal costs. The decrease for the six-month period was primarily driven by a one-time \$25 legal settlement reserve associated with Do-Not-Call litigation recorded in the first quarter of 2019 and the closure of a sales and use tax audit in the second quarter of 2020, partially offset by higher legal costs and the inclusion of Pandora for a full six months in the 2020 period.

Depreciation and Amortization represents the recognition in earnings of the cost of assets used in operations, including our satellite constellations, property, equipment and intangible assets, over their estimated service lives.

For the three months ended June 30, 2020 and 2019, depreciation and amortization expense was \$124 and \$119, respectively, an increase of 4%, or \$5. For the six months ended June 30, 2020 and 2019, depreciation and amortization expense was \$256 and \$226, respectively, an increase of 13% or \$30. The increase was driven by additional assets placed in-service. The increase for the six-month period was also impacted by the inclusion of Pandora for a full six months.

Acquisition and Restructuring Costs represents expenses associated with the acquisitions of Pandora and Simplecast and restructuring costs.

For the three months ended June 30, 2020 and 2019, acquisition and restructuring costs were \$24 and \$7, respectively. For the six months ended June 30, 2020 and 2019, acquisition and restructuring costs were \$24 and \$83, respectively. The acquisition and restructuring costs for the three and six months ended June 30, 2020 include costs associated with the termination of the Automatic service and costs associated with the acquisition of Simplecast. The acquisition and restructuring costs for the three and six months ended June 30, 2019 include costs associated with the Pandora Acquisition as well as related reorganization costs.

Other (Expense) Income

Interest Expense includes interest on outstanding debt.

For the three months ended June 30, 2020 and 2019, interest expense was \$101 and \$95, respectively. For the six months ended June 30, 2020 and 2019, interest expense was \$198 and \$184, respectively. The increase was primarily driven by higher average debt due to the issuances of Sirius XM's 5.500% Senior Notes due 2029, 4.625% Senior Notes due 2024, and the 4.125% Senior Notes due 2030; partially offset by the redemption of Sirius XM's 6.00% Senior Notes due 2024, redemption of the Pandora convertible notes in 2019, and lower interest rates.

Loss on Extinguishment of Debt includes losses incurred as a result of the redemption of certain debt.

We recorded a \$1 loss on extinguishment of debt during the six months ended June 30, 2019. The loss was due to the repurchase of \$151 principal amount of Pandora's 1.75% Convertible Senior Notes due 2020. There was no loss on extinguishment of debt during the three and six months ended June 30, 2020.

Other Income (Expense) primarily includes realized and unrealized gains and losses from our Deferred Compensation Plan and other investments, interest and dividend income, our share of the income or loss from equity investments in Sirius XM Canada and SoundCloud, and transaction costs related to non-operating investments.

For the three months ended June 30, 2020 and 2019, other (expense) income was \$(14) and \$(2), respectively. For the six months ended June 30, 2020 and 2019, other income (expense) was \$30 and \$2, respectively. During the six months ended June 30, 2020, we recorded a one-time lawsuit settlement of \$7.

Income Taxes

Income Tax Expense includes the change in our deferred tax assets, current federal and state tax expenses, and foreign withholding taxes.

For the three months ended June 30, 2020 and 2019, income tax expense was \$69 and \$76, respectively, and \$158 and \$157 for the six months ended June 30, 2020 and 2019, respectively.

Our effective tax rate for the three months ended June 30, 2020 and 2019 was 23.0% and 22.2%, respectively. Our effective tax rate for the six months ended June 30, 2020 and 2019 was 22.1% and 26.7%, respectively. The effective tax rates for the three and six months ended June 30, 2020 were primarily impacted by federal and state tax credits and the recognition of excess tax benefits related to share-based compensation. The effective tax rate for the three months ended June 30, 2019 was primarily impacted by the recognition of excess tax benefits related to share-based compensation. The effective tax rate for the six months ended June 30, 2019 was primarily impacted by the increase to the valuation allowance related to certain federal research and development credits that are no longer expected to be realizable. We estimate our effective tax rate for the year ending December 31, 2020 will be approximately 23%.

In connection with the Pandora Acquisition, we acquired gross net operating loss ("NOLs") carryforwards of approximately \$1,287 for federal income tax purposes. These NOL carryforwards are available to offset future taxable income. The acquired NOLs are limited annually by Section 382 of the Internal Revenue Code but we expect to fully utilize those NOLs within the carryforward period.

Unaudited Pro Forma Results

Set forth below are our pro forma results of operations for the three and six months ended June 30, 2020 compared with the three and six months ended June 30, 2019. These pro forma results are based on estimates and assumptions, which we believe are reasonable. They are not the results that would have been realized had the Pandora Acquisition actually occurred on January 1, 2019 and are not indicative of our consolidated results of operations in future periods. The pro forma results primarily include adjustments related to amortization of acquired intangible assets, depreciation of property and equipment, acquisition costs, fair value gain or loss on the Pandora investment and associated tax impacts. Pro forma adjustments are not included for the acquisition of Simplecast. Please refer to the Footnotes to Results of Operations (pages 46 through 51) following our discussion of results of operations.

2020 vs 2019 Change

	For the Three Months Ended June 30,		For the Six Months Ended June 30,		Three Months		Six Months	
	2020 (Pro Forma)	2019 (Pro Forma)	2020 (Pro Forma)	2019 (Pro Forma)	Amount	%	Amount	%
Revenue								
Sirius XM:								
Subscriber revenue	\$ 1,453	\$ 1,402	\$ 2,910	\$ 2,772	\$ 51	4 %	\$ 138	5 %
Advertising revenue	25	52	69	98	(27)	(52)%	(29)	(30)%
Equipment revenue	25	41	66	82	(16)	(39)%	(16)	(20)%
Other revenue	37	43	80	81	(6)	(14)%	(1)	(1)%
Total Sirius XM revenue	1,540	1,538	3,125	3,033	2	— %	92	3 %
Pandora:								
Subscriber revenue	125	135	253	269	(10)	(7)%	(16)	(6)%
Advertising revenue	211	306	452	537	(95)	(31)%	(85)	(16)%
Total Pandora revenue	336	441	705	806	(105)	(24)%	(101)	(13)%
Total consolidated revenue	1,876	1,979	3,830	3,839	(103)	(5)%	(9)	— %
Cost of services								
Sirius XM:								
Revenue share and royalties	365	360	731	707	5	1 %	24	3 %
Programming and content	104	113	216	215	(9)	(8)%	1	— %
Customer service and billing	99	99	192	197	—	— %	(5)	(3)%
Transmission	30	25	57	50	5	20 %	7	14 %
Cost of equipment	4	6	8	12	(2)	(33)%	(4)	(33)%
Total Sirius XM cost of services	602	603	1,204	1,181	(1)	— %	23	2 %
Pandora:								
Revenue share and royalties	224	246	430	463	(22)	(9)%	(33)	(7)%
Programming and content	6	3	12	7	3	100 %	5	71 %
Customer service and billing	23	21	48	44	2	10 %	4	9 %
Transmission	13	15	26	26	(2)	(13)%	—	— %
Total Pandora cost of services	266	285	516	540	(19)	(7)%	(24)	(4)%
Total consolidated cost of services	868	888	1,720	1,721	(20)	(2)%	(1)	— %
Subscriber acquisition costs	48	104	147	212	(56)	(54)%	(65)	(31)%
Sales and marketing	217	232	442	451	(15)	(6)%	(9)	(2)%
Engineering, design and development	61	74	132	142	(13)	(18)%	(10)	(7)%
General and administrative	119	120	226	271	(1)	(1)%	(45)	(17)%
Depreciation and amortization	124	119	256	241	5	4 %	15	6 %
Acquisition and restructuring costs	24	—	24	—	24	nm	24	nm
Total operating expenses	1,461	1,537	2,947	3,038	(76)	(5)%	(91)	(3)%
Income from operations	415	442	883	801	(27)	(6)%	82	10 %
Other (expense) income:								
Interest expense	(101)	(95)	(198)	(186)	(6)	(6)%	(12)	(6)%
Loss on extinguishment of debt	—	—	—	(1)	—	nm	1	100 %
Other income (expense)	(14)	(2)	30	3	(12)	600 %	27	900 %
Total other (expense) income	(115)	(97)	(168)	(184)	(18)	(19)%	16	9 %
Income before income taxes	300	345	715	617	(45)	(13)%	98	16 %
Income tax expense	(69)	(77)	(158)	(164)	8	(10)%	6	4 %
Net income	\$ 231	\$ 268	\$ 557	\$ 453	\$ (37)	(14)%	\$ 104	23 %
Adjusted EBITDA	\$ 615	\$ 618	\$ 1,254	\$ 1,184	\$ (3)	— %	\$ 70	6 %

nm - not meaningful

Sirius XM Revenue

Sirius XM Subscriber Revenue includes fees charged for self-pay and paid promotional subscriptions, U.S. Music Royalty Fees and other ancillary fees.

For the three months ended June 30, 2020 and 2019, subscriber revenue was \$1,453 and \$1,402, respectively, an increase of 4%, or \$51. For the six months ended June 30, 2020 and 2019, subscriber revenue was \$2,910 and \$2,772, respectively, an increase of 5% or \$138. The increases were primarily driven by higher self-pay revenue as a result of increases in certain subscription plans and higher U.S. Music Royalty Fees due to a higher music royalty rate.

Sirius XM Advertising Revenue includes the sale of advertising on Sirius XM's non-music channels.

For the three months ended June 30, 2020 and 2019, advertising revenue was \$25 and \$52, respectively, a decrease of 52%, or \$27. For the six months ended June 30, 2020 and 2019, advertising revenue was \$69 and \$98, respectively, a decrease of 30% or \$29. The decreases were due to lower advertising spend as a result of the impact of the COVID-19 pandemic primarily on news and sports channels related to the cancellation of live sporting events.

Sirius XM Equipment Revenue includes revenue and royalties from the sale of satellite radios, components and accessories.

For the three months ended June 30, 2020 and 2019, equipment revenue was \$25 and \$41, respectively, a decrease of 39% or \$16. For the six months ended June 30, 2020 and 2019, equipment revenue was \$66 and \$82, respectively, a decrease of 20% or \$16. The decreases were driven by lower royalty revenue as new vehicle production decreased due to the impact of the COVID-19 pandemic and by lower direct sales to consumers.

Sirius XM Other Revenue includes service and advisory revenue from our Sirius XM Canada, our connected vehicle services, and ancillary revenues.

For the three months ended June 30, 2020 and 2019, other revenue was \$37 and \$43, respectively, a decrease of 14%, or \$6. For the six months ended June 30, 2020 and 2019, other revenue was \$80 and \$81, respectively, a decrease of 1% or \$1. The decrease for the three-month period was primarily driven by lower revenue generated by our connected vehicle services, lower revenue from Sirius XM Canada and lower revenue from our rental car arrangements. The decrease for the six-month period was driven by lower revenue from Sirius XM Canada and lower revenue from our rental car arrangements, partially offset by higher revenue generated from our connected vehicle services.

Pandora Revenue

Pandora Subscriber Revenue includes fees charged for Pandora Plus and Pandora Premium subscriptions.

For the three months ended June 30, 2020 and 2019, Pandora subscriber revenue was \$125 and \$135, respectively, a decrease of 7%, or \$10. For the six months ended June 30, 2020 and 2019, Pandora subscriber revenue was \$253 and \$269, respectively, a decrease of 6% or \$16. The decreases were primarily due to the expiration of the one-year promotional subscriptions generated through an expired agreement with T-Mobile.

Pandora Advertising Revenue is generated primarily from audio, display and video advertising.

For the three months ended June 30, 2020 and 2019, Pandora advertising revenue was \$211 and \$306, respectively, a decrease of 31%, or \$95. For the six months ended June 30, 2020 and 2019, Pandora advertising revenue was \$452 and \$537, respectively, a decrease of 16% or \$85. The decreases were primarily due to lower advertising spend as a result of the impact of the COVID-19 pandemic.

Total Consolidated Revenue

Total Consolidated Revenue for the three months ended June 30, 2020 and 2019, was \$1,876 and \$1,979, respectively, a decrease of 5%, or \$103. Total Consolidated Revenue for the six months ended June 30, 2020 and 2019, was \$3,830 and \$3,839, respectively, a slight decrease of \$9.

Sirius XM Cost of Services

Sirius XM Cost of Services includes revenue share and royalties, programming and content, customer service and billing and transmission expenses.

Sirius XM Revenue Share and Royalties include royalties for transmitting content, including streaming royalties, as well as automaker, content provider and advertising revenue share.

For the three months ended June 30, 2020 and 2019, revenue share and royalties were \$365 and \$360, respectively, an increase of 1%, or \$5, and increased as a percentage of total Sirius XM revenue. For the six months ended June 30, 2020 and 2019, revenue share and royalties were \$731 and \$707, respectively, an increase of 3%, or \$24, and increased as a percentage of total Sirius XM revenue. The increases were driven by overall greater revenues subject to music royalties and revenue share.

Sirius XM Programming and Content includes costs to acquire, create, promote and produce content. We have entered into various agreements with third parties for music and non-music programming that require us to pay license fees and other amounts.

For the three months ended June 30, 2020 and 2019, programming and content expenses were \$104 and \$113, respectively, a decrease of 8%, or \$9, and decreased as a percentage of total Sirius XM revenue. For the six months ended June 30, 2020 and 2019, programming and content expenses were \$216 and \$215, respectively, a slight increase of \$1, but decreased as a percentage of total Sirius XM revenue. The decrease for the three-month period was driven by one-time benefits for reduced sports programming as a result of shortened sports seasons and lower live event programming costs due to the COVID-19 pandemic. The increase for the six-month period was primarily driven by higher content licensing costs as well as greater personnel-related costs partially offset by one-time benefits for reduced sports programming as a result of shortened sports seasons due to the COVID-19 pandemic.

Sirius XM Customer Service and Billing includes costs associated with the operation and management of internal and third-party customer service centers, and our subscriber management systems as well as billing and collection costs, bad debt expense, and transaction fees.

For the three months ended June 30, 2020 and 2019, customer service and billing expenses were \$99. For the six months ended June 30, 2020 and 2019, customer service and billing expenses were \$192 and \$197, respectively, a decrease of 3%, or \$5, and decreased as a percentage of total Sirius XM revenue. The decline for the six-month period was driven by reduced staffing resulting from stay at home orders issued in countries in which we or our vendors operate call centers and lower transaction costs from a one-time recovery of fees, partially offset by higher bad debt expense.

Sirius XM Transmission consists of costs associated with the operation and maintenance of our terrestrial repeater networks; satellites; satellite telemetry, tracking and control systems; satellite uplink facilities; studios; and delivery of our Internet streaming and connected vehicle services.

For the three months ended June 30, 2020 and 2019, transmission expenses were \$30 and \$25, respectively, an increase of 20%, or \$5, and increased as a percentage of total Sirius XM revenue. For the six months ended June 30, 2020 and 2019, transmission expenses were \$57 and \$50, respectively, an increase of 14%, or \$7, and increased as a percentage of total Sirius XM revenue. The increases were primarily driven by higher cloud hosting and wireless costs associated with our streaming services.

Sirius XM Cost of Equipment includes costs from the sale of satellite radios, components and accessories and provisions for inventory allowance attributable to products purchased for resale in our direct to consumer distribution channels.

For the three months ended June 30, 2020 and 2019, cost of equipment was \$4 and \$6, respectively, a decrease of 33%, or \$2, but increased as a percentage of equipment revenue. For the six months ended June 30, 2020 and 2019, cost of equipment was \$8 and \$12, respectively, a decrease of 33%, or \$4, and decreased as a percentage of equipment revenue. The decreases were primarily due to lower direct sales to consumers and lower inventory reserves.

Pandora Cost of Services

Pandora Cost of Services includes revenue share and royalties, programming and content, customer service and billing, and transmission expenses.

Pandora Revenue Share and Royalties includes licensing fees paid for streaming music or other content to our subscribers and listeners as well as revenue share paid to third party ad servers. We make payments to third party ad servers for the period the advertising impressions are delivered or click-through actions occur, and accordingly, we record this as a cost of service in the related period.

For the three months ended June 30, 2020 and 2019, revenue share and royalties were \$224 and \$246, respectively, a decrease of 9%, or \$22, but increased as a percentage of total Pandora revenue. For the six months ended June 30, 2020 and 2019, revenue share and royalties were \$430 and \$463, respectively, a decrease of 7%, or \$33, but increased as a percentage of total Pandora revenue. The decrease for the three-month period was primarily due to lower listening hours, lower subscriber revenue, and lower costs resulting from the presence of minimum guarantees associated with direct license agreements with major record labels in the prior year. The decrease for the six-month period was primarily driven by a reversal of a pre-acquisition reserve of \$16 for royalties during the first quarter of 2020, lower listening hours, lower subscriber revenue, and lower costs resulting from the presence of minimum guarantees associated with direct license agreements with major record labels in the prior year.

Pandora Programming and Content includes costs to produce live listener events and promote content.

For the three months ended June 30, 2020 and 2019, programming and content expenses were \$6 and \$3, respectively, an increase of 100%, or \$3, and increased as a percentage of total Pandora revenue. For the six months ended June 30, 2020 and 2019, programming and content expenses were \$12 and \$7, respectively, an increase of 71%, or \$5, and increased as a percentage of total Pandora revenue. The increases were primarily attributable to higher personnel-related costs.

Pandora Customer Service and Billing includes transaction fees on subscription purchases through mobile app stores, and bad debt expense.

For the three months ended June 30, 2020 and 2019, customer service and billing expenses were \$23 and \$21, respectively, an increase of 10%, or \$2, and increased as a percentage of total Pandora revenue. For the six months ended June 30, 2020 and 2019, customer service and billing expenses were \$48 and \$44, respectively, an increase of 9%, or \$4, and increased as a percentage of total Pandora revenue. The increases were primarily driven by higher bad debt expense.

Pandora Transmission includes costs associated with content streaming, maintaining our streaming radio and on-demand subscription services and creating and serving advertisements through third-party ad servers.

For the three months ended June 30, 2020 and 2019, transmission expenses were \$13 and \$15, respectively, a decrease of 13%, or \$2, but increased as a percentage of total Pandora revenue. For both the six months ended June 30, 2020 and 2019, transmission expenses were \$26. The decrease for the three-month period was driven by lower streaming and personnel-related costs.

Operating Costs

Subscriber Acquisition Costs are costs associated with our satellite radio service and include hardware subsidies paid to radio manufacturers, distributors and automakers; subsidies paid for chipsets and certain other components used in manufacturing radios; device royalties for certain radios and chipsets; product warranty obligations; and freight. The majority of subscriber acquisition costs are incurred and expensed in advance of acquiring a subscriber. Subscriber acquisition costs do not include advertising costs, marketing, loyalty payments to distributors and dealers of satellite radios or revenue share payments to automakers and retailers of satellite radios.

For the three months ended June 30, 2020 and 2019, subscriber acquisition costs were \$48 and \$104, respectively, a decrease of 54%, or \$56, and decreased as a percentage of total revenue. For the six months ended June 30, 2020 and 2019, subscriber acquisition costs were \$147 and \$212, respectively, a decrease of 31%, or \$65, and decreased as a percentage of total revenue. The decreases were driven by a decline in OEM installations as a result of the COVID-19 pandemic as well as lower hardware subsidies as certain subsidy rates decreased.

Sales and Marketing includes costs for marketing, advertising, media and production, including promotional events and sponsorships; cooperative and artist marketing; and personnel related costs including salaries, commissions, and sales support. Marketing costs include expenses related to direct mail, outbound telemarketing, email communications, and digital performance media.

For the three months ended June 30, 2020 and 2019, sales and marketing expenses were \$217 and \$232, respectively, a decrease of 6%, or \$15, and decreased as a percentage of total revenue. For the six months ended June 30, 2020 and 2019, sales and marketing expenses were \$442 and \$451, respectively, a decrease of 2%, or \$9, and decreased as a

percentage of total revenue. The decreases was primarily due to lower personnel-related costs and lower travel and entertainment costs, partially offset by additional subscriber communications and acquisition campaigns.

Engineering, Design and Development consists primarily of compensation and related costs to develop chipsets and new products and services, including streaming and connected vehicle services, research and development for broadcast information systems and costs associated with the incorporation of our radios into new vehicles manufactured by automakers.

For the three months ended June 30, 2020 and 2019, engineering, design and development expenses were \$61 and \$74, respectively, a decrease of 18%, or \$13, and decreased as a percentage of total revenue. For the six months ended June 30, 2020 and 2019, engineering, design and development expenses were \$132 and \$142, respectively, a decrease of 7%, or \$10, and decreased as a percentage of total revenue. The decreases were driven by lower personnel-related costs, partially offset by higher data costs.

General and Administrative primarily consists of compensation and related costs for personnel and facilities, and include costs related to our finance, legal, human resources and information technologies departments.

For the three months ended June 30, 2020 and 2019, general and administrative expenses were \$119 and \$120, respectively, a decrease of 1%, or \$1, but increased as a percentage of total revenue. For the six months ended June 30, 2020 and 2019, general and administrative expenses were \$226 and \$271, respectively, a decrease of 17%, or \$45, and decreased as a percentage of total revenue. The decrease for the three-month period was driven by the closure of a sales and use tax audit offset by higher legal costs. The decrease for the six-month period was primarily driven by a one-time \$25 legal settlement reserve associated with Do-Not-Call litigation recorded in the first quarter of 2019, lower personnel costs, and the closure of a sales and use tax audit in the second quarter of 2020, partially offset by higher legal costs.

Depreciation and Amortization represents the recognition in earnings of the cost of assets used in operations, including our satellite constellations, property, equipment and intangible assets, over their estimated service lives.

For the three months ended June 30, 2020 and 2019, depreciation and amortization expense was \$124 and \$119, respectively, an increase of 4%, or \$5. For the six months ended June 30, 2020 and 2019, depreciation and amortization expense was \$256 and \$241, respectively, an increase of 6%, or \$15. The increases were driven by additional assets placed in-service.

Acquisition and Restructuring Costs represents expenses associated with the termination of the Automatic service and the acquisition of Simplecast.

For the both the three and six months ended June 30, 2020, acquisition and restructuring costs were \$24. The acquisition and restructuring costs for the three and six months ended June 30, 2020 include costs associated with the termination of the Automatic service and costs associated with the acquisition of Simplecast. There were no acquisition and restructuring costs for the three and six months ended June 30, 2019.

Other (Expense) Income

Interest Expense includes interest on outstanding debt.

For the three months ended June 30, 2020 and 2019, interest expense was \$101 and \$95, respectively, an increase of 6%, or \$6. For the six months ended June 30, 2020 and 2019, interest expense was \$198 and \$189, respectively, an increase of 6%, or \$12. The increases were primarily driven by higher average debt due to the issuances of the 5.500% Senior Notes due 2029, the 4.625% Senior Notes due 2024 and the 4.125% Senior Notes due 2030; partially offset by the redemption of the 6.00% Senior Notes due 2024 and lower average interest rates.

Loss on Extinguishment of Debt, includes losses incurred as a result of the redemption of certain debt.

We recorded a \$1 loss during the six months ended June 30, 2019. The loss was due to the repurchase of \$151 principal amount of Pandora's 1.75% Convertible Senior Notes due 2020. There was no loss on extinguishment of debt during the six months ended June 30, 2020.

Other Income (Expense) primarily includes realized and unrealized gains and losses from our Deferred Compensation Plan and other investments, interest and dividend income, our share of the income or loss from our equity investments in Sirius XM Canada and SoundCloud, and transaction costs related to non-operating investments.

For the three months ended June 30, 2020 and 2019, other (expense) income was \$(14) and \$(2), respectively. For the six months ended June 30, 2020 and 2019, other income (expense) was \$30 and \$(1), respectively. During the six months ended June 30, 2020, we recorded a one-time lawsuit settlement of \$7.

Income Taxes

Income Tax Expense includes the change in our deferred tax assets, current federal and state tax expenses, and foreign withholding taxes.

For the three months ended June 30, 2020 and 2019, income tax expense was \$69 and \$77, respectively, and \$158 and \$164 for the six months ended June 30, 2020 and 2019, respectively.

Our effective tax rate for the three months ended June 30, 2020 and 2019 was 23.0% and 22.3%, respectively. Our effective tax rate for the six months ended June 30, 2020 and 2019 was 22.1% and 26.9%, respectively. The effective tax rates for the three and six months ended June 30, 2020 were primarily impacted by federal and state tax credits and the recognition of excess tax benefits related to share-based compensation. The effective tax rate for the three months ended June 30, 2019 was primarily impacted by the recognition of excess tax benefits related to share-based compensation. The effective tax rate for the six months ended June 30, 2019 was primarily impacted by the increase to the valuation allowance related to certain federal research and development credits that are no longer expected to be realizable. We estimate our effective tax rate for the year ending December 31, 2020 will be approximately 23%.

In connection with the Pandora Acquisition, we acquired gross NOL carryforwards of approximately \$1,287 for federal income tax purposes. These NOL carryforwards are available to offset future taxable income. The acquired NOLs are limited annually by Section 382 of the Internal Revenue Code but we expect to fully utilize those NOLs within the carryforward period.

Footnotes to Pro Forma Results of Operations

The following tables reconcile our results of operations as reported to our *pro forma* results of operations for the three and six months ended June 30, 2020 and 2019 which includes the Pandora pre-acquisition financial information for the applicable periods and the effects of purchase price accounting. These pro forma results are based on estimates and assumptions, which we believe are reasonable. They are not the results that would have been realized had the Pandora Acquisition actually occurred on January 1, 2019 and are not indicative of our consolidated results of operations in future periods. The pro forma results primarily include adjustments related to amortization of acquired intangible assets, depreciation of property and equipment, acquisition costs, fair value gain or loss on the Pandora investment and associated tax impacts.

Unaudited for the Three Months Ended June 30, 2020

	As Reported	Predecessor Financial Information	Purchase Price Accounting Adjustments	Ref	Pro Forma
<i>Revenue</i>					
Sirius XM:					
Subscriber revenue	\$ 1,453	\$ —	\$ —		\$ 1,453
Advertising revenue	25	—	—		25
Equipment revenue	25	—	—		25
Other revenue	35	—	2	(a)	37
Total Sirius XM revenue	1,538	—	2		1,540
Pandora:					
Subscriber revenue	125	—	—		125
Advertising revenue	211	—	—		211
Total Pandora revenue	336	—	—		336
Total consolidated revenue	1,874	—	2		1,876
<i>Cost of services</i>					
Sirius XM:					
Revenue share and royalties	365	—	—		365
Programming and content	104	—	—		104
Customer service and billing	99	—	—		99
Transmission	30	—	—		30
Cost of equipment	4	—	—		4
Total Sirius XM cost of services	602	—	—		602
Pandora:					
Revenue share and royalties	222	—	2	(b)	224
Programming and content	6	—	—		6
Customer service and billing	23	—	—		23
Transmission	13	—	—		13
Total Pandora cost of services	264	—	2		266
Total consolidated cost of services	866	—	2		868
Subscriber acquisition costs	48	—	—		48
Sales and marketing	217	—	—		217
Engineering, design and development	61	—	—		61
General and administrative	119	—	—		119
Depreciation and amortization	124	—	—		124
Acquisition and restructuring costs	24	—	—		24
Total operating expenses	1,459	—	2		1,461
Income from operations	415	—	—		415
Other (expense) income:					
Interest expense	(101)	—	—		(101)
Loss on extinguishment of debt	—	—	—		—
Other income (expense)	(14)	—	—		(14)
Total other (expense) income	(115)	—	—		(115)
Income before income taxes	300	—	—		300
Income tax expense	(69)	—	—		(69)
Net income	\$ 231	\$ —	\$ —		\$ 231

- (a) This adjustment eliminates the impact of additional revenue associated with certain programming agreements recorded as part of the merger of Sirius and XM (the "XM Merger").
- (b) This adjustment includes the impact of additional expense associated with minimum guarantee royalty contracts recorded as part of the Pandora Acquisition.

Unaudited for the Three Months Ended June 30, 2019

	As Reported	Predecessor Financial Information	Purchase Price Accounting Adjustments	Ref	Pro Forma
<i>Revenue</i>					
Sirius XM:					
Subscriber revenue	\$ 1,402	\$ —	\$ —		\$ 1,402
Advertising revenue	52	—	—		52
Equipment revenue	41	—	—		41
Other revenue	41	—	2	(c)	43
Total Sirius XM revenue	1,536	—	2		1,538
Pandora:					
Subscriber revenue	135	—	—		135
Advertising revenue	306	—	—		306
Total Pandora revenue	441	—	—		441
Total consolidated revenue	1,977	—	2		1,979
<i>Cost of services</i>					
Sirius XM:					
Revenue share and royalties	360	—	—		360
Programming and content	113	—	—		113
Customer service and billing	99	—	—		99
Transmission	25	—	—		25
Cost of equipment	6	—	—		6
Total Sirius XM cost of services	603	—	—		603
Pandora:					
Revenue share and royalties	240	—	6	(d)	246
Programming and content	3	—	—		3
Customer service and billing	21	—	—		21
Transmission	15	—	—		15
Total Pandora cost of services	279	—	6		285
Total consolidated cost of services	882	—	6		888
Subscriber acquisition costs	104	—	—		104
Sales and marketing	232	—	—		232
Engineering, design and development	74	—	—		74
General and administrative	120	—	—		120
Depreciation and amortization	119	—	—		119
Acquisition and restructuring costs	7	—	(7)	(e)	—
Total operating expenses	1,538	—	(1)		1,537
Income from operations	439	—	3		442
Other (expense) income:					
Interest expense	(95)	—	—		(95)
Loss on extinguishment of debt	—	—	—		—
Other income (expense)	(2)	—	—		(2)
Total other (expense) income	(97)	—	—		(97)
Income before income taxes	342	—	3		345
Income tax expense	(76)	—	(1)	(f)	(77)
Net income	266	\$ —	\$ 2		\$ 268

- (c) This adjustment eliminates the impact of additional revenue associated with certain programming agreements recorded as part of the XM Merger.
- (d) This adjustment includes the impact of additional expense associated with minimum guarantee royalty contracts recorded as part of the Pandora Acquisition.
- (e) This adjustment eliminates the impact of acquisition and other related costs.
- (f) This adjustment to income taxes was calculated by applying Sirius XM's statutory tax rate at June 30, 2019 to the pro forma adjustments of \$3.

Unaudited for the Six Months Ended June 30, 2020

	As Reported	Predecessor Financial Information	Purchase Price Accounting Adjustments	Ref	Pro Forma
<i>Revenue</i>					
Sirius XM:					
Subscriber revenue	\$ 2,910	\$ —	\$ —		\$ 2,910
Advertising revenue	69	—	—		69
Equipment revenue	66	—	—		66
Other revenue	76	—	4	(g)	80
Total Sirius XM revenue	3,121	—	4		3,125
Pandora:					
Subscriber revenue	253	—	—		253
Advertising revenue	452	—	—		452
Total Pandora revenue	705	—	—		705
Total consolidated revenue	3,826	—	4		3,830
<i>Cost of services</i>					
Sirius XM:					
Revenue share and royalties	731	—	—		731
Programming and content	216	—	—		216
Customer service and billing	192	—	—		192
Transmission	57	—	—		57
Cost of equipment	8	—	—		8
Total Sirius XM cost of services	1,204	—	—		1,204
Pandora:					
Revenue share and royalties	426	—	4	(h)	430
Programming and content	12	—	—		12
Customer service and billing	48	—	—		48
Transmission	26	—	—		26
Total Pandora cost of services	512	—	4		516
Total consolidated cost of services	1,716	—	4		1,720
Subscriber acquisition costs	147	—	—		147
Sales and marketing	442	—	—		442
Engineering, design and development	132	—	—		132
General and administrative	226	—	—		226
Depreciation and amortization	256	—	—		256
Acquisition and restructuring costs	24	—	—		24
Total operating expenses	2,943	—	4		2,947
Income from operations	883	—	—		883
Other (expense) income:					
Interest expense	(198)	—	—		(198)
Loss on extinguishment of debt	—	—	—		—
Other (expense) income	30	—	—		30
Total other (expense) income	(168)	—	—		(168)
Income before income taxes	715	—	—		715
Income tax expense	(158)	—	—		(158)
Net income	\$ 557	\$ —	\$ —		\$ 557

(g) This adjustment eliminates the impact of additional revenue associated with certain programming agreements recorded as part of the XM Merger.

(h) This adjustment includes the impact of additional expense associated with minimum guarantee royalty contracts recorded as part of the Pandora Acquisition.

Unaudited for the Six Months Ended June 30, 2019

	As Reported	Predecessor Financial Information (i)	Purchase Price Accounting Adjustments	Ref	Pro Forma
<i>Revenue</i>					
Sirius XM:					
Subscriber revenue	\$ 2,772	\$ —	\$ —		\$ 2,772
Advertising revenue	98	—	—		98
Equipment revenue	82	—	—		82
Other revenue	77	—	4	(j)	81
Total Sirius XM revenue	<u>3,029</u>	<u>—</u>	<u>4</u>		<u>3,033</u>
Pandora:					
Subscriber revenue	223	46	—		269
Advertising revenue	469	68	—		537
Total Pandora revenue	<u>692</u>	<u>114</u>	<u>—</u>		<u>806</u>
Total consolidated revenue	<u>3,721</u>	<u>114</u>	<u>4</u>		<u>3,839</u>
<i>Cost of services</i>					
Sirius XM:					
Revenue share and royalties	707	—	—		707
Programming and content	215	—	—		215
Customer service and billing	197	—	—		197
Transmission	50	—	—		50
Cost of equipment	12	—	—		12
Total Sirius XM cost of services	<u>1,181</u>	<u>—</u>	<u>—</u>		<u>1,181</u>
Pandora:					
Revenue share and royalties	385	71	7	(k)	463
Programming and content	7	—	—		7
Customer service and billing	36	8	—		44
Transmission	21	5	—		26
Total Pandora cost of services	<u>449</u>	<u>84</u>	<u>7</u>		<u>540</u>
Total consolidated cost of services	<u>1,630</u>	<u>84</u>	<u>7</u>		<u>1,721</u>
Subscriber acquisition costs	212	—	—		212
Sales and marketing	415	36	—		451
Engineering, design and development	128	14	—		142
General and administrative	255	16	—		271
Depreciation and amortization	226	6	9	(l)	241
Acquisition and restructuring costs	83	1	(84)	(m)	—
Total operating expenses	<u>2,949</u>	<u>157</u>	<u>(68)</u>		<u>3,038</u>
Income from operations	<u>772</u>	<u>(43)</u>	<u>72</u>		<u>801</u>
Other (expense) income:					
Interest expense	(184)	(2)	—		(186)
Loss on extinguishment of debt	(1)	—	—		(1)
Other (expense) income	2	1	—		3
Total other (expense) income	<u>(183)</u>	<u>(1)</u>	<u>—</u>		<u>(184)</u>
Income before income taxes	<u>589</u>	<u>(44)</u>	<u>72</u>		<u>617</u>
Income tax expense	(157)	—	(7)	(n)	(164)
Net income	<u>\$ 432</u>	<u>\$ (44)</u>	<u>\$ 65</u>		<u>\$ 453</u>

(i) Represents Pandora's results for the period January 1, 2019 through January 31, 2019.

(j) This adjustment eliminates the impact of additional revenue associated with certain programming agreements recorded as part of the XM Merger.

(k) This adjustment includes the impact of additional expense associated with minimum guarantee royalty contracts recorded as part of the Pandora Acquisition.

(l) This adjustment includes the impact of the additional amortization associated with the acquired intangible assets recorded as part of the Pandora Acquisition that are subject to amortization, partially offset by normal depreciation associated with assets revalued in purchase accounting.

(m) This adjustment eliminates the impact of acquisition and other related costs.

- (n) This adjustment to income taxes was calculated by applying Sirius XM's statutory tax rate at June 30, 2019 to the pro forma adjustments of \$72 and Pandora's loss before income tax of \$44.

Key Financial and Operating Performance Metrics

In this section, we present certain financial performance measures some of which are presented as Non-GAAP items, which include free cash flow and adjusted EBITDA. We also present certain operating performance measures. Our adjusted EBITDA excludes the impact of share-based payment expense and certain purchase price accounting adjustments related to the XM Merger and the Pandora Acquisition. Additionally, when applicable, our adjusted EBITDA metric excludes the effect of significant items that do not relate to the on-going performance of our business. We use these Non-GAAP financial and operating performance measures to manage our business, to set operational goals and as a basis for determining performance-based compensation for our employees. See the accompanying glossary on pages 57 through 60 for more details and for the reconciliation to the most directly comparable GAAP measure (where applicable).

We believe these Non-GAAP financial and operating performance measures provide useful information to investors regarding our financial condition and results of operations. We believe these Non-GAAP financial and operating performance measures may be useful to investors in evaluating our core trends because they provide a more direct view of our underlying costs. We believe investors may use our adjusted EBITDA to estimate our current enterprise value and to make investment decisions. We believe free cash flow provides useful supplemental information to investors regarding our cash available for future subscriber acquisitions and capital expenditures, to repurchase or retire debt, to acquire other companies and our ability to return capital to stockholders. By providing these Non-GAAP financial and operating performance measures, together with the reconciliations to the most directly comparable GAAP measure (where applicable), we believe we are enhancing investors' understanding of our business and our results of operations.

Our Non-GAAP financial measures should be viewed in addition to, and not as an alternative for or superior to, our reported results prepared in accordance with GAAP. In addition, our Non-GAAP financial measures may not be comparable to similarly-titled measures by other companies. Please refer to the glossary (pages 57 through 60) for a further discussion of such Non-GAAP financial and operating performance measures and reconciliations to the most directly comparable GAAP measure (where applicable). Subscribers and subscription related revenues and expenses associated with our connected vehicle services and Sirius XM Canada are not included in Sirius XM's subscriber count or subscriber-based operating metrics.

Set forth below are our subscriber balances as of June 30, 2020 compared to June 30, 2019.

<i>(subscribers in thousands)</i>	As of June 30,		2020 vs 2019 Change	
	2020	2019	Amount	%
Sirius XM				
Self-pay subscribers	30,311	29,336	975	3 %
Paid promotional subscribers	3,939	5,009	(1,070)	(21)%
Ending subscribers	34,250	34,345	(95)	— %
Traffic users	9,414	9,150	264	3 %
Sirius XM Canada subscribers	2,607	2,702	(95)	(4)%
Pandora				
Monthly active users - all services	59,604	64,948	(5,344)	(8)%
Self-pay subscribers	6,256	6,224	32	1 %
Paid promotional subscribers	46	733	(687)	(94)%
Ending subscribers	6,302	6,957	(655)	(9)%

The following table contains our Non-GAAP pro forma financial and operating performance measures which are based on our adjusted results of operations for the three and six months ended June 30, 2020 and 2019.

(subscribers in thousands)	2020 vs 2019 Change							
	For the Three Months Ended June 30,		For the Six Months Ended June 30,		Three Months		Six Months	
	2020	2019	2020	2019 (1)	Amount	%	Amount	%
Sirius XM								
Self-pay subscribers	264	290	333	421	(26)	(9)%	(88)	(21)%
Paid promotional subscribers	(780)	(116)	(992)	(115)	(664)	572 %	(877)	763 %
Net additions	(516)	174	(659)	306	(690)	(397)%	(965)	(315)%
Weighted average number of subscribers	34,288	34,126	34,556	34,071	162	— %	485	1 %
Average self-pay monthly churn	1.6 %	1.7 %	1.7 %	1.7 %	(0.1)%	(6)%	— %	— %
ARPU ⁽²⁾	\$ 13.96	\$ 13.83	\$ 13.95	\$ 13.67	\$ 0.13	1 %	\$ 0.28	2 %
SAC, per installation	\$ 20.14	\$ 22.74	\$ 20.14	\$ 23.40	\$ (2.60)	(11)%	\$ (3.26)	(14)%
Pandora								
Self-pay subscribers	40	64	91	310	(24)	(38)%	(219)	(71)%
Paid promotional subscribers	(4)	(3)	(3)	(23)	(1)	33 %	20	(87)%
Net additions ⁽³⁾	36	61	88	287	(25)	(41)%	(199)	(69)%
Weighted average number of subscribers	6,223	6,873	6,233	6,791	(650)	(9)%	(558)	(8)%
ARPU	\$ 6.70	\$ 6.53	\$ 6.77	\$ 6.61	\$ 0.17	3 %	\$ 0.16	2 %
Ad supported listener hours (in billions)	3.29	3.49	6.41	6.91	(0.20)	(6)%	(0.50)	(7)%
Advertising revenue per thousand listener hours (RPM)	\$ 55.23	\$ 80.14	\$ 61.23	\$ 71.46	\$ (24.91)	(31)%	\$ (10.23)	(14)%
Licensing costs per thousand listener hours (LPM)	\$ 37.16	\$ 37.91	\$ 37.12	\$ 37.28	\$ (0.75)	(2)%	\$ (0.16)	— %
Licensing costs per paid subscriber (LPU)	\$ 4.06	\$ 4.16	\$ 4.08	\$ 4.06	\$ (0.10)	(2)%	\$ 0.02	— %
Total Company								
Adjusted EBITDA	\$ 615	\$ 618	\$ 1,254	\$ 1,184	\$ (3)	— %	\$ 70	6 %
Free cash flow ⁽⁴⁾	\$ 503	\$ 474	\$ 851	\$ 774	\$ 29	6 %	\$ 77	10 %

- (1) Includes Pandora's results for the six-month period, including pre-acquisition results for the period January 1, 2019 through January 31, 2019.
- (2) ARPU for Sirius XM excludes subscriber revenue from our connected vehicle services of \$42 and \$38 for the three months and \$86 and \$75 for the six months ended June 30, 2020 and 2019, respectively.
- (3) Amounts may not sum as a result of rounding.
- (4) Free cash flow has not been adjusted for Pandora's pre-acquisition results.

Sirius XM

Subscribers. At June 30, 2020, Sirius XM had approximately 34,250 subscribers, a decrease of 95, from the approximately 34,345 subscribers as of June 30, 2019. The decrease in subscribers was primarily due to the decrease in paid promotional, partially offset by growth in our self-pay subscriber base from subsequent owner trial conversions as well as subscriber win back programs.

For the three months ended June 30, 2020 and 2019, net subscriber additions were (516) and 174, respectively. For the six months ended June 30, 2020 and 2019, net subscriber additions were (659) and 306, respectively. Paid promotional subscribers decreased due to declines in shipments and trial subscription starts from automakers offering paid subscriptions due to the COVID-19 pandemic. Self-pay net additions decreased year over year as increases in subsequent owner trial conversions and reductions in vehicle related and non-pay churn were offset by reduced additions from win back programs, new car conversions, and aftermarket programs as well as increases in voluntary churn.

Traffic Users. We offer services that provide graphic information as to road closings, traffic flow and incident data to consumers with compatible in-vehicle navigation systems. At June 30, 2020, Sirius XM had approximately 9,414 traffic users, an increase of 264 users, or 3%, from the approximately 9,150 traffic users as of June 30, 2019.

Sirius XM Canada Subscribers. At June 30, 2020, Sirius XM Canada had approximately 2,607 subscribers, a decrease of 95, or 4%, from the approximately 2,702 Sirius XM Canada subscribers as of June 30, 2019.

Average Self-pay Monthly Churn is derived by dividing the monthly average of self-pay deactivations for the period by the average number of self-pay subscribers for the period. (See accompanying glossary on pages 57 through 60 for more details.)

For the three months ended June 30, 2020 and 2019, our average self-pay monthly churn rate was 1.6% and 1.7%, respectively. For both the six months ended June 30, 2020 and 2019, our average self-pay monthly churn rate was 1.7%. The decrease for the three month period was primarily driven by lower vehicle and non-pay churn, partially offset by increased voluntary churn.

ARPU is derived from total earned Sirius XM subscriber revenue (excluding revenue derived from our connected vehicle services) and net advertising revenue, divided by the number of months in the period, divided by the daily weighted average number of subscribers for the period. (See the accompanying glossary on pages 57 through 60 for more details.)

For the three months ended June 30, 2020 and 2019, subscriber ARPU - Sirius XM was \$13.96 and \$13.83, respectively. For the six months ended June 30, 2020 and 2019, subscriber ARPU - Sirius XM was \$13.95 and \$13.67, respectively. The increase was driven by an increase in certain subscription rates and the U.S. Music Royalty Fee.

SAC, Per Installation, is derived from subscriber acquisition costs and margins from the sale of radios, components and accessories (excluding connected vehicle services), divided by the number of satellite radio installations in new vehicles and shipments of aftermarket radios for the period. (See the accompanying glossary on pages 57 through 60 for more details.)

For the three months ended June 30, 2020 and 2019, SAC, per installation, was \$20.14 and \$22.74, respectively. For the six months ended June 30, 2020 and 2019, SAC, per installation, was \$20.14 and \$23.40, respectively. The decreases were driven by reductions to OEM hardware subsidy rates.

Pandora

Monthly Active Users. At June 30, 2020, Pandora had approximately 59,604 monthly active users, a decrease of 5,344 monthly active users, or 8%, from the 64,948 monthly active users as of June 30, 2019. The decrease in monthly active users was driven by declines in user engagement related to changes in commuting patterns, an increase in ad-supported listener churn and a decrease in the number of new users.

Subscribers. At June 30, 2020, Pandora had approximately 6,302 subscribers, a decrease of 655, or 9%, from the approximately 6,957 as of June 30, 2019.

For the three months ended June 30, 2020 and 2019, net subscriber additions were 36 and 61, respectively. For the six months ended June 30, 2020 and 2019, net subscriber additions were 88 and 287, respectively. The net subscriber decrease was driven by fewer trial starts.

ARPU is defined as average monthly revenue per paid subscriber on our Pandora subscription services. (See the accompanying glossary on pages 57 through 60 for more details.)

For the three months ended June 30, 2020 and 2019, subscriber ARPU - Pandora was \$6.70 and \$6.53, respectively. For the six months ended June 30, 2020 and 2019, subscriber ARPU - Pandora was \$6.77 and \$6.61, respectively. The increases in subscriber ARPU were primarily driven by the expiration of a lower rate T-Mobile plan and an increase in Pandora Premium plans.

Ad supported listener hours are a key indicator of our Pandora business and the engagement of our Pandora listeners. We include ad supported listener hours related to Pandora's non-radio content offerings in the definition of listener hours.

For the three months ended June 30, 2020 and 2019, ad supported listener hours were 3,286 and 3,490, respectively. For the six months ended June 30, 2020 and 2019, ad supported listener hours were 6,412 and 6,910, respectively. The decrease in ad supported listener hours was primarily driven by the decline in monthly active users, partially offset by higher hours per active user.

RPM is a key indicator of our ability to monetize advertising inventory created by our listener hours on the Pandora services. Ad RPM is calculated by dividing advertising revenue by the number of thousands of listener hours of our Pandora advertising-based service.

For the three months ended June 30, 2020 and 2019, RPM was \$55.23 and \$80.14, respectively. For the six months ended June 30, 2020 and 2019, RPM was \$61.23 and \$71.46, respectively. The decreases were a result of lower sell-through percentages as a result of the COVID-19 pandemic.

LPM is tracked for our non-subscription, ad-supported service across all Pandora delivery platforms. The content acquisition costs included in our ad LPM calculations are based on the rates set by our license agreements with record labels, performing rights organizations and music publishers or the applicable rates set by the Copyright Royalty Board if we have not entered into a license agreement with the copyright owner of a particular sound recording.

For the three months ended June 30, 2020 and 2019, LPM was \$37.16 and \$37.91, respectively. For the six months ended June 30, 2020 and 2019, LPM was \$37.12 and \$37.28, respectively. The decreases were primarily a result of lower advertising revenue from the COVID-19 pandemic impact due to lower sell-through percentages and lower CPM rates.

LPU is defined as average monthly licensing costs per paid subscriber on our Pandora subscription services. LPU is a key measure of our ability to manage costs for our subscription services.

For the three months ended June 30, 2020 and 2019, LPU was \$4.06 and \$4.16, respectively. For the six months ended June 30, 2020 and 2019, LPU was \$4.08 and \$4.06, respectively. The decrease for the three-month period was driven by minimum guarantees associated with our direct license agreements with major record labels in the prior year. The increase for the six-month period was due to increased publisher rates offset by minimum guarantees associated with our direct license agreements with major record labels in the prior year.

Total Company

Adjusted EBITDA. Adjusted EBITDA is defined as net income before interest expense, income tax expense and depreciation and amortization, adjusted for pro forma information which includes of the predecessor periods. (Pandora's results for the period January 1, 2019 through January 31, 2019.) Adjusted EBITDA excludes the impact of other expense (income), loss on extinguishment of debt, other non-cash charges, such as certain purchase price accounting adjustments, share-based payment expense, legal settlements and reserves, and acquisition and restructuring costs (if applicable). (See the accompanying glossary on pages 57 through 60 for a reconciliation to GAAP and for more details.)

For the three months ended June 30, 2020 and 2019, adjusted EBITDA was \$615 and \$618, respectively, a decrease of 0%, or \$3. For the six months ended June 30, 2020 and 2019, adjusted EBITDA was \$1,254 and \$1,184, respectively, an increase of 6%, or \$70. The increase was due to growth in Sirius XM subscriber revenue from higher U.S. Music Royalty Fee as a result of a higher music royalty rate and an increase in the daily weighted average number of subscribers, lower revenue share costs, personnel-related costs and subscriber acquisition costs; partially offset by lower advertising revenue.

Free Cash Flow includes cash provided by operations, net of additions to property and equipment, and restricted and other investment activity. (See the accompanying glossary on pages 57 through 60 for a reconciliation to GAAP and for more details.)

For the three months ended June 30, 2020 and 2019, free cash flow was \$503 and \$474, respectively, an increase of \$29, or 6%. For the six months ended June 30, 2020 and 2019, free cash flow was \$851 and \$774, respectively, an increase of \$77, or 10%. The increases were driven by growth in operating performance as well as lower capital expenditures. We paid a one-time amount of \$25 for a legal settlement during the six months ended June 30, 2019.

Liquidity and Capital Resources

Cash Flows for the six months ended June 30, 2020 compared with the six months ended June 30, 2019.

The following table presents a summary of our cash flow activity for the periods set forth below:

	For the Six Months Ended June 30,		
	2020	2019	2020 vs 2019
Net cash provided by operating activities	\$ 955	\$ 867	\$ 88
Net cash (used in) provided by investing activities	(265)	209	(474)
Net cash provided by (used in) financing activities	971	(915)	1,886
Net increase in cash, cash equivalents and restricted cash	1,661	161	1,500
Cash, cash equivalents and restricted cash at beginning of period	120	65	55
Cash, cash equivalents and restricted cash at end of period	<u>\$ 1,781</u>	<u>\$ 226</u>	<u>\$ 1,555</u>

Cash Flows Provided by Operating Activities

Cash flows provided by operating activities increased by \$88 to \$955 for the six months ended June 30, 2020 from \$867 for the six months ended June 30, 2019.

Our largest source of cash provided by operating activities is cash generated by subscription and subscription-related revenues. We also generate cash from the sale of advertising on Pandora, advertising on certain non-music channels on Sirius XM and the sale of satellite radios, components and accessories. Our primary uses of cash from operating activities include revenue share and royalty payments to distributors, programming and content providers, and payments to radio manufacturers, distributors and automakers. In addition, uses of cash from operating activities include payments to vendors to service, maintain and acquire listeners and subscribers, general corporate expenditures, and compensation and related costs. We paid a one-time amount of \$25 for a legal settlement during the six months ended June 30, 2019.

Cash Flows (Used in) Provided by Investing Activities

Cash flows used in investing activities in the six months ended June 30, 2020 were primarily due to our \$75 investment in SoundCloud, the acquisition of Simplecast of \$28, spending primarily for capitalized software and hardware, and to construct replacement satellites. Cash flows provided by investing activities in the six months ended June 30, 2019 were primarily due to cash received of \$313 from the Pandora Acquisition and from the sale of short-term investments of \$72, partially offset by additional spending primarily for capitalized software and hardware, and to construction replacement satellites. We spent \$109 and \$92 on capitalized software and hardware as well as \$20 and \$36 to construct replacement satellites during the six months ended June 30, 2020 and 2019, respectively.

Cash Flows Provided by (Used in) Financing Activities

Cash flows provided by (used in) financing activities consists of the issuance and repayment of long-term debt, the purchase of common stock under Holdings' share repurchase program and the payment of cash dividends. Proceeds from long-term debt have been used to fund our operations, construct and launch new satellites, invest in other infrastructure improvements and purchase shares of Holdings' common stock.

Cash flows provided by financing activities in the six months ended June 30, 2020 were primarily due to the issuance of \$1,483 in aggregate principal amount of 4.125% Senior Notes due 2030, net of costs; partially offset by purchase and retirement of shares of Holdings' common stock under Holdings' repurchase program for \$399 and the payment of cash dividends on Holdings' common stock of \$117. Cash flows used in financing activities in the six months ended June 30, 2019 were primarily due to the purchase and retirement of shares of Holdings' common stock under Holdings' repurchase program for \$1,474, repayment under the Credit Facility of \$439, the repurchase for \$152 of Pandora's 1.75% Convertible Senior Notes due 2020 and the payment of cash dividends on Holdings' common stock of \$113, partially offset by the issuance of \$1,236 in aggregate principal amount of Sirius XM's 5.500% Senior Notes due 2029, net of costs.

Future Liquidity and Capital Resource Requirements

Based upon our current business plans, we expect to fund operating expenses, capital expenditures, including the construction of replacement satellites, working capital requirements, interest payments, taxes and scheduled maturities of our debt with existing cash, cash flow from operations and borrowings under our Credit Facility. Additionally, we used our cash

balance as of June 30, 2020 (including net proceeds from the issuance of the 4.125% Senior Note due 2030) to redeem our 5.375% Senior Notes due 2025 and 4.625% Senior Notes due 2023 on July 9, 2020. As of June 30, 2020, \$0 was outstanding under our Credit Facility. As the amount available for future borrowing is reduced by \$1 related to letters of credit issued for the benefit of Pandora, \$1,749 was available for future borrowing under our Credit Facility. We believe that we have sufficient cash and cash equivalents, as well as debt capacity, to cover our estimated short-term and long-term funding needs, including amounts to construct, launch and insure replacement satellites, as well as fund Holdings' future stock repurchases, future dividend payments on Holdings' common stock and pursue strategic opportunities.

Our ability to meet our debt and other obligations depends on our future operating performance and on economic, financial, competitive and other factors. We continually review our operations for opportunities to adjust the timing of expenditures to ensure that sufficient resources are maintained.

We regularly evaluate our business plans and strategy. These evaluations often result in changes to our business plans and strategy, some of which may be material and significantly change our cash requirements. These changes in our business plans or strategy may include: the acquisition of unique or compelling programming; the development and introduction of new features or services; significant new or enhanced distribution arrangements; investments in infrastructure, such as satellites, equipment or radio spectrum; and acquisitions and investments, including acquisitions and investments that are not directly related to our existing business.

We may from time to time purchase our outstanding debt through open market purchases, privately negotiated transactions or otherwise. Purchases or retirement of debt, if any, will depend on prevailing market conditions, liquidity requirements, contractual restrictions and other factors. The amounts involved may be material.

Holdings' Capital Return Program

As of June 30, 2020, Holdings' board of directors had authorized for repurchase an aggregate of \$14,000 of Holdings' common stock. As of June 30, 2020, Holdings' cumulative repurchases since December 2012 under Holdings' stock repurchase program totaled \$13,241, and \$759 remained available for additional repurchases under Holdings' existing stock repurchase program authorization. On July 14, 2020, our board of directors approved an additional \$2,000 of common stock repurchases, increasing our total authorization to \$16,000 since the inception of the program.

Shares of common stock may be purchased from time to time on the open market and in privately negotiated transactions, including in accelerated stock repurchase transactions and transactions with Liberty Media and its affiliates. We intend to fund the additional repurchases through a combination of cash on hand, cash generated by operations and future borrowings. The size and timing of any purchases will be based on a number of factors, including price and business and market conditions.

On July 14, 2020, Holdings' board of directors declared a quarterly dividend on Holdings' common stock in the amount of \$0.01331 per share of Holdings' common stock payable on August 31, 2020 to Holdings' stockholders of record as of the close of business on August 7, 2020. Holdings' board of directors expects to declare regular quarterly dividends, in an aggregate annual amount of \$0.05324 per share of Holdings' common stock.

Debt Covenants

The indentures governing our senior notes and Pandora's convertible notes and the agreement governing the Credit Facility include restrictive covenants. As of June 30, 2020, we were in compliance with such covenants. For a discussion of our "Debt Covenants," refer to Note 12 to our unaudited consolidated financial statements in this Quarterly Report.

Off-Balance Sheet Arrangements

We do not have any significant off-balance sheet arrangements other than those disclosed in Note 15 to our unaudited consolidated financial statements in this Quarterly Report that are reasonably likely to have a material effect on our financial condition, results of operations, liquidity, capital expenditures or capital resources.

Contractual Cash Commitments

For a discussion of our "Contractual Cash Commitments," refer to Note 15 to our unaudited consolidated financial statements in this Quarterly Report.

Related Party Transactions

For a discussion of “Related Party Transactions,” refer to Note 11 to our unaudited consolidated financial statements in this Quarterly Report.

Critical Accounting Policies and Estimates

For a discussion of our “Critical Accounting Policies and Estimates,” refer to “Management's Discussion and Analysis of Financial Condition and Results of Operations” in our Annual Report for the year ended December 31, 2019. There have been no material changes to our critical accounting policies and estimates since December 31, 2019.

Glossary

Monthly active users - the number of distinct registered users on the Pandora services, including subscribers, which have consumed content within the trailing 30 days to the end of the final calendar month of the period. The number of monthly active users on the Pandora services may overstate the number of unique individuals who actively use our Pandora service, as one individual may use multiple accounts. To become a registered user on the Pandora services, a person must sign-up using an email address or phone number, or access our service using a device with a unique identifier, which we use to create an account for our service.

Average self-pay monthly churn - the Sirius XM monthly average of self-pay deactivations for the period divided by the average number of self-pay subscribers for the period.

Adjusted EBITDA - EBITDA is defined as net income before interest expense, income tax expense and depreciation and amortization. We adjust EBITDA to exclude the impact of other expense (income) as well as certain other charges discussed below. Adjusted EBITDA is a Non-GAAP financial measure that excludes or adjusts for (if applicable): (i) certain adjustments as a result of the purchase price accounting for the XM Merger and the Pandora Acquisition, (ii) predecessor net income adjusted for certain expenses, including depreciation and amortization, other income (loss), and share-based payment expense for January 2019, (iii) share-based payment expense and (iv) other significant operating expense (income) that do not relate to the on-going performance of our business. We believe adjusted EBITDA is a useful measure of the underlying trend of our operating performance, which provides useful information about our business apart from the costs associated with our capital structure and purchase price accounting. We believe investors find this Non-GAAP financial measure useful when analyzing our past operating performance with our current performance and comparing our operating performance to the performance of other communications, entertainment and media companies. We believe investors use adjusted EBITDA to estimate our current enterprise value and to make investment decisions. As a result of large capital investments in our satellite radio system, our results of operations reflect significant charges for depreciation expense. We believe the exclusion of share-based payment expense is useful as it is not directly related to the operational conditions of our business. We also believe the exclusion of the legal settlements and reserves, acquisition related costs, and loss on extinguishment of debt, to the extent they occur during the period, is useful as they are significant expenses not incurred as part of our normal operations for the period.

Adjusted EBITDA has certain limitations in that it does not take into account the impact to our statements of comprehensive income of certain expenses, including share-based payment expense and certain purchase price accounting for the XM Merger and the Pandora Acquisition. We endeavor to compensate for the limitations of the Non-GAAP measure presented by also providing the comparable GAAP measure with equal or greater prominence and descriptions of the reconciling items, including quantifying such items, to derive the Non-GAAP measure. Investors that wish to compare and evaluate our operating results after giving effect for these costs, should refer to net income as disclosed in our unaudited consolidated statements of comprehensive income. Since adjusted EBITDA is a Non-GAAP financial performance measure, our calculation of adjusted EBITDA may be susceptible to varying calculations; may not be comparable to other similarly titled measures of other companies; and should not be considered in isolation, as a substitute for, or superior to measures of financial performance prepared in accordance with GAAP. The reconciliation of net income to the adjusted EBITDA is calculated as follows:

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
	2020	2019	2020	2019
Net income:	\$ 231	\$ 266	\$ 557	\$ 432
Add back items excluded from Adjusted EBITDA:				
Legal settlements and reserves	—	—	(16)	25
Acquisition and restructuring costs ⁽¹⁾	24	7	24	83
Share-based payment expense	52	57	107	106
Depreciation and amortization	124	119	256	226
Interest expense	101	95	198	184
Loss on extinguishment of debt	—	—	—	1
Other expense (income)	14	2	(30)	(2)
Income tax expense	69	76	158	157
Purchase price accounting adjustments:				
Revenues	2	2	4	4
Operating expenses	(2)	(6)	(4)	(7)
Pro forma adjustments ⁽²⁾	—	—	—	(25)
Adjusted EBITDA	\$ 615	\$ 618	\$ 1,254	\$ 1,184

- (1) Acquisition and restructuring costs include \$21 of share-based compensation expense for the six months ended June 30, 2019.
- (2) Pro forma adjustment for six months ended June 30, 2019 includes Pandora's Net income for the six months ended June 30, 2019 of \$(44) plus Depreciation and amortization of \$6, Share-based payment expense of \$11, Acquisition and other related costs of \$1, and Interest expense of \$2, offset by Other expense (income) of \$1

Free cash flow - is derived from cash flow provided by operating activities, net of additions to property and equipment and purchases of other investments. Free cash flow is a metric that our management and board of directors use to evaluate the cash generated by our operations, net of capital expenditures and other investment activity. In a capital intensive business, with significant investments in satellites, we look at our operating cash flow, net of these investing cash outflows, to determine cash available for future subscriber acquisition and capital expenditures, to repurchase or retire debt, to acquire other companies and to evaluate our ability to return capital to stockholders. We exclude from free cash flow certain items that do not relate to the on-going performance of our business, such as cash flows related to acquisitions, strategic and short-term investments, and net loan activity with related parties and other equity investees. We believe free cash flow is an indicator of the long-term financial stability of our business. Free cash flow, which is reconciled to “Net cash provided by operating activities,” is a Non-GAAP financial measure. This measure can be calculated by deducting amounts under the captions “Additions to property and equipment” and deducting or adding Restricted and other investment activity from “Net cash provided by operating activities” from the unaudited consolidated statements of cash flows. Free cash flow should be used in conjunction with other GAAP financial performance measures and may not be comparable to free cash flow measures presented by other companies. Free cash flow should be viewed as a supplemental measure rather than an alternative measure of cash flows from operating activities, as determined in accordance with GAAP. Free cash flow is limited and does not represent remaining cash flows available for discretionary expenditures due to the fact that the measure does not deduct the payments required for debt maturities. We believe free cash flow provides useful supplemental information to investors regarding our current cash flow, along with other GAAP measures (such as cash flows from operating and investing activities), to determine our financial condition, and to compare our operating performance to other communications, entertainment and media companies. Free cash flow is calculated as follows:

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
	2020	2019	2020	2019
Cash Flow information				
Net cash provided by operating activities	\$ 574	\$ 504	\$ 955	\$ 867
Net cash (used in) provided by investing activities	\$ (120)	\$ (75)	\$ (265)	\$ 209
Net cash used in financing activities	\$ 1,275	\$ (276)	\$ 971	\$ (915)
Free Cash Flow				
Net cash provided by operating activities	\$ 574	\$ 504	\$ 955	\$ 867
Equity-related transactions for Holdings ^(a)	17	41	52	74
Additions to property and equipment	(87)	(70)	(149)	(160)
Purchases of other investments	(1)	(1)	(7)	(7)
Free cash flow	<u>\$ 503</u>	<u>\$ 474</u>	<u>\$ 851</u>	<u>\$ 774</u>

- (a) Subsequent to our corporate reorganization in November 2013, certain equity-related transactions are reported as related party transactions within our unaudited consolidated statements of cash flows. For the six months ended June 30, 2020 and 2019, this included payments of \$43 and \$47, respectively. These equity-related transactions are classified as Cash flows used in financing activities within Holdings' unaudited consolidated statements of cash flows, and therefore, are adjusted to reflect free cash flow at Sirius XM.

ARPU - Sirius XM ARPU is derived from total earned subscriber revenue (excluding revenue associated with our connected vehicle services) and advertising revenue, divided by the number of months in the period, divided by the daily weighted average number of subscribers for the period. Pandora ARPU is defined as average monthly subscriber revenue per paid subscriber on our Pandora subscription services.

Subscriber acquisition cost, per installation - or SAC, per installation, is derived from subscriber acquisition costs and margins from the sale of radios and accessories (excluding connected vehicle services), divided by the number of satellite radio installations in new vehicles and shipments of aftermarket radios for the period. SAC, per installation, is calculated as follows:

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
	2020	2019	2020	2019
Subscriber acquisition costs, excluding connected vehicle services	\$ 48	\$ 104	\$ 147	\$ 212
Less: margin from sales of radios and accessories, excluding connected vehicle services	(21)	(34)	(58)	(68)
	\$ 27	\$ 70	\$ 89	\$ 144
Installations	1,320	3,078	4,403	6,155
SAC, per installation ^(a)	\$ 20.14	\$ 22.74	\$ 20.14	\$ 23.40

(a) Amounts may not recalculate due to rounding.

Ad supported listener hours - is based on the total bytes served over our Pandora advertising supported platforms for each track that is requested and served from our Pandora servers, as measured by our internal analytics systems, whether or not a listener listens to the entire track. For non-music content such as podcasts, episodes are divided into approximately track-length parts, which are treated as tracks. To the extent that third-party measurements of advertising hours are not calculated using a similar server-based approach, the third-party measurements may differ from our measurements.

RPM - is calculated by dividing advertising revenue, excluding AdsWizz and other off-platform revenue, by the number of thousands of listener hours on our Pandora advertising-based service.

LPM - is calculated by dividing advertising licensing costs by the number of thousands of listener hours on our Pandora advertising-based service.

LPU - is calculated by dividing subscriber licensing costs by the number of paid subscribers on our Pandora subscription services.