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

FORM 10-Q

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

FOR THE QUARTERLY PERIOD ENDED MARCH 31, 2017

OR

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

FOR THE TRANSITION PERIOD FROM __________ TO ________

COMMISSION FILE NUMBER 001-34295

SIRIUS XM HOLDINGS INC.

(Exact name of registrant as specified in its charter)

Delaware	**38-3916511**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification No.)*
1290 Avenue of the Americas, 11th Floor **New York, New York**	**10104**
(Address of principal executive offices)	*(Zip Code)*

Registrant's telephone number, including area code: (212) 584-5100

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☑ No ☐

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

Large accelerated filer ☑	Accelerated filer ☐	Non-accelerated filer ☐ (Do not check if a smaller reporting company)
Smaller reporting company ☐	Emerging growth company ☐	

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

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

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

(Class)	(Outstanding as of April 25, 2017)	
COMMON STOCK, $0.001 PAR VALUE	**4,665,016,103**	**SHARES**

SIRIUS XM HOLDINGS INC. AND SUBSIDIARIES
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SIRIUS XM HOLDINGS INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(UNAUDITED)

(in thousands, except per share data)	For the Three Months Ended March 31, 2017	2016
Revenue:		
Subscriber revenue	$ 1,078,257	$ 1,009,682
Advertising revenue	36,016	31,541
Equipment revenue	29,658	27,121
Other revenue	150,135	132,666
Total revenue	1,294,066	1,201,010
Operating expenses:		
Cost of services:		
Revenue share and royalties	277,300	251,744
Programming and content	95,544	85,100
Customer service and billing	96,775	96,867
Satellite and transmission	20,576	23,538
Cost of equipment	6,912	9,779
Subscriber acquisition costs	127,488	132,449
Sales and marketing	96,909	88,726
Engineering, design and development	23,817	19,441
General and administrative	78,201	77,505
Depreciation and amortization	76,704	67,627
Total operating expenses	900,226	852,776
Income from operations	393,840	348,234
Other income (expense):		
Interest expense	(81,657)	(78,400)
Other income	8,863	10,848
Total other expense	(72,794)	(67,552)
Income before income taxes	321,046	280,682
Income tax expense	(113,973)	(108,242)
Net income	$ 207,073	$ 172,440
Foreign currency translation adjustment, net of tax	(17)	449
Total comprehensive income	$ 207,056	$ 172,889
Net income per common share:		
Basic	$ 0.04	$ 0.03
Diluted	$ 0.04	$ 0.03
Weighted average common shares outstanding:		
Basic	4,710,340	5,065,319
Diluted	4,784,420	5,110,618
Dividends declared per common share	$ 0.01	$ —

See accompanying notes to the unaudited consolidated financial statements.

SIRIUS XM HOLDINGS INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

(in thousands, except per share data)	March 31, 2017	December 31, 2016
ASSETS	**(unaudited)**	
Current assets:		
Cash and cash equivalents	$ 230,488	$ 213,939
Receivables, net	234,348	223,029
Inventory, net	16,972	20,363
Related party current assets	6,846	6,170
Prepaid expenses and other current assets	187,078	179,148
Total current assets	675,732	642,649
Property and equipment, net	1,408,152	1,398,693
Intangible assets, net	2,533,273	2,544,801
Goodwill	2,205,107	2,205,107
Related party long-term assets	8,114	8,918
Deferred tax assets	976,825	1,084,330
Other long-term assets	124,603	119,097
Total assets	$ 7,931,806	$ 8,003,595
LIABILITIES AND STOCKHOLDERS' (DEFICIT) EQUITY		
Current liabilities:		
Accounts payable and accrued expenses	$ 630,445	$ 713,034
Accrued interest	81,887	114,633
Current portion of deferred revenue	1,856,874	1,832,609
Current maturities of long-term debt	4,637	5,485
Related party current liabilities	2,840	2,840
Total current liabilities	2,576,683	2,668,601
Deferred revenue	179,991	176,319
Long-term debt	5,983,213	5,842,764
Related party long-term liabilities	7,245	7,955
Deferred tax liabilities	6,418	6,418
Other long-term liabilities	99,334	93,553
Total liabilities	8,852,884	8,795,610
Commitments and contingencies (Note 13)		
Stockholders' (deficit) equity:		
Common stock, par value $0.001; 9,000,000 shares authorized; 4,686,473 and 4,746,047 shares issued; 4,683,473 and 4,740,947 outstanding at March 31, 2017 and December 31, 2016, respectively	4,685	4,745
Accumulated other comprehensive loss, net of tax	(156)	(139)
Additional paid-in capital	2,774,189	3,117,666
Treasury stock, at cost; 3,000 and 5,100 shares of common stock at March 31, 2017 and December 31, 2016, respectively	(15,488)	(22,906)
Accumulated deficit	(3,684,308)	(3,891,381)
Total stockholders' (deficit) equity	(921,078)	(792,015)
Total liabilities and stockholders' (deficit) equity	$ 7,931,806	$ 8,003,595

See accompanying notes to the unaudited consolidated financial statements.

SIRIUS XM HOLDINGS INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENT OF STOCKHOLDERS' (DEFICIT) EQUITY
(UNAUDITED)

	Common Stock		Accumulated Other Comprehensive (Loss) Income	Additional Paid-in Capital	Treasury Stock		Accumulated Deficit	Total Stockholders' (Deficit) Equity
(in thousands)	Shares	Amount			Shares	Amount		
Balance at December 31, 2016	4,746,047	$ 4,745	$ (139)	$3,117,666	5,100	$ (22,906)	$(3,891,381)	$ (792,015)
Comprehensive income, net of tax	—	—	(17)	—	—	—	207,073	207,056
Share-based payment expense	—	—	—	25,868	—	—	—	25,868
Exercise of options and vesting of restricted stock units	4,065	4	—	(4)	—	—	—	—
Withholding taxes on net share settlement of stock-based compensation	—	—	—	(16,293)	—	—	—	(16,293)
Cash dividends paid on common stock	—	—	—	(47,137)	—	—	—	(47,137)
Common stock repurchased	—	—	—	—	61,539	(298,557)	—	(298,557)
Common stock retired	(63,639)	(64)	—	(305,911)	(63,639)	305,975	—	—
Balance at March 31, 2017	4,686,473	$ 4,685	$ (156)	$2,774,189	3,000	$ (15,488)	$(3,684,308)	$ (921,078)

See accompanying notes to the unaudited consolidated financial statements.

SIRIUS XM HOLDINGS INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(UNAUDITED)

(in thousands)	For the Three Months Ended March 31, 2017	2016
Cash flows from operating activities:		
Net income	$ 207,073	$ 172,440
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	76,704	67,627
Non-cash interest expense, net of amortization of premium	2,104	2,054
Provision for doubtful accounts	14,044	13,055
Amortization of deferred income related to equity method investment	(694)	(694)
Gain on unconsolidated entity investments, net	(3,014)	(6,274)
Dividend received from unconsolidated entity investment	3,606	3,386
Share-based payment expense	29,446	23,693
Deferred income taxes	107,505	101,980
Changes in operating assets and liabilities:		
Receivables	(25,363)	(6,443)
Inventory	3,391	540
Related party, net	(503)	(3,310)
Prepaid expenses and other current assets	(7,930)	(18,545)
Other long-term assets	1,691	(956)
Accounts payable and accrued expenses	(99,707)	(18,239)
Accrued interest	(32,746)	(1,773)
Deferred revenue	27,937	30,473
Other long-term liabilities	5,781	3,172
Net cash provided by operating activities	309,325	362,186
Cash flows from investing activities:		
Additions to property and equipment	(53,365)	(30,171)
Purchases of restricted and other investments	(7,021)	(3,798)
Net cash used in investing activities	(60,386)	(33,969)
Cash flows from financing activities:		
Taxes paid in lieu of shares issued for stock-based compensation	(15,609)	(1,354)
Net proceeds from revolving credit facility	140,000	260,000
Principal payments of long-term borrowings	(3,669)	(2,299)
Common stock repurchased and retired	(305,975)	(594,450)
Dividends paid	(47,137)	—
Net cash used in financing activities	(232,390)	(338,103)
Net increase (decrease) in cash and cash equivalents	16,549	(9,886)
Cash and cash equivalents at beginning of period	213,939	111,838
Cash and cash equivalents at end of period	$ 230,488	$ 101,952

See accompanying notes to the unaudited consolidated financial statements.

SIRIUS XM HOLDINGS INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS - Continued
(UNAUDITED)

(in thousands)	For the Three Months Ended March 31, 2017	2016
Supplemental Disclosure of Cash and Non-Cash Flow Information		
Cash paid during the period for:		
Interest, net of amounts capitalized	$ 110,655	$ 76,315
Income taxes paid	$ 6,215	$ 5,755
Non-cash investing and financing activities:		
Capital lease obligations incurred to acquire assets	$ —	$ 6,647
Treasury stock not yet settled	$ 15,488	$ 17,757

See accompanying notes to the unaudited consolidated financial statements.

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

(1) Business & Basis of Presentation

This Quarterly Report on Form 10-Q presents information for Sirius XM Holdings Inc. (“Holdings”). The terms “Holdings,” “we,” “us,” “our,” and “our company” as used herein and unless otherwise stated or indicated by context, refer to Sirius XM Holdings Inc. and its subsidiaries, and "Sirius XM" refers to, our wholly-owned subsidiary Sirius XM Radio Inc. Holdings has no operations independent of its wholly-owned subsidiary, Sirius XM.

Business

We transmit music, sports, entertainment, comedy, talk, news, traffic and weather channels, as well as infotainment services, in the United States on a subscription fee basis through our two proprietary satellite radio systems. Subscribers can also receive music and other channels, plus features such as SiriusXM On Demand and MySXM, over our Internet radio service, including through applications for mobile devices, home devices and other consumer electronic equipment. We are also a leader in providing connected vehicle services. Our connected vehicle services are designed to enhance the safety, security and driving experience for vehicle operators while providing marketing and operational benefits to automakers and their dealers.

We have agreements with every major automaker (“OEMs”) to offer satellite radio in their vehicles. We also acquire subscribers through marketing to owners and lessees of previously owned vehicles that include factory-installed satellite radios that are not currently subscribing to our services. Our satellite radios are primarily distributed through automakers, retail stores nationwide, and through our website. Satellite radio services are also offered to customers of certain rental car companies.

Our primary source of revenue is subscription fees, with most of our customers subscribing to annual, semi-annual, quarterly or monthly plans. We offer discounts for prepaid, longer-term subscription plans, as well as a multiple subscription discount. We also derive revenue from activation and other fees, the sale of advertising on select non-music channels, the direct sale of satellite radios and accessories, and other ancillary services, such as our weather, traffic and data services.

In certain cases, a subscription to our radio services is included in the sale or lease price of new or previously owned vehicles. The length of these subscriptions varies but is typically three to twelve months. We receive payments for these subscriptions from certain automakers. We also reimburse various automakers for certain costs associated with satellite radios installed in new vehicles.

As of March 31, 2017, Liberty Media Corporation (“Liberty Media”) beneficially owned, directly and indirectly, approximately68% of the outstanding shares of our common stock. As a result, we are a “controlled company” for the purposes of the NASDAQ corporate governance requirements. Liberty Media owns interests in a range of media, communications and entertainment businesses.

Reorganization of Sirius XM Canada

On May 12, 2016, our subsidiary, Sirius XM, entered into an arrangement agreement (the “Arrangement Agreement”) with Sirius XM Canada Holdings Inc. (“Sirius XM Canada”), an entity in which Sirius XM currently holds an approximate 37% equity interest and25% voting interest. Pursuant to the Arrangement Agreement, Sirius XM and certain Canadian shareholders will form a new company to acquire shares of Sirius XM Canada not already owned by them pursuant to a plan of arrangement (the “Transaction”). In connection with the Transaction, Sirius XM Canada’s shareholders will be entitled to elect to receive, for each share of Sirius XM Canada held, C$4.50 (U.S. $3.50 as of May 12, 2016) in (i) cash, (ii) shares of our common stock, (iii) a security exchangeable for shares of our common stock, or (iv) a combination thereof; provided that no more than 50% of the total consideration in the Transaction (or up to35,000 shares) will be issued in our common stock and exchangeable shares. All of the obligations of Sirius XM under the Arrangement Agreement are guaranteed by us.

Following the Transaction, Sirius XM is expected to hold a70% equity interest and33% voting interest in Sirius XM Canada, with the remainder of the voting power and equity interest held by Slaight Communications and Obelysk Media, two of Sirius XM Canada’s current Canadian shareholders. Sirius XM expects to contribute to Sirius XM Canada approximately U.S. $275,000 in connection with the Transaction (assuming that all shareholders elect to receive cash in connection with the Transaction), which amount is expected to be used to pay the cash consideration to Sirius XM Canada’s shareholders and will be decreased proportionately if shareholders elect to receive consideration in shares of our common stock or securities exchangeable for our common stock.

The Transaction has been approved by the stockholders of Sirius XM Canada and has received the required court approval and approval by the Canadian Radio-Television and Telecommunications Commission. The Transaction is expected to close in May of 2017.

Basis of Presentation

The accompanying unaudited consolidated financial statements of Holdings and its subsidiaries have been prepared in accordance with U.S. generally accepted accounting principles ("GAAP"), the instructions to Form 10-Q and Article 10 of Regulation S-X of the United States Securities and Exchange Commission ("SEC") for interim financial reporting. Certain information and footnote disclosures normally included in the financial statements presented in accordance with GAAP have been condensed or omitted pursuant to such rules and regulations.

Certain amounts in our prior period consolidated financial statements have been either reclassified to conform to our current period presentation or adjusted to reflect the adoption of Accounting Standards Updated ("ASU") 2016-09, *Compensation-Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*, in the third quarter of 2016. All significant intercompany transactions have been eliminated in consolidation. In the opinion of our management, all normal recurring adjustments necessary for a fair presentation of our unaudited consolidated financial statements as of March 31, 2017 and for the three months ended March 31, 2017 and 2016 have been made.

Interim results are not necessarily indicative of the results that may be expected for a full year. This Quarterly Report on Form 10-Q should be read together with our Annual Report on Form 10-K for the year ended December 31, 2016, which was filed with the SEC on February 2, 2017.

Public companies 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 makers in deciding how to allocate resources to an individual segment and in assessing performance of the segment. We have determined that we have one reportable segment as our chief operating decision maker, our Chief Executive Officer, assesses performance and allocates resources based on the consolidated results of operations of our business.

We have evaluated events subsequent to the balance sheet date and prior to the filing of this Quarterly Report on Form 10-Q for the three months ended March 31, 2017 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 15.

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.

(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 March 31, 2017 and December 31, 2016, the carrying amounts of cash and cash equivalents, receivables, and accounts payable approximated fair value due to the short-term nature of these instruments.

(Dollars and shares in thousands, except per share amounts)

Our assets and liabilities measured at fair value were as follows:

	March 31, 2017				December 31, 2016			
	Level 1	Level 2	Level 3	Total Fair Value	Level 1	Level 2	Level 3	Total Fair Value
Assets:								
Sirius XM Canada - investment [(a)]	$ 195,512	—	—	$ 195,512	$ 178,696	—	—	$ 178,696
Liabilities:								
Debt [(b)]	—	$ 6,254,159	—	$ 6,254,159	—	$ 6,008,205	—	$ 6,008,205

(a) This amount approximates fair value. The carrying value of our investment in Sirius XM Canada was $7,810 and $8,615 as of March 31, 2017 and December 31, 2016, respectively.

(b) The fair value for non-publicly traded instruments is based upon estimates from a market maker and brokerage firm. Refer to Note 10 for information related to the carrying value of our debt as of March 31, 2017 and December 31, 2016.

Recent Accounting Pronouncements

In January 2017, the Financial Accounting Standards Board ("FASB") issued ASU 2017-04, *Intangibles - Goodwill and Other (Topic 350)*. This ASU eliminates Step 2 from the goodwill impairment test. Under the new guidance, entities 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. Additionally, this ASU eliminates the requirements for any reporting unit with a zero or negative carrying amount to perform a qualitative assessment and, if it fails that qualitative test, to perform Step 2 of the goodwill impairment test. The amendments in this ASU are effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years, and is applied on a prospective basis. Early adoption is permitted for interim or annual goodwill impairment tests performed on testing dates after January 1, 2017. While we are currently evaluating the impact of the adoption of this ASU, we do not believe that the adoption of this guidance will have a material impact on our consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*. This ASU requires a company to recognize lease assets and liabilities arising from operating leases in the statement of financial position. This ASU does not significantly change the previous lease guidance for how a lessee should recognize the recognition, measurement, and presentation of expenses and cash flows arising from a lease. Additionally, the criteria for classifying a finance lease versus an operating lease are substantially the same as the previous guidance. The amendments in this ASU are effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years, and early adoption is permitted. This ASU must be adopted using a modified retrospective approach. We plan to adopt this ASU on January 1, 2019. We are currently evaluating the impact of the adoption of this ASU on our consolidated financial statements.

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers (Topic 606)*. This ASU is a comprehensive new revenue recognition model that requires a company to recognize revenue to depict the transfer of goods or services to a customer at an amount that reflects the consideration it expects to receive in exchange for those goods or services. This ASU also requires additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to obtain or fulfill a contract. In August 2015, the FASB issued ASU 2015-14 which amended the effective date of this ASU to fiscal years beginning after December 15, 2017, and early adoption is permitted only for fiscal years beginning after December 15, 2016. In 2016, the FASB issued additional guidance which clarified principal versus agent considerations, identification of performance obligations and the implementation guidance for licensing. In addition, the FASB issued guidance regarding practical expedients related to disclosures of remaining performance obligations, as well as other amendments to guidance on transition, collectibility, non-cash consideration and the presentation of sales and other similar taxes. The two permitted transition methods under the new standard are the full retrospective method, in which case the standard would be applied to each prior reporting period presented, or the modified retrospective method, in which case the cumulative effect of applying the standard would be recognized at the date of initial application. We currently plan to adopt this ASU under the modified retrospective method.

We have substantially completed our evaluation of the impact of this ASU on our subscription fees earned from self-pay subscribers and advertising revenue, and based on the preliminary results of our evaluation, we do not expect the application of this ASU to have a material impact on the recognition of these revenues. We are still evaluating the impact of this ASU as it relates to other ancillary revenue streams, as well as certain associated expenses. Depending on the results of our review, there could be changes to the classification and timing of recognition of revenues and expenses related to these ancillary areas. We expect to complete our assessment of this ASU by the end of the third quarter of 2017 along with our implementation process prior to the adoption of this ASU on January 1, 2018.

(Dollars and shares in thousands, except per share amounts)

(3) Earnings per Share

Basic net income per common share is calculated by dividing the income available to common stockholders by the weighted average common shares outstanding during each reporting period. Diluted net income per common share adjusts the weighted average number of common shares outstanding for the potential dilution that could occur if common stock equivalents (stock options and restricted stock units) were exercised or converted into common stock, calculated using the treasury stock method. We had no participating securities during the three months ended March 31, 2017 and 2016.

Common stock equivalents of 63,668 and 238,258 for the three months ended March 31, 2017 and 2016, respectively, were excluded from the calculation of diluted net income per common share as the effect would have been anti-dilutive.

	For the Three Months Ended March 31,	
	2017	2016
Numerator:		
Net income available to common stockholders for basic and diluted net income per common share	$ 207,073	$ 172,440
Denominator:		
Weighted average common shares outstanding for basic net income per common share	4,710,340	5,065,319
Weighted average impact of dilutive equity instruments	74,080	45,299
Weighted average shares for diluted net income per common share	4,784,420	5,110,618
Net income per common share:		
Basic	$ 0.04	$ 0.03
Diluted	$ 0.04	$ 0.03

(4) Receivables, net

Receivables, net, includes customer accounts receivable, receivables from distributors and other receivables.

Customer accounts receivable, net, includes receivables from our subscribers and advertising 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 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 OEMs 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 OEMs or other third parties.

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

Receivables, net, consists of the following:

	March 31, 2017	December 31, 2016
Gross customer accounts receivable	$ 102,130	$ 105,737
Allowance for doubtful accounts	(8,524)	(8,658)
Customer accounts receivable, net	$ 93,606	$ 97,079
Receivables from distributors	113,202	98,498
Other receivables	27,540	27,452
Total receivables, net	$ 234,348	$ 223,029

(5) 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:

	March 31, 2017	December 31, 2016
Raw materials	$ 4,868	$ 10,219
Finished goods	21,753	19,581
Allowance for obsolescence	(9,649)	(9,437)
Total inventory, net	$ 16,972	$ 20,363

(6) 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 single reporting unit 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. If the carrying amount of goodwill exceeds its fair value, an impairment loss is recognized.

As of March 31, 2017, there were no indicators of impairment, and no impairment loss was recorded, for goodwill during the three months ended March 31, 2017 and 2016. As of March 31, 2017, the cumulative balance of goodwill impairments recorded since the July 2008 merger (the “Merger”) between our wholly owned subsidiary, Vernon Merger Corporation, and XM Satellite Radio Holdings Inc. (“XM”), was $4,766,190, which was recognized during the year ended December 31, 2008.

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

(7) Intangible Assets

Our intangible assets include the following:

		March 31, 2017			December 31, 2016		
	Weighted Average Useful Lives	Gross Carrying Value	Accumulated Amortization	Net Carrying Value	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
Indefinite life intangible assets:							
FCC licenses	Indefinite	$ 2,083,654	$ —	$ 2,083,654	$ 2,083,654	$ —	$ 2,083,654
Trademark	Indefinite	250,000	—	250,000	250,000	—	250,000
Definite life intangible assets:							
Subscriber relationships	9 years	380,000	(371,477)	8,523	380,000	(364,893)	15,107
OEM relationships	15 years	220,000	(50,111)	169,889	220,000	(46,444)	173,556
Licensing agreements	12 years	45,289	(31,585)	13,704	45,289	(30,664)	14,625
Proprietary software	8 years	27,215	(19,979)	7,236	27,215	(19,673)	7,542
Developed technology	10 years	2,000	(1,733)	267	2,000	(1,683)	317
Total intangible assets		$ 3,008,158	$ (474,885)	$ 2,533,273	$ 3,008,158	$ (463,357)	$ 2,544,801

Indefinite Life Intangible Assets

We have identified our FCC licenses and the XM trademark 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. The following table outlines the years in which each of our satellite licenses expires:

FCC satellite licenses	Expiration year
SIRIUS FM-5	2025
SIRIUS FM-6	2022
XM-3	2021
XM-4	2022
XM-5	2018

Prior to expiration of our FCC licenses, we are required to apply for a renewal of our FCC licenses. The renewal and extension of our licenses is reasonably certain at minimal cost, which is expensed as incurred. Each of the FCC licenses authorizes us to use the radio spectrum, which is a renewable, reusable resource that does not deplete or exhaust over time.

Our annual impairment assessment of our identifiable indefinite life 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. As of March 31, 2017, there were no indicators of impairment, andno impairment loss was recorded, for intangible assets with indefinite lives during the three months ended March 31, 2017 and 2016.

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Definite Life Intangible Assets

Amortization expense for all definite life intangible assets was$11,528 and $12,440 for the three months ended March 31, 2017 and 2016, respectively. Expected amortization expense for the remaining period in 2017, each of the fiscal years 2018 through 2021 and for periods thereafter is as follows:

Years ending December 31,	Amount
2017 (remaining)	$ 23,354
2018	19,463
2019	19,026
2020	18,446
2021	15,576
Thereafter	103,754
Total definite life intangible assets, net	$ 199,619

(8) Property and Equipment

Property and equipment, net, consists of the following:

	March 31, 2017	December 31, 2016
Satellite system	$ 1,586,794	$ 1,586,794
Terrestrial repeater network	128,325	127,854
Leasehold improvements	54,164	53,898
Broadcast studio equipment	86,849	84,697
Capitalized software and hardware	570,384	558,101
Satellite telemetry, tracking and control facilities	64,822	77,290
Furniture, fixtures, equipment and other	91,209	90,214
Land	38,411	38,411
Building	61,684	61,597
Construction in progress	201,992	144,954
Total property and equipment	2,884,634	2,823,810
Accumulated depreciation and amortization	(1,476,482)	(1,425,117)
Property and equipment, net	$ 1,408,152	$ 1,398,693

Construction in progress consists of the following:

	March 31, 2017	December 31, 2016
Satellite system	$ 80,359	$ 43,977
Terrestrial repeater network	1,649	1,139
Capitalized software	102,687	82,204
Other	17,297	17,634
Construction in progress	$ 201,992	$ 144,954

Depreciation and amortization expense on property and equipment was $65,176 and $55,187 for the three months ended March 31, 2017 and 2016, respectively. We retired property and equipment of $13,811 and $3,160 during the three months ended March 31, 2017 and 2016, respectively.

We capitalize a portion of the interest on funds borrowed to finance the construction and launch of our satellites and launch vehicles. Capitalized interest is recorded as part of the asset's cost and depreciated over the satellite's useful life.

(Dollars and shares in thousands, except per share amounts)

Capitalized interest costs for the three months ended March 31, 2017 was $718, which related to the construction of our SXM-7 and SXM-8 satellites. We did not capitalize any interest costs for the three months ended March 31, 2016.

Satellites

As of March 31, 2017, we owned a fleet of five satellites. The chart below provides certain information on our satellites as of March 31, 2017:

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

(9) Related Party Transactions

In the normal course of business, we enter into transactions with related parties.

Liberty Media

As of March 31, 2017, Liberty Media beneficially owned, directly and indirectly, approximately 68% of the outstanding shares of our common stock and has two executives 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 Canada

We hold an equity method investment in Sirius XM Canada. As of March 31, 2017, we owned approximately 47,300 of Sirius XM Canada's Class A shares on a converted basis, representing an approximate 37% equity interest and an approximate 25% voting interest. We primarily provide programming and content services to Sirius XM Canada and are reimbursed from Sirius XM Canada for certain product development costs, production and distribution of chipsets, as well as for information technology and streaming support costs. Refer to Note 1, Business - Basis of Presentation, for information on the pending transaction with Sirius XM Canada.

We had the following related party balances associated with Sirius XM Canada:

	March 31, 2017	December 31, 2016
Related party current assets	$ 6,846	$ 6,170
Related party long-term assets	$ 8,114	$ 8,918
Related party current liabilities	$ 2,840	$ 2,840
Related party long-term liabilities	$ 7,245	$ 7,955

Our related party current assets balance primarily consist of activation fees and streaming and chipset costs for which we are reimbursed. Our related party long-term assets balance as of March 31, 2017 and December 31, 2016 primarily included our investment balance in Sirius XM Canada. Our related party liabilities as of March 31, 2017 and December 31, 2016 included $2,776 for the current portion of deferred revenue and $7,170 and $7,867, respectively, for the long-term portion of deferred revenue recorded as of the Merger date related to agreements with legacy XM Canada, now Sirius XM Canada. These costs are being amortized on a straight line basis through 2020.

(Dollars and shares in thousands, except per share amounts)

We recorded the following revenue and other income associated with Sirius XM Canada in our unaudited consolidated statements of comprehensive income:

	For the Three Months Ended March 31,	
	2017	2016
Revenue [a]	$ 12,216	$ 9,911
Other income		
Share of net earnings [b]	$ 3,014	$ 6,274
Dividends [c]	$ —	$ 3,575

(a) Under our agreements with Sirius XM Canada, we currently receive a percentage-based royalty of 10% and 15% for certain types of subscription revenue earned by Sirius XM Canada for the use of Sirius and XM platforms, respectively; and additional royalties for premium services and royalties for activation fees and reimbursements for other charges. We record revenue from Sirius XM Canada as Other revenue in our unaudited consolidated statements of comprehensive income. The license and services agreement entered into with legacy Sirius Canada will expire in August 2017. The license agreement entered into with legacy XM Canada will expire in November 2020.

(b) We recognize our proportionate share of earnings or losses of Sirius XM Canada as they occur as a component of Other income in our unaudited consolidated statements of comprehensive income on a one month lag.

(c) Sirius XM Canada paid gross dividends to us of $3,796 and $3,575 during the three months ended March 31, 2017 and 2016, respectively. These dividends were first recorded as a reduction to our investment balance in Sirius XM Canada to the extent a balance existed and then as Other income for the remaining portion.

(10) Debt

Our debt as of March 31, 2017 and December 31, 2016 consisted of the following:

Issuer / Borrower	Issued	Debt	Maturity Date	Interest Payable	Principal Amount at March 31, 2017	Carrying value[a] at March 31, 2017	Carrying value[a] at December 31, 2016
Sirius XM (b)	May 2013	4.25% Senior Notes (the "4.25% Notes")	May 15, 2020	semi-annually on May 15 and November15	$ 500,000	$ 497,272	$ 497,069
Sirius XM (b)	August 2013	5.75% Senior Notes (the "5.75% Notes")	August 1, 2021	semi-annually on February 1 and August 1	600,000	596,559	596,386
Sirius XM (b)	May 2013	4.625% Senior Notes (the "4.625% Notes")	May 15, 2023	semi-annually on May 15 and November 15	500,000	496,243	496,111
Sirius XM (b)	May 2014	6.00% Senior Notes (the "6.00% Notes")	July 15, 2024	semi-annually on January 15 and July 15	1,500,000	1,486,909	1,486,556
Sirius XM (b)	March 2015	5.375% Senior Notes (the "5.375% Notes due 2025")	April 15, 2025	semi-annually on April 15 and October 15	1,000,000	990,572	990,340
Sirius XM (b)	May 2016	5.375% Senior Notes (the "5.375% Notes due 2026")	July 15, 2026	semi-annually on January 15 and July 15	1,000,000	989,474	989,259
Sirius XM (b)(c)	August 2012	5.25% Senior Secured Notes (the "5.25% Notes")	August 15, 2022	semi-annually on February 15 and August 15	400,000	396,376	396,232
Sirius XM (d)	December 2012	Senior Secured Revolving Credit Facility (the "Credit Facility")	June 16, 2020	variable fee paid quarterly	1,750,000	530,000	390,000
Sirius XM	Various	Capital leases	Various	n/a	n/a	11,473	13,559
Total Debt						5,994,878	5,855,512
Less: total current maturities						4,637	5,485
Less: total deferred financing costs for Notes						7,028	7,263
Total long-term debt						$ 5,983,213	$ 5,842,764

(a) The carrying value of the obligations is net of any remaining unamortized original issue discount.

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(b) Substantially all of our domestic wholly-owned subsidiaries have guaranteed these notes.

(c) The liens securing the 5.25% Notes are equal and ratable to the liens granted to secure the Credit Facility.

(d) Sirius XM's obligations under the Credit Facility are guaranteed by certain of its material domestic subsidiaries and are secured by a lien on substantially all of Sirius XM's assets and the assets of its material domestic subsidiaries. Interest on borrowings is payable on a monthly basis and accrues at a rate based on LIBOR plus an applicable rate. Sirius XM is 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 March 31, 2017. Sirius XM's 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.

Covenants and Restrictions

Under the Credit Facility, Sirius XM, our wholly-owned subsidiary, 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 Sirius XM's 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 Sirius XM's assets, and (vii) make voluntary prepayments of certain debt, in each case subject to exceptions.

The indentures governing Sirius XM's notes restrict Sirius XM's 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 Sirius XM's ability and the ability of its subsidiaries to create certain liens; enter into sale/leaseback transactions; and merge or consolidate.

Under Sirius XM's 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.

At March 31, 2017 and December 31, 2016, we were in compliance with our debt covenants.

(11) Stockholders' Equity

Common Stock, par value $0.001 per share

We are authorized to issue up to 9,000,000 shares of common stock. There were 4,686,473 and 4,746,047 shares of common stock issued and 4,683,473 and 4,740,947 shares outstanding on March 31, 2017 and December 31, 2016, respectively.

As of March 31, 2017, there were 346,000 shares of common stock reserved for issuance in connection with outstanding stock based awards and common stock to be granted to members of our board of directors, employees and third parties.

Dividend Declared, $0.01 per share

On January 24, 2017, our board of directors declared a dividend on our common stock in the amount of $0.01 per share of common stock to stockholders of record as of the close of business on February 7, 2017. The dividend was paid in cash on February 28, 2017 in the aggregate amount of $47,137.

Stock Repurchase Program

As of March 31, 2017, our board of directors had approved for repurchase an aggregate of $10,000,000 of our common stock. Our board of directors did not establish an end date for this stock repurchase program. Shares of common stock may be purchased from time to time on the open market, pursuant to pre-set trading plans meeting the requirements of Rule 10b5-1 under the Exchange Act, in privately negotiated transactions, including transactions with Liberty Media and its affiliates, or otherwise. As of March 31, 2017, our cumulative repurchases since December 2012 under our stock repurchase program totaled 2,265,148 shares for $8,272,394, and $1,727,606 remained available under our stock repurchase program.

(Dollars and shares in thousands, except per share amounts)

The following table summarizes our total share repurchase activity for thethree months ended:

	March 31, 2017		March 31, 2016	
Share Repurchase Type	**Shares**	**Amount**	**Shares**	**Amount**
Open Market [(a)]	61,539	$ 298,557	158,965	$ 588,480
Total Repurchases	61,539	$ 298,557	158,965	$ 588,480

(a) As of March 31, 2017, $15,488 of common stock repurchases had not settled, nor been retired, and were recorded as Treasury stock within our unaudited consolidated balance sheets and unaudited consolidated statements of stockholders' (deficit) equity.

Preferred Stock, par value $0.001 per share

We are authorized to issue up to 50,000 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 March 31, 2017 and December 31, 2016.

(12) Benefit Plans

We recognized share-based payment expense of $29,446 and $23,693 for the three months ended March 31, 2017 and 2016, respectively.

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 deem 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 expireten years from the date of grant. Restricted stock units include performance-based restricted stock units ("PRSUs"), the vesting of which is subject to the employee's continued employment. The PRSU awards are subject to the achievement of performance goals and cliff vest on the three-year anniversary of the grant date. Each restricted stock unit entitles the holder to receive one share of common stock upon vesting. As of March 31, 2017, 182,795 shares of common stock were available for future grants under the 2015 Plan.

Other Plans

We maintain four other share-based benefit plans — the Sirius XM Radio Inc. 2009 Long-Term Stock Incentive Plan, the XM 2007 Stock Incentive Plan, the Amended and Restated Sirius Satellite Radio 2003 Long-Term Stock Incentive Plan and the XM 1998 Shares Award Plan. Excluding dividend equivalent units granted as a result of a declared dividend, no further awards may be made under these plans.

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

	For the Three Months Ended March 31,	
	2017	**2016**
Risk-free interest rate	1.6%	1.0%
Expected life of options — years	3.71	3.76
Expected stock price volatility	26%	24%
Expected dividend yield	0.8%	0.0%

There were no options granted to our board of directors or third parties during thethree months ended March 31, 2017 and 2016. Since we did not historically pay dividends on our common stock prior to the fourth quarter of 2016, the expected dividend yield used in the Black-Scholes option pricing model waszero for the three months ended March 31, 2016.

(Dollars and shares in thousands, except per share amounts)

The following table summarizes stock option activity under our share-based plans for thethree months ended March 31, 2017:

	Options	Weighted-Average Exercise Price Per Share	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Outstanding as of December 31, 2016	332,648	$ 3.50		
Granted	1,318	$ 4.75		
Exercised	(16,720)	$ 2.85		
Forfeited, cancelled or expired	(1,384)	$ 3.74		
Outstanding as of March 31, 2017	315,862	$ 3.54	7.15	$ 508,511
Exercisable as of March 31, 2017	112,521	$ 2.84	5.81	$ 260,094

The weighted average grant date fair value per share of options granted during thethree months ended March 31, 2017 was $0.95. The total intrinsic value of stock options exercised during the three months ended March 31, 2017 and 2016 was $34,662 and $4,470, respectively. During the three months ended March 31, 2017, the number of net settled shares which were issued as a result of stock option exercises was 3,887.

We recognized share-based payment expense associated with stock options of$19,512 and $19,039 for the three months ended March 31, 2017 and 2016, respectively.

The following table summarizes the restricted stock unit, including PRSUs, under our share-based plans for thethree months ended March 31, 2017:

	Shares	Grant Date Fair Value Per Share
Nonvested as of December 31, 2016	29,893	$ 4.03
Granted	854	$ 4.39
Vested	(367)	$ 3.67
Forfeited	(242)	$ 4.06
Nonvested as of March 31, 2017	30,138	$ 4.05

The total intrinsic value of restricted stock units vesting during thethree months ended March 31, 2017 was $1,745. During the three months ended March 31, 2017 the number of net settled shares which were issued as a result of restricted stock units vesting totaled 178. During the three months ended March 31, 2017, we granted 526 PRSUs to certain employees. We believe it is probable that the performance target applicable to these and other previously granted PRSUs will be achieved.

In connection with the cash dividend paid during thethree months ended March 31, 2017, we granted 65 restricted stock units, including PRSUs, in accordance with the terms of existing award agreements. This grant did not result in any additional incremental share-based payment expense being recognized during the three months ended March 31, 2017.

We recognized share-based payment expense associated with restricted stock units, including PRSUs, of$9,934 and $4,654 for the three months ended March 31, 2017 and 2016, respectively.

Total unrecognized compensation costs related to unvested share-based payment awards for stock options and restricted stock units granted to employees, members of our board of directors and third parties at March 31, 2017 and December 31, 2016 were $253,383 and $266,045, respectively. The total unrecognized compensation costs at March 31, 2017 are expected to be recognized over a weighted-average period of2.4 years.

401(k) Savings Plan

Sirius XM sponsors 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 our common stock on the open market, unless the employee elects our common stock as their investment option for this contribution. We recognized $1,682 and $1,691 in expense during three months ended March 31, 2017 and 2016, respectively, in connection with the Sirius XM Plan.

(Dollars and shares in thousands, except per share amounts)

Sirius XM Holdings Inc. Deferred Compensation Plan

In 2015, we adopted the Sirius XM Holdings Inc. Deferred Compensation Plan (the "DCP"). The DCP allows members of our 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, we may elect to make additional contributions beyond amounts deferred by participants, but we are under no obligation to do so. We have established a grantor (or "rabbi") trust to facilitate the payment of our obligations under the DCP.

Contributions to the DCP, net of withdrawals, for the three months ended March 31, 2017 and 2016, were $7,021 and $3,798, respectively. As of March 31, 2017, the fair value of the investments held in the trust was $12,283, which is included in Other long-term assets in our unaudited consolidated balance sheets and is classified as trading securities. Trading gains and losses associated with these investments are recorded in Other 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 administration expense within our unaudited consolidated statements of comprehensive income. For the three months ended March 31, 2017 and 2016, we recorded an immaterial amount of unrealized gains on investments held in the trust.

(13) Commitments and Contingencies

The following table summarizes our expected contractual cash commitments as of March 31, 2017:

	2017	2018	2019	2020	2021	Thereafter	Total
Debt obligations	$ 3,401	$ 4,477	$ 3,169	$ 1,030,426	$ 600,000	$ 4,400,000	$ 6,041,473
Cash interest payments	210,868	314,733	314,634	296,185	276,125	782,563	2,195,108
Satellite and transmission	80,544	67,960	51,751	25,740	19,291	6,667	251,953
Programming and content	235,863	313,141	290,031	244,738	165,939	206,100	1,455,812
Marketing and distribution	16,018	15,673	13,105	7,612	6,784	166	59,358
Satellite incentive payments	11,214	14,302	10,652	9,310	8,448	71,337	125,263
Operating lease obligations	29,938	42,254	37,786	35,523	29,520	150,440	325,461
Other	34,438	10,481	3,545	1,761	527	30	50,782
Total [(1)]	$ 622,284	$ 783,021	$ 724,673	$ 1,651,295	$ 1,106,634	$ 5,617,303	$ 10,505,210

(1) The table does not include our reserve for uncertain tax positions, which at March 31, 2017 totaled $5,663, as the specific timing of any cash payments cannot be projected with reasonable certainty.

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

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

Satellite and transmission. During the year ended December 31, 2016, we entered into an agreement with Space Systems/Loral to design and build two satellites, SXM-7 and SXM-8, for our service. 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 agreements. Under the terms of these agreements, our obligations include fixed payments, advertising commitments and revenue sharing arrangements. Our 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.

Marketing and distribution. We have entered into various marketing, sponsorship and distribution agreements to promote our brand and are obligated to make payments to sponsors, retailers, automakers and radio manufacturers under these agreements. Certain programming and content agreements also require us to purchase advertising on properties owned or controlled by the licensors. We also reimburse automakers for certain costs associated with the incorporation of satellite radios into new vehicles they manufacture.

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 with respect to XM-3 and XM-4 meeting their fifteen-year design life, which we expect to occur. Boeing may also be entitled to additional incentive payments up to $10,000 if our XM-4 satellite continues to operate above baseline specifications during thefive years beyond the satellite's fifteen-year design life.

Space Systems/Loral, the manufacturer of certain of our in-orbit satellites, may be entitled to future in-orbit performance payments with respect to 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, equipment and terrestrial repeaters. 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. The effect of the rent holidays and rent concessions are recognized on a straight-line basis over the lease term, including reasonably assured renewal periods.

Other. We have 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 agreements with 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. The cost of our common stock acquired in our capital return program but not paid for as of March 31, 2017 is also included in this category.

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 the following 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 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 a possible eventual loss, if any.

SoundExchange Royalty Claims. In August 2013, SoundExchange, Inc. filed a complaint in the United States District Court for the District of Columbia alleging that we underpaid royalties for statutory licenses in violation of the regulations established by the Copyright Royalty Board for the 2007-2012 period. SoundExchange principally alleges that we improperly reduced our gross revenues applicable to royalties by improperly deducting revenue attributable to pre-1972 recordings and Premier package revenue that is not “separately charged” as required by the regulations. We believe that we properly applied the gross revenue exclusions contained in the regulations established by the Copyright Royalty Board. SoundExchange is seeking compensatory damages of not less than $50,000 and up to $100,000 or more, payment of late fees and interest, and attorneys’ fees and costs.

In August 2014, the United States District Court for the District of Columbia, in response to our motion to dismiss the complaint, stayed the case on the grounds that it properly should be pursued in the first instance before the Copyright Royalty Board rather than the District Court. In its opinion, the District Court concluded that the gross revenue exclusions in the regulations established by the Copyright Royalty Board for the 2007-2012 period were ambiguous and did not, on their face, make clear whether our royalty calculation approaches were permissible under the regulations. In December 2014, SoundExchange filed a petition with the Copyright Royalty Board requesting an order interpreting the applicable regulations.

On January 10, 2017, the Copyright Royalty Board issued a ruling concluding that we correctly interpreted the revenue exclusions applicable to pre-1972 recordings, but in certain cases did not apply those exclusions properly. The ruling further indicated that we improperly claimed a revenue exclusion based on our Premier package upcharge, because, in the Judges’ view, the portion of the package that contained programming that did not include sound recordings was not offered for a “separate charge” in accordance with the regulations. On March 9, 2017, the Copyright Royalty Board issued an order withdrawing its January 10, 2017 ruling in its entirety and requesting that the parties submit briefs addressing certain jurisdictional issues related to this proceeding.

Rulings by the Copyright Royalty Board are subject to limited legal review by the Register of Copyrights. We expect that any ruling by the Copyright Royalty Board in this matter (and any potential review by the Register of Copyrights) will be transmitted back to the District Court for further proceedings, such as adjudication claims relating to damages and defenses. We believe we have substantial defenses to SoundExchange claims that can be asserted, including in proceedings in the District Court, and will continue to defend this action vigorously.

This matter is titled SoundExchange, Inc. v. Sirius XM Radio, Inc., No.13-cv-1290-RJL (D.D.C.), and *Determination of Rates and Terms for Preexisting Subscription Services and Satellite Digital Audio Radio Services,* United States Copyright Royalty Board, No. 2006-1 CRB DSTRA. Information concerning the action is publicly available in filings under the docket numbers. This matter is not related to certain claims under state law brought by owners of pre-1972 recording copyrights arising out of our use and performance of those recordings.

At December 31, 2016, we concluded that a loss, in excess of our recorded liabilities, is reasonably possible in connection with the SoundExchange royalty claims. At March 31, 2017, the estimable portion of such possible loss continues to range from $0 to $70,000, plus any related interest or late fees. Based on our defenses, such a loss is not considered probable at this time and no liability for such additional loss has been recorded. The matters underlying this estimated range and the estimable portion of reasonably possible losses may change from time to time and the actual possible loss may vary from this estimate.

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. 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.

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

(14) Income Taxes

We file a consolidated federal income tax return for all of our wholly-owned subsidiaries, including Sirius XM. For the three months ended March 31, 2017 and 2016, income tax expense was $113,973 and $108,242, respectively. We estimate our annual effective tax rate for the year ending December 31, 2017 will be 37.3%. Our effective tax rate for the three months ended March 31, 2017 and 2016 was 35.5% and 38.6%, respectively. The rate for the three months ended March 31, 2017 and 2016 was primarily impacted by the recognition of excess tax benefits and shortfalls related to share based compensation, respectively.

As of March 31, 2017 and December 31, 2016, we had a valuation allowance related to deferred tax assets of $44,022 and $47,682, respectively, that were not likely to be realized due to certain net operating loss limitations and acquired net operating losses that were not more likely than not going to be utilized.

(15) Subsequent Events

Acquisition

On April 18, 2017, we acquired Automatic Labs Inc., a connected vehicle device and mobile application company, for an aggregate purchase price of approximately $115,000 in cash.

Capital Return Program

For the period from April 1, 2017 to April 25, 2017, we repurchased 18,606 shares of our common stock on the open market for an aggregate purchase price of $94,886, including fees and commissions.

On April 25, 2017, our board of directors declared a quarterly dividend on our common stock in the amount of $0.01 per share of common stock payable on May 31, 2017 to stockholders of record as of the close of business on May 10, 2017.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

All amounts referenced in this Item 2 are in thousands, except per subscriber and per installation amounts, 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 on Form 10-Q and with our Annual Report on Form 10-K for the year ended December 31, 2016.

This Quarterly Report on Form 10-Q presents information for Sirius XM Holdings Inc. ("Holdings"). The terms "Holdings," "we," "us," "our," and "our company" as used herein and unless otherwise stated or indicated by context, refer to Sirius XM Holdings Inc. and its subsidiaries, and "Sirius XM" refers to, our wholly-owned subsidiary Sirius XM Radio Inc. Holdings has no operations independent of its wholly-owned subsidiary, Sirius XM.

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 on Form 10-Q 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 on Form 10-Q and in other reports and documents published by us from time to time, particularly the risk factors described under "Risk Factors" in Part I, Item 1A, of our Annual Report on Form 10-K for the year ended December 31, 2016 and "Management's Discussion and Analysis of Financial Condition and Results of Operations" herein and in Part II, Item 7, of our Annual Report on Form 10-K for the year ended December 31, 2016.

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

- we face substantial competition and that competition is likely to increase over time;
- our ability to attract and retain subscribers in the future is uncertain;
- our service may experience harmful interference from new wireless operations;
- consumer protection laws and their enforcement could damage our business;
- the unfavorable outcome of pending or future litigation could have a material adverse impact on our operations and financial condition;
- the market for music rights is changing and is subject to significant uncertainties;
- our business depends in large part upon the auto industry;
- general economic conditions can affect our business;
- 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;
- existing or future government laws and regulations could harm our business;
- failure of our satellites would significantly damage our business;
- interruption or failure of our information technology and communications systems could negatively impact our results and our brand;
- we may not realize the benefits of acquisitions or other strategic investments and initiatives;
- rapid technological and industry changes could adversely impact our services;
- failure of third parties to perform could adversely affect our business;
- failure to comply with FCC requirements could damage our business;

- 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 studios, terrestrial repeater networks, satellite uplink facilities or other ground facilities could be damaged by natural catastrophes or terrorist activities;
- our principal stockholder has significant influence, including over actions requiring stockholder approval, and its interests may differ from the interests of other holders of our common stock;
- we are 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;
- our business may be impaired by third-party intellectual property rights; and
- while we currently pay a quarterly cash dividend to holders of our common stock, we may change our dividend policy at any time.

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.

Executive Summary

We transmit music, sports, entertainment, comedy, talk, news, traffic and weather channels, as well as infotainment services, in the United States on a subscription fee basis through our two proprietary satellite radio systems. Subscribers can also receive music and other channels, plus features such as SiriusXM On Demand and MySXM, over our Internet radio service, including through applications for mobile devices, home devices and other consumer electronic equipment. We are also a leader in providing connected vehicle services. Our connected vehicle services are designed to enhance the safety, security and driving experience for vehicle operators while providing marketing and operational benefits to automakers and their dealers.

We have agreements with every major automaker (“OEMs”) to offer satellite radio in their vehicles. We also acquire subscribers through marketing to owners and lessees of previously owned vehicles that include factory-installed satellite radios that are not currently subscribing to our services. Our satellite radios are primarily distributed through automakers; retail stores nationwide; and through our website. Satellite radio services are also offered to customers of certain rental car companies.

As of March 31, 2017, we had approximately 31.6 million subscribers of which approximately 26.2 million were self-pay subscribers and approximately 5.4 million were paid promotional subscribers. Our subscriber totals include subscribers under our regular pricing plans; discounted pricing plans; subscribers that have prepaid, including payments either made or due from automakers for subscriptions included in the sale or lease price of a vehicle; subscribers to our Internet services who do not also have satellite radio subscriptions; and certain subscribers to our weather, traffic, and data services who do not also have satellite radio subscriptions. Subscribers and subscription related revenues and expenses associated with our connected vehicle services and the Sirius XM Canada service are not included in our subscriber count or subscriber-based operating metrics.

Our primary source of revenue is subscription fees, with most of our customers subscribing to annual, semi-annual, quarterly or monthly plans. We offer discounts for prepaid, longer term subscription plans, as well as a multiple subscription discount. We also derive revenue from activation and other fees, the sale of advertising on select non-music channels, the direct sale of satellite radios and accessories, and other ancillary services, such as our weather, traffic and data services.

In certain cases, a subscription to our radio services is included in the sale or lease price of new vehicles or previously owned vehicles. The length of these subscriptions varies but is typically three to twelve months. We receive payments for these subscriptions from certain automakers. We also reimburse various automakers for certain costs associated with satellite radios installed in new vehicles.

As of March 31, 2017, Liberty Media beneficially owned, directly and indirectly, approximately 68% of the outstanding shares of our common stock. As a result, we are a "controlled company" for the purposes of the NASDAQ corporate governance requirements. Liberty Media owns interests in a range of media, communications and entertainment businesses.

We hold an equity method investment in Sirius XM Canada Holdings Inc. ("Sirius XM Canada"), which offers satellite radio services in Canada. As of March 31, 2017, we owned an approximate 37% equity interest in Sirius XM Canada.

Results of Operations

Set forth below are our results of operations for the three months ended March 31, 2017 compared with the three months ended March 31, 2016.

	For the Three Months Ended March 31,		2017 vs 2016 Change	
	2017	2016	Amount	%
Revenue:				
Subscriber revenue	$ 1,078,257	$ 1,009,682	$ 68,575	7 %
Advertising revenue	36,016	31,541	4,475	14 %
Equipment revenue	29,658	27,121	2,537	9 %
Other revenue	150,135	132,666	17,469	13 %
Total revenue	1,294,066	1,201,010	93,056	8 %
Operating expenses:				
Cost of services:				
Revenue share and royalties	277,300	251,744	25,556	10 %
Programming and content	95,544	85,100	10,444	12 %
Customer service and billing	96,775	96,867	(92)	0 %
Satellite and transmission	20,576	23,538	(2,962)	(13)%
Cost of equipment	6,912	9,779	(2,867)	(29)%
Subscriber acquisition costs	127,488	132,449	(4,961)	(4)%
Sales and marketing	96,909	88,726	8,183	9 %
Engineering, design and development	23,817	19,441	4,376	23 %
General and administrative	78,201	77,505	696	1 %
Depreciation and amortization	76,704	67,627	9,077	13 %
Total operating expenses	900,226	852,776	47,450	6 %
Income from operations	393,840	348,234	45,606	13 %
Other income (expense):				
Interest expense	(81,657)	(78,400)	(3,257)	(4)%
Other income	8,863	10,848	(1,985)	(18)%
Total other expense	(72,794)	(67,552)	(5,242)	(8)%
Income before income taxes	321,046	280,682	40,364	14 %
Income tax expense	(113,973)	(108,242)	(5,731)	(5)%
Net income	$ 207,073	$ 172,440	$ 34,633	20 %

Total Revenue

Subscriber Revenue includes subscription, activation and other fees.

For the three months ended March 31, 2017 and 2016, subscriber revenue was $1,078,257 and $1,009,682, respectively, an increase of 7%, or $68,575. The increase was primarily attributable to a 5% increase in the daily weighted average number of subscribers as well as a 2% increase in average monthly revenue per subscriber that resulted from certain rate increases implemented in 2016.

We expect subscriber revenues to increase based on the growth of our subscriber base, increases in certain of our subscription rates and the sale of additional services to subscribers.

Advertising Revenue includes the sale of advertising on certain non-music channels.

For the three months ended March 31, 2017 and 2016, advertising revenue was $36,016 and $31,541, respectively, an increase of 14%, or $4,475. The increase was primarily due to a greater number of advertising spots sold and transmitted as well as increases in rates charged per spot.

We expect our advertising revenue to continue to grow as more advertisers are attracted to our national platform and growing subscriber base and as we launch additional non-music channels.

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

For the three months ended March 31, 2017 and 2016, equipment revenue was $29,658 and $27,121, respectively, an increase of 9%, or $2,537. The increase was driven by an increase in royalty revenue on certain modules starting in the second quarter of 2016, partially offset by lower sales to distributors and consumers.

We expect equipment revenue to increase due to the increase in royalty revenues associated with the transition of our chipsets.

Other Revenue includes amounts earned from subscribers for the U.S. Music Royalty Fee, and revenue from our connected vehicle services, our Canadian affiliate and ancillary revenues.

For the three months ended March 31, 2017 and 2016, other revenue was $150,135 and $132,666, respectively, an increase of 13%, or $17,469. The increase was primarily driven by additional revenues from the U.S. Music Royalty Fee due to an increase in the number of subscribers and subscribers paying at a higher rate of 13.9%, and higher revenue generated from our connected vehicle services.

Other revenue is expected to increase due to an increase in U.S. Music Royalty Fees as our subscriber base continues to grow and an increase in revenue from Sirius XM Canada related to future service agreements.

Operating Expenses

Revenue Share and Royalties include distribution and content provider revenue share, royalties for transmitting content and web streaming, and advertising revenue share.

For the three months ended March 31, 2017 and 2016, revenue share and royalties were $277,300 and $251,744, respectively, an increase of 10%, or $25,556, and increased as a percentage of total revenue. The increase was due to overall greater revenues subject to royalty and revenue sharing arrangements and a 5% increase in the statutory royalty rate applicable to our use of post-1972 recordings, which increased from 10.5% in 2016 to 11% in 2017.

We expect our revenue share and royalty costs to increase as our revenues grow and the statutory royalty rate increases.

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 March 31, 2017 and 2016, programming and content expenses were $95,544 and $85,100, respectively, an increase of 12%, or $10,444, and increased as a percentage of total revenue. The increase was primarily due to the renewal of programming agreements at higher costs as well as increased talent and personnel-related costs.

We expect our programming and content expenses to increase as we offer additional programming, and renew or replace expiring agreements.

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 March 31, 2017 and 2016, customer service and billing expenses were $96,775 and $96,867, respectively, a decrease of less than 1%, or $92, and decreased as a percentage of total revenue. The decrease was primarily due to lower call center costs due to lower contact rates and lower agent rates, partially offset by increased transaction fees from a higher subscriber base and higher bad debt expense.

We expect our customer service and billing expenses to increase as our subscriber base grows.

Satellite and 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 March 31, 2017 and 2016, satellite and transmission expenses were $20,576 and $23,538, respectively, a decrease of 13%, or $2,962, and decreased as a percentage of total revenue. The decrease was driven primarily by lower wireless costs from our connected vehicle services, costs related to our repeater network and personnel-related costs.

We expect satellite and transmission expenses to decrease as wireless costs on our connected vehicle services decline.

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 March 31, 2017 and 2016, cost of equipment was $6,912 and $9,779, respectively, a decrease of 29%, or $2,867, and decreased as a percentage of equipment revenue. The decrease was primarily due to lower sales to distributors and consumers.

We expect cost of equipment to fluctuate with changes in sales.

Subscriber Acquisition Costs 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; commissions paid to automakers and retailers; product warranty obligations; freight; and provisions for inventory allowances attributable to inventory consumed in our OEM and retail distribution channels. The majority of subscriber acquisition costs are incurred and expensed in advance of, or concurrent with, 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 March 31, 2017 and 2016, subscriber acquisition costs were $127,488 and $132,449, respectively, a decrease of 4%, or $4,961, and decreased as a percentage of total revenue. The decrease was driven by reductions to OEM hardware subsidy rates and lower subsidized costs related to the transition of chipsets, partially offset by higher radio installations.

We expect subscriber acquisition costs to fluctuate with OEM installations and aftermarket volume; however, the subsidized chipsets cost is expected to decline as we transition to a new generation of chipsets. We intend to continue to offer subsidies, commissions and other incentives to acquire subscribers.

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

For the three months ended March 31, 2017 and 2016, sales and marketing expenses were $96,909 and $88,726, respectively, an increase of 9%, or $8,183, and increased as a percentage of total revenue. The increase was primarily due to additional subscriber communications, retention programs and acquisition campaigns.

We anticipate that sales and marketing expenses will increase as we expand programs to retain our existing subscribers, win back former subscribers, and attract new subscribers.

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 March 31, 2017 and 2016, engineering, design and development expenses were $23,817 and $19,441, respectively, an increase of 23%, or $4,376, and increased as a percentage of total revenue. The increase was driven primarily by additional costs associated with the development of our streaming and internet-based video products as well as increased personnel-related costs.

We expect engineering, design and development expenses to increase in future periods as we continue to develop our infrastructure, products and services.

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 March 31, 2017 and 2016, general and administrative expenses were $78,201 and $77,505, respectively, an increase of 1%, or $696, and decreased as a percentage of total revenue. The increase was primarily driven by higher legal costs, partially offset by lower consulting costs.

We expect our general and administrative expenses will increase to support the growth of our business.

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 March 31, 2017 and 2016, depreciation and amortization expense was $76,704 and $67,627, respectively, an increase of 13%, or $9,077, and increased as a percentage of total revenue. The increase was driven by acceleration of amortization related to a shorter useful life of certain software.

Other Income (Expense)

Interest Expense includes interest on outstanding debt.

For the three months ended March 31, 2017 and 2016, interest expense was $81,657 and $78,400, respectively, an increase of 4%, or $3,257. The increase was primarily due to higher average debt during the three months ended March 31, 2017 compared to the three months ended March 31, 2016.

We expect interest expense to increase in future periods to the extent the amount of our total debt outstanding increases.

Other Income primarily includes realized gains and losses, interest income, and our share of the income or loss of Sirius XM Canada.

For the three months ended March 31, 2017 and 2016, interest and investment income was $8,863 and $10,848, respectively. The income for the three months ended March 31, 2017 was driven by our share of Sirius XM Canada's net income. The income for the three months ended March 31, 2016 was driven by our share of Sirius XM Canada's net income and the dividends received from Sirius XM Canada in excess of our investment.

Income Taxes

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

For the three months ended March 31, 2017 and 2016, income tax expense was $113,973 and $108,242, respectively. We estimate our annual effective tax rate for the year ending December 31, 2017 will be approximately 37.3%. Our effective tax rate for the three months ended March 31, 2017 and 2016 was 35.5% and 38.6%, respectively. The rate for the three months ended March 31, 2017 and 2016 was primarily impacted by the recognition of excess tax benefits and shortfalls related to share based compensation, respectively.

Key Financial and Operating Performance Metrics

In this section, we present certain financial performance measures that are not calculated and presented in accordance with generally accepted accounting principles in the United States ("Non-GAAP"), which include free cash flow and adjusted EBITDA. We also present certain operating performance measures, which include average monthly revenue per subscriber, or ARPU; customer service and billing expenses, per average subscriber; and subscriber acquisition cost, or SAC, per installation.

Our Adjusted EBITDA excludes the impact of share-based payment expense and certain purchase price accounting adjustments related to the merger of Sirius and XM (the “Merger”). Additionally, when applicable, our adjusted EBITDA and free cash flow metrics exclude 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 accompanying glossary on pages 33 through 35 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 investors find these Non-GAAP financial and operating performance measures useful in evaluating our core trends because they provide a direct view of our underlying contractual costs. We believe investors 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 acquisition and capital expenditures, to repurchase or retire debt, to acquire other companies and to evaluate 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 33 through 35) 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 our subscriber count or subscriber-based operating metrics.

Set forth below are our subscriber balances as of March 31, 2017 compared to March 31, 2016:

	As of March 31,		2017 vs 2016 Change	
	2017	2016	Amount	%
Self-pay subscribers	26,210	24,636	1,574	6 %
Paid promotional subscribers	5,393	5,423	(30)	(1)%
Ending subscribers [(a)]	31,602	30,059	1,543	5 %

(a) Amounts may not sum as a result of rounding.

The following table contains our Non-GAAP financial and operating performance measures which are based on our adjusted results of operations for the three months ended March 31, 2017 and 2016:

	For the Three Months Ended March 31,		2017 vs 2016 Change	
	2017	2016	Amount	%
Self-pay subscribers	259	348	(89)	(26)%
Paid promotional subscribers	(3)	117	(120)	(103)%
Net additions [(a)]	257	465	(208)	(45)%
Daily weighted average number of subscribers	31,369	29,767	1,602	5 %
Average self-pay monthly churn	1.8%	1.9%	(0.1)%	(5)%
New vehicle consumer conversion rate	40%	38%	2 %	5 %
ARPU	$ 12.95	$ 12.66	$ 0.29	2 %
SAC, per installation	$ 29	$ 34	$ (5)	(15)%
Customer service and billing expenses, per average subscriber	$ 0.97	$ 1.01	$ (0.04)	(4)%
Adjusted EBITDA	$ 501,803	$ 441,367	$ 60,436	14 %
Free cash flow	$ 248,939	$ 328,217	$ (79,278)	(24)%
Diluted weighted average common shares outstanding (GAAP)	4,784,420	5,110,618	(326,198)	(6)%

(a) Amounts may not sum as a result of rounding.

Subscribers. At March 31, 2017, we had approximately 31.6 million subscribers, an increase of 1.5 million subscribers, or 5%, from the approximately 30.1 million subscribers as of March 31, 2016. The increase in total subscribers was primarily due to growth in our self-pay subscriber base, which increased 1.6 million. The increase in self-pay subscribers is primarily from original and subsequent owner trial conversions and subscriber win back programs, partially offset by deactivations. The increase in self-pay subscribers was partially offset by a 30 thousand decrease in paid promotional subscribers.

For the three months ended March 31, 2017 and 2016, net additions were 257 thousand and 465 thousand, respectively, a decrease of 45%. The decline was due to a decrease in net additions of paid promotional subscribers as a result of lower shipments from automakers offering paid promotional subscriptions, and lower self-pay net additions due to higher vehicle turnover of our subscriber base.

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 33 through 35 for more details.)

For the three months ended March 31, 2017 and 2016, our average self-pay monthly churn rate was 1.8% and 1.9%, respectively. The decrease in churn was primarily driven by improvements in voluntary and non-pay churn, partially offset by an increase in vehicle-related churn.

New Vehicle Consumer Conversion Rate is the percentage of owners and lessees of new vehicles that receive our service and convert to become self-paying subscribers after an initial promotional period. The metric excludes rental and fleet vehicles. (See accompanying glossary on pages 33 through 35 for more details.)

For the three months ended March 31, 2017 and 2016, our new vehicle consumer conversion rate was 40% and 38%, respectively. The increase in new vehicle consumer conversion rate was driven by improvements in conversion of trialers who are also current self-pay subscribers and trialers who are first time vehicle buyers.

ARPU is derived from total earned subscriber revenue (excluding revenue derived from our connected vehicle services), net advertising revenue and other subscription-related 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 33 through 35 for more details.)

For the three months ended March 31, 2017 and 2016, ARPU was $12.95 and $12.66, respectively. The increase was driven primarily by increases in certain of our subscription rates in 2016, partially offset by growth in subscription discounts offered through customer acquisition and retention programs and one less day in the first quarter of 2017 compared to 2016.

SAC, Per Installation, is derived from subscriber acquisition costs and margins from the sale of radios, components and accessories, 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 33 through 35 for more details.)

For the three months ended March 31, 2017 and 2016, SAC, per installation, was $29 and $34, respectively. The decrease was driven by lower OEM hardware subsidy rates, lower subsidized costs and higher royalties related to our transition to a new generation of chipsets.

Customer Service and Billing Expenses, Per Average Subscriber, is derived from total customer service and billing expenses, excluding connected vehicle customer service and billing expenses and share-based payment expense, 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 33 through 35 for more details.)

For the three months ended March 31, 2017 and 2016, customer service and billing expenses, per average subscriber, was $0.97 and $1.01, respectively. The decrease was primarily related to lower call center costs due to lower contact rates and lower agent rates.

Adjusted EBITDA. EBITDA is defined as net income before interest expense, income tax expense and depreciation and amortization. Adjusted EBITDA excludes the impact of other income, other non-cash charges, such as certain purchase price accounting adjustments, and share-based payment expense. (See the accompanying glossary on pages 33 through 35 for a reconciliation to GAAP and for more details.)

For the three months ended March 31, 2017 and 2016, adjusted EBITDA was $501,803 and $441,367, respectively, an increase of 14%, or $60,436. The increase was due to growth in revenues primarily as a result of the increase in our subscriber base and certain of our subscription rates and lower subscriber acquisition costs, partially offset by higher revenue share and royalty costs due to growth in our revenues and royalty rates, programming and content, sales and marketing and engineering, design and development costs.

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 33 through 35 for a reconciliation to GAAP and for more details.)

For the three months ended March 31, 2017 and 2016, free cash flow was $248,939 and $328,217, respectively, a decrease of $79,278, or 24%. The decrease was driven by the timing of interest payments, a payment for a legal settlement, an increase in additions to property and equipment resulting from new satellite construction, and the timing of OEM and certain vendor payments.

Liquidity and Capital Resources

Cash Flows for the three months ended March 31, 2017 compared with the three months ended March 31, 2016.

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

	For the Three Months Ended March 31,		
	2017	2016	2017 vs 2016
Net cash provided by operating activities	$ 309,325	$ 362,186	$ (52,861)
Net cash used in investing activities	(60,386)	(33,969)	(26,417)
Net cash used in financing activities	(232,390)	(338,103)	105,713
Net increase (decrease) in cash and cash equivalents	16,549	(9,886)	26,435
Cash and cash equivalents at beginning of period	213,939	111,838	102,101
Cash and cash equivalents at end of period	$ 230,488	$ 101,952	$ 128,536

Cash Flows Provided by Operating Activities

Cash flows provided by operating activities decreased by $52,861 to $309,325 for the three months ended March 31, 2017 from $362,186 for the three months ended March 31, 2016. The decrease was driven by the timing of interest payments, a payment for a legal settlement, and the timing of OEM and certain vendor payments.

Our largest source of cash provided by operating activities is generated by subscription and subscription-related revenues. We also generate cash from the sale of advertising on certain non-music channels 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 subscribers, general corporate expenditures, and compensation and related costs.

Cash Flows Used in Investing Activities

Cash flows used in investing activities, in the first quarter of 2017, were primarily due to additional spending to construct replacement satellites of $12,100, improve our terrestrial repeater network, for capitalized software, and deferred compensation. In 2016, our cash flows used in investing activities were primarily due to additional spending to improve our terrestrial repeater network and for capitalized software.

Cash Flows Used in Financing Activities

Cash flows used in financing activities consists of the issuance and repayment of long-term debt, the purchase of common stock under our share repurchase program and the payment of a cash dividend. Proceeds from long-term debt, related party debt and equity issuances have been used to fund our operations, construct and launch new satellites, invest in other infrastructure improvements and purchase shares of our common stock.

Cash flows used in financing activities in the first quarter of 2017 were primarily due to the purchase and retirement of shares of our common stock under our repurchase program for $305,975, and the payment of a cash dividend of $47,137, partially offset by net borrowings of $140,000 under the Credit Facility. Cash flows used in financing activities in the first quarter of 2016 were primarily due to the purchase and retirement of shares of our common stock under our repurchase program for $594,450, partially offset by net borrowings of $260,000 under the Credit Facility.

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, legal settlements, interest payments, taxes and scheduled maturities of our debt with existing cash, cash flow from operations and borrowings under our Credit Facility. As of March 31, 2017, $1,220,000 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, as well as fund stock repurchases, future dividend payments and 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 satellite radio business.

Capital Return Program

As of March 31, 2017, our board of directors had approved for repurchase an aggregate of $10,000,000 of our common stock. As of March 31, 2017, our cumulative repurchases since December 2012 under our stock repurchase program totaled 2,265,148 shares for $8,272,394, and $1,727,606 remained available under our stock repurchase program.

On April 25, 2017, our board of directors also declared a quarterly dividend on our common stock in the amount of $0.01 per share of common stock payable on May 31, 2017 to stockholders of record as of the close of business on May 10, 2017. Our board of directors expects to declare regular quarterly dividends, in an aggregate annual amount of $0.04 per share of common stock.

Debt Covenants

The indentures governing Sirius XM's senior notes, and the agreement governing the Credit Facility include restrictive covenants. As of March 31, 2017, we were in compliance with such covenants. For a discussion of our “Debt Covenants,” refer to Note 10 to our unaudited consolidated financial statements in Item 1 of this Quarterly Report on Form 10-Q.

Off-Balance Sheet Arrangements

We do not have any significant off-balance sheet arrangements other than those disclosed in Note 13 to our unaudited consolidated financial statements in Item 1 of this Quarterly Report on Form 10-Q 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 13 to our unaudited consolidated financial statements in Item 1 of this Quarterly Report on Form 10-Q.

Related Party Transactions

For a discussion of “Related Party Transactions,” refer to Note 9 to our unaudited consolidated financial statements in Item 1 of this Quarterly Report on Form 10-Q.

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 on Form 10-K for the year ended December 31, 2016. There have been no material changes to our critical accounting policies and estimates since December 31, 2016.

Glossary

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 income as well as certain other charges discussed below. Adjusted EBITDA is one of the primary Non-GAAP financial measures we use to (i) evaluate the performance of our on-going core operating results period over period, (ii) base our internal budgets and (iii) compensate management. Adjusted EBITDA is a Non-GAAP financial measure that excludes (if applicable): (i) certain adjustments as a result of the purchase price accounting for the Merger, (ii) share-based payment expense and (iii) 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. Because 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 related to the historical use of sound recordings and loss on disposal of assets, 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 Merger. 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 March 31,	
	2017	2016
Net income:	$ 207,073	$ 172,440
Add back items excluded from Adjusted EBITDA:		
Purchase price accounting adjustments:		
Revenues	1,813	1,813
Share-based payment expense	29,446	23,693
Depreciation and amortization	76,704	67,627
Interest expense	81,657	78,400
Other income	(8,863)	(10,848)
Income tax expense	113,973	108,242
Adjusted EBITDA	$ 501,803	$ 441,367

ARPU - is derived from total earned subscriber revenue, advertising revenue and other subscription-related revenue, excluding revenue associated with our connected vehicle services, divided by the number of months in the period, divided by the daily weighted average number of subscribers for the period. Other subscription-related revenue includes the U.S. Music Royalty Fee. ARPU is calculated as follows:

	For the Three Months Ended March 31,	
	2017	2016
Subscriber revenue, excluding connected vehicle services	$ 1,058,054	$ 984,984
Add: advertising revenue	36,016	31,541
Add: other subscription-related revenue	124,468	114,071
	$ 1,218,538	$ 1,130,596
Daily weighted average number of subscribers	31,369	29,767
ARPU	$ 12.95	$ 12.66

Average self-pay monthly churn - is defined as the monthly average of self-pay deactivations for the period divided by the average number of self-pay subscribers for the period.

Customer service and billing expenses, per average subscriber - is derived from total customer service and billing expenses, excluding connected vehicle customer service and billing expenses and share-based payment expense, divided by the number of months in the period, divided by the daily weighted average number of subscribers for the period. We believe the exclusion of share-based payment expense in our calculation of customer service and billing expenses, per average subscriber, is useful as share-based payment expense is not directly related to the operational conditions that give rise to variations in the components of our customer service and billing expenses. Customer service and billing expenses, per average subscriber, is calculated as follows:

	For the Three Months Ended March 31,	
	2017	2016
Customer service and billing expenses, excluding connected vehicle services	$ 92,120	$ 91,171
Less: share-based payment expense	(1,011)	(806)
	$ 91,109	$ 90,365
Daily weighted average number of subscribers	31,369	29,767
Customer service and billing expenses, per average subscriber	$ 0.97	$ 1.01

Free cash flow - is derived from cash flow provided by operating activities, net of additions to property and equipment, restricted and other investment activity and the return of capital from investment in unconsolidated entity. 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 and significant items that do not relate to the on-going performance of our business. 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 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 consolidated statements of cash flows, adjusted for any significant legal settlements. 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 March 31,	
	2017	2016
Cash Flow information		
Net cash provided by operating activities	$ 309,325	$ 362,186
Net cash used in investing activities	$ (60,386)	$ (33,969)
Net cash used in financing activities	$ (232,390)	$ (338,103)
Free Cash Flow		
Net cash provided by operating activities	$ 309,325	$ 362,186
Additions to property and equipment	(53,365)	(30,171)
Purchases of restricted and other investments	(7,021)	(3,798)
Free cash flow	$ 248,939	$ 328,217

New vehicle consumer conversion rate - is defined as the percentage of owners and lessees of new vehicles that receive our satellite radio service and convert to become self-paying subscribers after the initial promotion period. At the time satellite radio enabled vehicles are sold or leased, the owners or lessees generally receive trial subscriptions ranging from three to twelve months. We measure conversion rate three months after the period in which the trial service ends. The metric excludes rental and fleet vehicles.

Subscriber acquisition cost, per installation - or SAC, per installation, is derived from subscriber acquisition costs and margins from the sale of radios and accessories, 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 March 31,	
	2017	2016
Subscriber acquisition costs	$ 127,488	$ 132,449
Less: margin from sales of radios and accessories	(22,746)	(17,342)
	$ 104,742	$ 115,107
Installations	3,584	3,430
SAC, per installation	$ 29	$ 34

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISKS

As of March 31, 2017, we did not hold or issue any free-standing derivatives. We hold investments in money market funds and certificates of deposit. These securities are consistent with the objectives contained within our investment policy. The basic objectives of our investment policy are the preservation of capital, maintaining sufficient liquidity to meet operating requirements and maximizing yield.

Our debt includes fixed rate instruments and the fair market value of our debt is sensitive to changes in interest rates. Sirius XM's borrowings under the Credit Facility carry a variable interest rate based on LIBOR plus an applicable rate based on its debt to operating cash flow ratio. We currently do not use interest rate derivative instruments to manage our exposure to interest rate fluctuations.

ITEM 4. CONTROLS AND PROCEDURES

Controls and Procedures

We maintain a set of disclosure controls and procedures designed to ensure that information required to be disclosed in reports that we file or submit under the Exchange Act of 1934, is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, and that such information is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosures. The design of any disclosure controls and procedures is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Any controls and procedures, no matter how well designed and operated, can provide only reasonable, not absolute, assurance of achieving the desired control objectives.

As of March 31, 2017, an evaluation was performed under the supervision and with the participation of our management, including James E. Meyer, our Chief Executive Officer, and David J. Frear, our Senior Executive Vice President and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures (as that term is defined in Rule 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934). Based on that evaluation, our management, including our Chief Executive Officer and our Chief Financial Officer, concluded that our disclosure controls and procedures were effective as of March 31, 2017.

There has been no change in our internal control over financial reporting (as that term is defined in Rule 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934) during the quarter ended March 31, 2017 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II — OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

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

SoundExchange Royalty Claims. In August 2013, SoundExchange, Inc. filed a complaint in the United States District Court for the District of Columbia alleging that we underpaid royalties for statutory licenses in violation of the regulations established by the Copyright Royalty Board for the 2007-2012 period. SoundExchange principally alleges that we improperly reduced our gross revenues applicable to royalties by improperly deducting revenue attributable to pre-1972 recordings and Premier package revenue that is not "separately charged" as required by the regulations. We believe that we properly applied the gross revenue exclusions contained in the regulations established by the Copyright Royalty Board. SoundExchange is seeking compensatory damages of not less than $50 million and up to $100 million or more, payment of late fees and interest, and attorneys' fees and costs.

In August 2014, the United States District Court for the District of Columbia, in response to our motion to dismiss the complaint, stayed the case on the grounds that it properly should be pursued in the first instance before the Copyright Royalty Board rather than the District Court. In its opinion, the District Court concluded that the gross revenue exclusions in the regulations established by the Copyright Royalty Board for the 2007-2012 period were ambiguous and did not, on their face, make clear whether our royalty calculation approaches were permissible under the regulations. In December 2014, SoundExchange filed a petition with the Copyright Royalty Board requesting an order interpreting the applicable regulations.

On January 10, 2017, the Copyright Royalty Board issued a ruling concluding that we correctly interpreted the revenue exclusions applicable to pre-1972 recordings, but in certain cases did not apply those exclusions properly. The ruling further indicated that we improperly claimed a revenue exclusion based on our Premier package upcharge, because, in the Judges' view, the portion of the package that contained programming that did not include sound recordings was not offered for a "separate charge" in accordance with the regulations. On March 9, 2017, the Copyright Royalty Board issued an order withdrawing its January 10, 2017 ruling in its entirety and requesting that the parties submit briefs addressing certain jurisdictional issues related to this proceeding.

Rulings by the Copyright Royalty Board are subject to limited legal review by the Register of Copyrights. We expect that any ruling by the Copyright Royalty Board in this matter (and any potential review by the Register of Copyrights) will be transmitted back to the District Court for further proceedings, such as adjudication claims relating to damages and defenses. We believe we have substantial defenses to SoundExchange claims that can be asserted, including in proceedings in the District Court, and will continue to defend this action vigorously.

This matter is titled SoundExchange, Inc. v. Sirius XM Radio, Inc., No.13-cv-1290-RJL (D.D.C.), and *Determination of Rates and Terms for Preexisting Subscription Services and Satellite Digital Audio Radio Services,* United States Copyright Royalty Board, No. 2006-1 CRB DSTRA. Information concerning the action is publicly available in filings under the docket numbers. This matter is not related to certain claims under state law brought by owners of pre-1972 recording copyrights arising out of our use and performance of those recordings.

At December 31, 2016, we concluded that a loss, in excess of our recorded liabilities, is reasonably possible in connection with the SoundExchange royalty claims. At March 31, 2017, the estimable portion of such possible loss continues to range from $0 to $70 million, plus any related interest or late fees. Based on our defenses, such a loss is not considered probable at this time and no liability for such additional loss has been recorded. The matters underlying this estimated range and the estimable portion of reasonably possible losses may change from time to time and the actual possible loss may vary from this estimate.

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. 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.

ITEM 1A. RISK FACTORS

There have been no material changes to the risk factors previously disclosed in response to Part 1, Item 1A, of our Annual Report on Form 10-K for the year ended December 31, 2016.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

As of March 31, 2017, our board of directors had approved for repurchase an aggregate of $10.0 billion of our common stock. Our board of directors did not establish an end date for this stock repurchase program. Shares of common stock may be purchased from time to time on the open market, pursuant to pre-set trading plans meeting the requirements of Rule 10b5-1 under the Exchange Act, in privately negotiated transactions, including transactions with Liberty Media and its affiliates, or otherwise. As of March 31, 2017, our cumulative repurchases since December 2012 under our stock repurchase program totaled 2.3 billion shares for $8.3 billion, and $1.7 billion remained available under our stock repurchase program. The size and timing of these purchases will be based on a number of factors, including price and business and market conditions.

The following table provides information about our purchases of equity securities registered pursuant to Section 12 of the Securities Exchange Act of 1934, as amended, during the quarter ended March 31, 2017:

Period	Total Number of Shares Purchased	Average Price Paid Per Share (a)	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs (a)
January 1, 2017 - January 31, 2017	26,675,600	$ 4.60	26,675,600	$ 1,903,483,787
February 1, 2017 - February 28, 2017	12,776,380	$ 4.82	12,776,380	$ 1,841,930,795
March 1, 2017 - March 31, 2017	22,087,440	$ 5.18	22,087,440	$ 1,727,606,352
Total	61,539,420	$ 4.85	61,539,420	

(a) These amounts include fees and commissions associated with the shares repurchased.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

Not applicable.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

None.

ITEM 6. EXHIBITS

See Exhibit Index attached hereto, which is incorporated herein by reference.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized on this 27th day of April 2017.

SIRIUS XM HOLDINGS INC.

By: /s/ DAVID J. FREAR

David J. Frear
Senior Executive Vice President and
Chief Financial Officer
(Principal Financial Officer)

EXHIBIT INDEX

Exhibit	Description
31.1	Certificate of James E. Meyer, Chief Executive Officer, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith).
31.2	Certificate of David J. Frear, Senior Executive Vice President and Chief Financial Officer, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith).
32.1	Certificate of James E. Meyer, Chief Executive Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (furnished herewith).
32.2	Certificate of David J. Frear, Senior Executive Vice President and Chief Financial Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (furnished herewith).
101.1	The following financial information from our Quarterly Report on Form 10-Q for the quarter ended March 31, 2017 formatted in eXtensible Business Reporting Language (XBRL): (i) Consolidated Statements of Comprehensive Income (Unaudited) for the three months ended March 31, 2017 and 2016; (ii) Consolidated Balance Sheets as of March 31, 2017 (Unaudited) and December 31, 2016; (iii) Consolidated Statements of Stockholders' (Deficit) Equity for the three months ended March 31, 2017 (Unaudited); (iv) Consolidated Statements of Cash Flows (Unaudited) for the three months ended March 31, 2017 and 2016; and (v) Notes to Consolidated Financial Statements (Unaudited).

The agreements and other documents filed as exhibits to this report are not intended to provide factual information or other disclosure other than with respect to the terms of the agreements or other documents themselves, and you should not rely on them for that purpose. In particular, any representations and warranties made by us in these agreements or other documents were made solely within the specific context of the relevant agreement or document and may not describe the actual state of affairs as of the date they were made or at any other time.

Exhibit 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER

I, James E. Meyer, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the quarterly period endedMarch 31, 2017 of Sirius XM Holdings Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
   (a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

By: /s/ JAMES E. MEYER

James E. Meyer
Chief Executive Officer
(Principal Executive Officer)

April 27, 2017

Exhibit 31.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER

I, David J. Frear, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the quarterly period endedMarch 31, 2017 of Sirius XM Holdings Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
   (a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

By: /s/ DAVID J. FREAR

David J. Frear
Senior Executive Vice President and
Chief Financial Officer
(Principal Financial Officer)

April 27, 2017

Exhibit 32.1

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY
ACT OF 2002**

In connection with the Quarterly Report of Sirius XM Holdings Inc. (the “Company”) on Form 10-Q for the quarterly period ended March 31, 2017 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, James E. Meyer, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

By: /s/ JAMES E. MEYER

James E. Meyer
Chief Executive Officer
(Principal Executive Officer)

April 27, 2017

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

Exhibit 32.2

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY
ACT OF 2002**

In connection with the Quarterly Report of Sirius XM Holdings Inc. (the "Company") on Form 10-Q for the quarterly period ended March 31, 2017 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, David J. Frear, Senior Executive Vice President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

By: /s/ DAVID J. FREAR

David J. Frear
Senior Executive Vice President and
Chief Financial Officer
(Principal Financial Officer)

April 27, 2017

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