SIRIUS XM RADIO INC.

(Exact name of company as specified in its charter)

QUARTERLY REPORT

For the Quarterly Period Ended June 30, 2017

Explanatory Note

Sirius XM Radio Inc. ("Sirius XM") is furnishing this Quarterly Report for the quarterly period ended June 30, 2017 (the "Quarterly Report") in order to comply with the reporting obligations in the indentures governing its 4.25% Senior Notes due 2020, 5.75% Senior Notes due 2021, 5.25% Senior Secured Notes due 2022, 4.625% Senior Notes due 2023, 6.00% Senior Notes due 2024, 5.375% Senior Notes due 2025 and 5.375% Senior Notes due 2026 (collectively, the "Notes").

Before making any investment decisions in Sirius XM or Sirius XM Holdings Inc. ("Holdings"), investors should read the following unaudited consolidated financial statements and Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") of Sirius XM in conjunction with Holdings' Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2017 and Holdings' other reports available through the Securities and Exchange Commission website at www.sec.gov and our website at www.siriusxm.com, and with Sirius XM's other reports available through our website. Holdings' Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2017 is hereby incorporated by reference. Sirius XM is a wholly-owned subsidiary of Holdings and Holdings has no operations independent of Sirius XM. Refer to Note 1 to the unaudited consolidated financial statements included within this Quarterly Report for an explanation of differences between Sirius XM and Holdings' unaudited consolidated financial statements.

The terms "Sirius XM," "we," "us," "our," and the "Company," as used herein and unless otherwise stated or indicated by context, refer to Sirius XM Radio Inc. and its subsidiaries.

SIRIUS XM RADIO INC. AND SUBSIDIARIES
TABLE OF CONTENTS

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

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
(in thousands)	2017	2016	2017	2016
Revenue:				
Subscriber revenue	$ 1,111,011	$ 1,033,284	$ 2,189,268	$ 2,042,966
Advertising revenue	40,178	33,521	76,194	65,062
Equipment revenue	29,674	27,858	59,332	54,979
Other revenue	166,706	140,903	316,841	273,569
Total revenue	1,347,569	1,235,566	2,641,635	2,436,576
Operating expenses:				
Cost of services:				
Revenue share and royalties	292,893	264,385	570,193	516,129
Programming and content	96,255	83,645	191,799	168,745
Customer service and billing	95,324	93,712	192,099	190,579
Satellite and transmission	19,603	34,847	40,179	58,385
Cost of equipment	9,371	9,728	16,283	19,507
Subscriber acquisition costs	125,154	128,956	252,642	261,405
Sales and marketing	106,707	91,358	203,616	180,084
Engineering, design and development	27,783	18,893	51,600	38,334
General and administrative	84,607	81,178	162,808	158,683
Depreciation and amortization	73,519	66,708	150,223	134,335
Total operating expenses	931,216	873,410	1,831,442	1,726,186
Income from operations	416,353	362,156	810,193	710,390
Other income (expense):				
Interest expense	(82,794)	(83,396)	(164,451)	(161,796)
Other (expense) income	(11,937)	2,515	(3,074)	13,363
Total other expense	(94,731)	(80,881)	(167,525)	(148,433)
Income before income taxes	321,622	281,275	642,668	561,957
Income tax expense	(119,513)	(106,310)	(233,486)	(214,552)
Net income attributable to Sirius XM Radio Inc.'s sole stockholder	$ 202,109	$ 174,965	$ 409,182	$ 347,405
Foreign currency translation adjustment, net of tax	2,763	(15)	2,746	434
Total comprehensive income attributable to Sirius XM Radio Inc.'s sole stockholder	$ 204,872	$ 174,950	$ 411,928	$ 347,839

See accompanying notes to the unaudited consolidated financial statements.

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

(in thousands, except per share data)	June 30, 2017	December 31, 2016
ASSETS	**(unaudited)**	
Current assets:		
Cash and cash equivalents	$ 42,738	$ 213,939
Receivables, net	234,352	223,029
Inventory, net	19,581	20,363
Related party current assets	12,085	6,170
Prepaid expenses and other current assets	186,481	179,148
Total current assets	495,237	642,649
Property and equipment, net	1,410,265	1,398,693
Intangible assets, net	2,536,675	2,544,801
Goodwill	2,290,240	2,205,107
Related party long-term assets	6,280,073	5,185,730
Long-term investment	173,104	—
Deferred tax assets	873,024	1,084,330
Other long-term assets	119,742	119,097
Total assets	$ 14,178,360	$ 13,180,407
LIABILITIES AND STOCKHOLDER EQUITY		
Current liabilities:		
Accounts payable and accrued expenses	$ 645,066	$ 701,968
Accrued interest	107,591	114,633
Current portion of deferred revenue	1,864,643	1,832,609
Current maturities of long-term debt	5,160	5,485
Related party current liabilities	2,840	2,840
Total current liabilities	2,625,300	2,657,535
Deferred revenue	180,647	176,319
Long-term debt	6,453,757	5,842,764
Related party long-term liabilities	6,535	7,955
Deferred tax liabilities	6,418	6,418
Other long-term liabilities	97,911	93,553
Total liabilities	9,370,568	8,784,544
Commitments and contingencies (Note 14)		
Stockholder equity:		
Common stock, par value $0.001; 9,000,000 shares authorized; 1 share issued and outstanding at June 30, 2017 and December 31, 2016, respectively	—	—
Accumulated other comprehensive income (loss), net of tax	2,607	(139)
Additional paid-in capital	8,679,538	8,679,538
Accumulated deficit	(3,874,353)	(4,283,536)
Total stockholder equity	4,807,792	4,395,863
Total liabilities and stockholder equity	$ 14,178,360	$ 13,180,407

See accompanying notes to the unaudited consolidated financial statements.

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

	Common Stock					
(in thousands)	Shares	Amount	Accumulated Other Comprehensive (Loss) Income	Additional Paid-in Capital	Accumulated Deficit	Total Stockholder Equity
Balance at December 31, 2016	1	$ —	$ (139)	$ 8,679,538	$ (4,283,536)	$ 4,395,863
Comprehensive income, net of tax	—	—	2,746	—	409,182	411,928
Balance at June 30, 2017	1	$ —	$ 2,607	$ 8,679,538	$ (3,874,354)	$ 4,807,791

See accompanying notes to the unaudited consolidated financial statements.

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

(in thousands)	For the Six Months Ended June 30, 2017	2016
Cash flows from operating activities:		
Net income	$ 409,182	$ 347,405
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	150,223	134,335
Non-cash interest expense, net of amortization of premium	4,231	4,230
Provision for doubtful accounts	27,377	25,707
Amortization of deferred income related to equity method investment	(1,388)	(1,388)
Loss (gain) on unconsolidated entity investments, net	2,183	(8,451)
Dividend received from unconsolidated entity investment	3,606	7,160
Loss on disposal of assets	—	12,912
Share-based payment expense	59,697	47,870
Deferred income taxes	220,415	202,170
Changes in operating assets and liabilities:		
Receivables	(38,063)	(16,305)
Inventory	2,492	(3,981)
Related party, net	(12,928)	(3,304)
Prepaid expenses and other current assets	(6,617)	(14,052)
Other long-term assets	5,937	15,081
Accounts payable and accrued expenses	(84,501)	(17,135)
Accrued interest	(7,042)	5,448
Deferred revenue	30,779	49,288
Other long-term liabilities	4,358	1,919
Net cash provided by operating activities	769,941	788,909
Cash flows from investing activities:		
Additions to property and equipment	(119,517)	(67,172)
Purchases of restricted and other investments	(7,355)	(3,953)
Acquisition of business, net of cash acquired	(107,488)	—
Investment in convertible preferred stock	(172,500)	—
Loan to related parties	(130,794)	—
Payments to acquire additional ownership in related parties	(130,026)	—
Net cash used in investing activities	(667,680)	(71,125)
Cash flows from financing activities:		
Intercompany financing activities	(877,462)	(995,632)
Net proceeds (repayments) related to revolving credit facility	610,000	(340,000)
Principal payments of long-term borrowings	(6,000)	(4,831)
Proceeds from long-term borrowings, net of costs	—	987,294
Net cash used in financing activities	(273,462)	(353,169)
Net (decrease) increase in cash and cash equivalents	(171,201)	364,615
Cash and cash equivalents at beginning of period	213,939	111,838
Cash and cash equivalents at end of period	$ 42,738	$ 476,453

See accompanying notes to the unaudited consolidated financial statements.

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

	For the Six Months Ended June 30,	
(in thousands)	**2017**	**2016**
Supplemental Disclosure of Cash and Non-Cash Flow Information		
Cash paid during the period for:		
Interest, net of amounts capitalized	$ 164,147	$ 148,398
Income taxes paid	$ 12,264	$ 11,478
Non-cash investing and financing activities:		
Capital lease obligations incurred to acquire assets	$ —	$ 6,647

See accompanying notes to the unaudited consolidated financial statements.

SIRIUS XM RADIO INC. AND SUBSIDIARIES
(a wholly-owned subsidiary of Sirius XM Holdings Inc.)
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(UNAUDITED)
(Dollars and shares in thousands, except per share amounts)

(1) Business & Basis of Presentation

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.

During the three months ended June 30, 2017, we entered into several strategic transactions;

- On April 18, 2017, we acquired Automatic Labs Inc. ("Automatic"). Refer to Note 2 for information on this transaction.

- On May 25, 2017, we completed a recapitalization of Sirius XM Canada Holdings Inc. ("Sirius XM Canada"). Refer to Note 9 for information on this transaction.

- On June 9, 2017, we entered into an investment agreement with Pandora Media, Inc. ("Pandora"). Refer to Note 10 for information on this transaction.

As of June 30, 2017, Liberty Media Corporation ("Liberty Media") beneficially owned, directly and indirectly, approximately 68% of the outstanding shares of Holdings' common stock. As a result, Holdings is a "controlled company" for the purposes of the NASDAQ corporate governance requirements. Liberty Media owns interests in a range of media, communications and entertainment businesses.

Basis of Presentation

The accompanying unaudited consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles ("GAAP"). 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.

The unaudited consolidated financial statements for Sirius XM for the quarterly period ended June 30, 2017 are essentially identical to the unaudited consolidated financial statements included in Holdings' Form 10-Q for the quarterly period ended June 30, 2017, filed with the SEC on July 27, 2017, with the following exceptions:

- As a result of our corporate reorganization effective November 15, 2013, all of the outstanding shares of Sirius XM's common stock were converted, on a share for share basis, into identical shares of common stock of Holdings and all equity-related transactions, including repurchases of Holdings' common stock, dividend payments on shares of Holdings' common stock, the issuance of equity related to stock-based compensation to Sirius XM employees, Holdings' directors and third parties and the issuance of Holdings' common stock related to the recapitalization of Sirius XM Canada have been reported as related party transactions within Sirius XM's unaudited consolidated financial statements. Refer to Note 9 for additional information related to related party transactions.

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 Update ("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 June 30, 2017 and for the three and six months ended June 30, 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 should be read together with our Annual Report for the year ended December 31, 2016, which is available on our website at http://investor.siriusxm.com/investor-overview/default.aspx#dividend-tab2, and with Holdings' 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, including our parent Holdings, are required to disclose certain information about their reportable operating segments. Operating segments are defined as significant components of an enterprise for which separate financial information is available and is evaluated on a regular basis by the chief operating decision 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 furnishing of this Quarterly Report for the three and six months ended June 30, 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 16.

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) Acquisition

On April 18, 2017, we acquired Automatic, a connected vehicle device and mobile application company, for an aggregate purchase price of $107,488, net of cash and restricted cash acquired of $819. Automatic has created and operates a data-driven platform that enables vehicle owners to be safer and drive smarter. The company's proprietary Automatic Pro and Automatic Lite connected car adapters provide, among other things, vehicle diagnostic alerts, emergency crash assistance, fuel monitoring, access to parking information and live vehicle location tracking.

SIRIUS XM RADIO INC. AND SUBSIDIARIES
(a wholly-owned subsidiary of Sirius XM Holdings Inc.)
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
(UNAUDITED)
(Dollars and shares in thousands, except per share amounts)

The condensed table below summarizes the fair value of the assets acquired and liabilities assumed as of the acquisition date:

Acquired Assets:		
Intangible assets subject to amortization	$	14,700
Goodwill		85,133
Deferred income tax asset, net		10,854
Other assets		4,019
Trademark		800
Total Assets	$	115,506
Assumed Liabilities:		
Deferred revenue		(5,582)
Other liabilities		(1,617)
Total Liabilities	$	(7,199)
Total Consideration	$	108,307

The transaction was accounted for using the acquisition method of accounting. The initial purchase price allocation is subject to change upon receipt of the final valuation analysis for Automatic. The fair value assessed for the majority of the assets acquired and liabilities assumed equaled their carrying value. The excess purchase price over identifiable net assets of $85,133 has been recorded to Goodwill in our unaudited consolidated balance sheets as of June 30, 2017. A total of $14,700 has been allocated to identifiable intangible assets subject to amortization and relates to the assessed fair value of software and technology and a total of $800 has been allocated to the Automatic trademark.

We recognized acquisition related costs of $861 that were expensed in General and administrative expenses in our unaudited consolidated statements of comprehensive income during the quarter ended June 30, 2017. Pro forma financial information related to this acquisition has not been provided as it is not material to our consolidated results of operations.

(3) Summary of Significant Accounting Policies

Fair Value Measurements

For assets and liabilities required to be reported at fair value, GAAP provides a hierarchy that prioritizes inputs to valuation techniques used to measure fair value into three broad levels. Level 1 inputs are based on unadjusted quoted prices in active markets for identical instruments. Level 2 inputs are inputs, other than quoted market prices included within Level 1, that are observable for the asset or liability, either directly or indirectly. Level 3 inputs are unobservable inputs for the asset or liability. As of June 30, 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.

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

	June 30, 2017				December 31, 2016			
	Level 1	Level 2	Level 3	Total Fair Value	Level 1	Level 2	Level 3	Total Fair Value
Assets:								
Pandora - investment [(a)]	—	$ 173,104	—	$ 173,104	—	—	—	$ —
Sirius XM Canada - investment [(b)]	—	—	—	N/A	$178,696	—	—	$ 178,696
Liabilities:								
Debt [(c)]	—	$6,735,887	—	$6,735,887	—	$6,008,205	—	$6,008,205

(a) During the three months ended June 30, 2017, we entered into an investment agreement with Pandora. We have elected the fair value option to account for this investment. Refer to Note 10 for information on this transaction.
(b) During the three months ended June 30, 2017, we completed a recapitalization of Sirius XM Canada. Following this recapitalization, Sirius XM Canada ceased to be a publicly traded company. Refer to Note 9 for information on this transaction. The amount as of December 31, 2016 approximated fair value. The carrying value of our investment in Sirius XM Canada was $313,698 and $8,615 as of June 30, 2017 and December 31, 2016, respectively.
(c) The fair value for non-publicly traded instruments is based upon estimates from a market maker and brokerage firm. Refer to Note 11 for information related to the carrying value of our debt as of June 30, 2017 and December 31, 2016.

Accumulated Other Comprehensive Income (Loss)

Accumulated other comprehensive income of $2,607 was primarily comprised of the cumulative foreign currency translation adjustments related to the loan with Sirius XM Canada (refer to Note 9 for additional information related to this loan). During the six months ended June 30, 2017, we recorded a foreign currency translation adjustment gain of $2,746, net of a tax benefit of $1,745, which was primarily related to the second quarter of 2017.

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. Although we are in the process of evaluating the impact of adoption of the ASU on our consolidated financial statements, we currently believe the most significant changes will be related to the recognition of right-of-use assets and lease liability on our consolidated balance sheet for operating leases.

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.

SIRIUS XM RADIO INC. AND SUBSIDIARIES
(a wholly-owned subsidiary of Sirius XM Holdings Inc.)
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
(UNAUDITED)
(Dollars and shares in thousands, except per share amounts)

We have substantially completed our evaluation of the impact this ASU will have 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, 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.

(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 other customers, including advertising, 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.

Receivables, net, consists of the following:

	June 30, 2017	December 31, 2016
Gross customer accounts receivable	$ 109,562	$ 105,737
Allowance for doubtful accounts	(8,570)	(8,658)
Customer accounts receivable, net	$ 100,992	$ 97,079
Receivables from distributors	109,762	98,498
Other receivables	23,598	27,452
Total receivables, net	$ 234,352	$ 223,029

(5) Inventory, net

Inventory consists of finished goods, refurbished goods, chipsets and other raw material components used in manufacturing radios and devices. 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.

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

Inventory, net, consists of the following:

	June 30, 2017	December 31, 2016
Raw materials	$ 8,034	$ 10,219
Finished goods	20,855	19,581
Allowance for obsolescence	(9,308)	(9,437)
Total inventory, net	$ 19,581	$ 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 a result of the acquisition of Automatic, we recorded additional goodwill of $85,133 during the three and six months ended June 30, 2017.

As of June 30, 2017, there were no indicators of impairment, and no impairment loss was recorded, for goodwill during the three and six months ended June 30, 2017 and 2016. As of June 30, 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.

(7) Intangible Assets

Our intangible assets include the following:

		June 30, 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	250,800	—	250,800	250,000	—	250,000
Definite life intangible assets:							
Subscriber relationships	9 years	380,000	(377,896)	2,104	380,000	(364,893)	15,107
OEM relationships	15 years	220,000	(53,778)	166,222	220,000	(46,444)	173,556
Licensing agreements	12 years	45,289	(32,506)	12,783	45,289	(30,664)	14,625
Software and technology	7 years	43,915	(22,803)	21,112	29,215	(21,356)	7,859
Total intangible assets		$ 3,023,658	$ (486,983)	$ 2,536,675	$ 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. As part of the Automatic acquisition in April 2017, we have also identified $800 related to its trademark.

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

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, 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 June 30, 2017, there were no indicators of impairment, and no impairment loss was recorded, for intangible assets with indefinite lives during the three and six months ended June 30, 2017 and 2016.

Definite Life Intangible Assets

As part of the Automatic acquisition in April 2017, $14,700 has been allocated to identifiable intangible assets subject to amortization and relates to the assessed fair value of software and technology. Amortization expense for all definite life intangible assets was $12,098 and $12,258 for the three months ended June 30, 2017 and 2016, respectively, and $23,626 and $24,698 for the six months ended June 30, 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)	$ 13,829
2018	23,138
2019	22,701
2020	22,121
2021	16,678
Thereafter	103,754
Total definite life intangible assets, net	$ 202,221

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

(8) Property and Equipment

Property and equipment, net, consists of the following:

	June 30, 2017	December 31, 2016
Satellite system	$ 1,586,794	$ 1,586,794
Terrestrial repeater network	129,127	127,854
Leasehold improvements	54,749	53,898
Broadcast studio equipment	88,634	84,697
Capitalized software and hardware	606,567	558,101
Satellite telemetry, tracking and control facilities	66,759	77,290
Furniture, fixtures, equipment and other	91,567	90,214
Land	38,411	38,411
Building	61,729	61,597
Construction in progress	223,543	144,954
Total property and equipment	2,947,880	2,823,810
Accumulated depreciation and amortization	(1,537,615)	(1,425,117)
Property and equipment, net	$ 1,410,265	$ 1,398,693

Construction in progress consists of the following:

	June 30, 2017	December 31, 2016
Satellite system	$ 96,759	$ 43,977
Terrestrial repeater network	1,863	1,139
Capitalized software	104,660	82,204
Other	20,261	17,634
Construction in progress	$ 223,543	$ 144,954

Depreciation and amortization expense on property and equipment was $61,421 and $54,450 for the three months ended June 30, 2017 and 2016, respectively, and $126,597 and $109,637 for the six months ended June 30, 2017 and 2016, respectively. We retired property and equipment of $14,760 and $36,512 during the six months ended June 30, 2017 and 2016, respectively. We recognized a loss on disposal of assets of $12,912, which was recorded in Satellite and transmission expense in our unaudited consolidated statements of comprehensive income during the three and six months ended June 30, 2016, which related to the disposal of certain obsolete spare parts for a future satellite.

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. Capitalized interest costs for the three and six months ended June 30, 2017 was $1,005 and $1,723, respectively, which related to the construction of our SXM-7 and SXM-8 satellites. We did not capitalize any interest costs for the three and six months ended June 30, 2016.

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

Satellites

As of June 30, 2017, we owned a fleet of five satellites. The chart below provides certain information on our satellites as of June 30, 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 June 30, 2017, Liberty Media beneficially owned, directly and indirectly, approximately 68% of the outstanding shares of Holdings' common stock and has two executives and one of its directors on Holdings' board of directors. Gregory B. Maffei, the President and Chief Executive Officer of Liberty Media, is the Chairman of Holdings' board of directors.

Sirius XM Holdings

Sirius XM is a wholly-owned subsidiary of Holdings. Holdings has no operations independent of Sirius XM. All equity-related transactions, including repurchases of Holdings' common stock, dividend payments on shares of Holdings' common stock, the issuance of equity related to stock-based compensation for Sirius XM employees, Holdings' directors and third parties and the issuance of Holdings' common stock related to the recapitalization of Sirius XM Canada have been reported as related party transactions within Sirius XM's unaudited consolidated financial statements. The stock-based compensation for Sirius XM employees, Holdings' directors and third parties has been recorded in Sirius XM's unaudited consolidated financial statements. The Related party long-term assets balance as of June 30, 2017 and December 31, 2016 of Sirius XM includes $5,830,656 and $5,176,811, respectively, for net amounts due from Holdings in connection with these equity-related transactions, as well as for the conversion of the 7% Exchangeable Senior Subordinated Notes in December 2014.

During the six months ended June 30, 2017, we used $877,462 of our cash for the purchase and retirement of shares of Holdings' common stock under Holdings' repurchase program and payment of a cash dividend on Holdings' common stock. This amount is included in our Related party long-term asset balance as a receivable due from Holdings.

Sirius XM Canada

On May 25, 2017, we completed a recapitalization of Sirius XM Canada (the "Transaction"), which is now a privately held corporation.

Following the Transaction, we hold a 70% equity interest and 33% voting interest in Sirius XM Canada, with the remainder of the voting power and equity interest held by two of Sirius XM Canada's previous shareholders. The total consideration from us to Sirius XM Canada, excluding transaction costs, during the three and six months ended June 30, 2017 was $308,526, which included $129,676 in cash and Holdings issued common stock with an aggregate value of $178,850 to the holders of the shares of Sirius XM Canada acquired in the Transaction. We received common stock, non-voting common stock and preferred stock of Sirius XM Canada. We now own a total of 590,950 shares of preferred stock of Sirius XM Canada, which has a liquidation preference of one Canadian dollar per share.

In connection with the Transaction, we also made a contribution in the form of a loan to Sirius XM Canada in the aggregate amount of $130,794 on May 25, 2017. The loan is denominated in Canadian dollars and is considered a long-term investment with any unrealized gains or losses reported within Accumulated other comprehensive (loss) income. Such loan has a term of fifteen years, bears interest at a rate of 7.62% per annum and includes customary covenants and events of default, including an event of default relating to Sirius XM Canada's failure to maintain specified leverage ratios. In addition, the terms of the loan require Sirius XM Canada to prepay a portion of the outstanding principal amount of the loan within sixty days of the end of each fiscal year in an amount equal to any cash on hand in excess of C$10,000 at the last day of the financial year if all target dividends have been paid in full.

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

In connection with the Transaction, we also entered into a Services Agreement and an Advisory Services Agreement with Sirius XM Canada. Each agreement has a thirty year term. Pursuant to the Services Agreement, Sirius XM Canada will pay us 25% of its gross revenues on a monthly basis through December 31, 2021 and 30% of its gross revenues on a monthly basis thereafter. Pursuant to the Advisory Services Agreement, Sirius XM Canada will pay us 5% of its gross revenues on a monthly basis. These agreements supersede and replace the existing agreements between Sirius XM Canada and its predecessors and us.

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

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

	June 30, 2017		December 31, 2016	
Related party current assets	$	12,085	$	6,170
Related party long-term assets	$	449,417	$	8,918
Related party current liabilities	$	2,840	$	2,840
Related party long-term liabilities	$	6,535	$	7,955

Under the legacy agreement, as of December 31, 2016, our related party current assets balance primarily consisted of activation fees and streaming and chipset costs for which we were reimbursed. As of June 30, 2017, our related party current asset balance included amounts due under the new royalty arrangement and certain amounts due prior to the recapitalization. Our related party long-term assets balance as of June 30, 2017 and December 31, 2016 included the carrying value of our investment balance in Sirius XM Canada of $313,698 and $8,615, respectively, and, as of June 30, 2017, also included $135,421 for the current value of the outstanding loan to Sirius XM Canada. Our related party liabilities as of each of June 30, 2017 and December 31, 2016 included $2,776 for the current portion of deferred revenue and $6,476 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.

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

	For the Three Months Ended June 30,				For the Six Months Ended June 30,			
	2017		2016		2017		2016	
Revenue [(a)(b)]	$	28,129	$	10,667	$	40,345	$	20,578
Other (expense) income								
Share of net (loss) earnings [(b)]	$	(5,197)	$	2,177	$	(2,183)	$	8,451
Dividends [(c)]	$	—	$	—	$	3,796	$	3,575
Interest income [(d)]	$	803	$	—	$	803	$	—

(a) Prior to the Transaction, under our legacy agreements with Sirius XM Canada, we received 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.

(b) Prior to the Transaction, we recognized our proportionate share of revenue and earnings or losses attributable to Sirius XM Canada as they occurred as Other revenue and as a component of Other (expense) income, respectively, in our unaudited consolidated statements of comprehensive income on a one month lag. As a result of the Transaction, there is no longer a one-month lag for recognizing our proportionate share of revenue and earnings or losses attributable to Sirius XM Canada.

(c) Sirius XM Canada paid dividends to us on a gross basis of $3,973 during the three months ended June 30, 2016, and $3,796 and $7,548 during the six months ended June 30, 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 (expense) income for the remaining portion. Sirius XM Canada did not pay any dividends to us during the three months ended June 30, 2017.

(d) This interest income relates to the loan to Sirius XM Canada and is recorded as Other (expense) income in our unaudited consolidated statements of comprehensive income.

(10) Long-term Investment

On June 9, 2017, we entered into an agreement to purchase a 19% interest, or approximately 16% on an as converted basis, in Pandora for $480,000. Pandora operates an internet-based music discovery platform, offering a personalized experience for listeners.

The Investment Agreement with Pandora relates to the issuance and sale of 480 shares of Pandora's Series A Convertible Preferred Stock, par value $0.0001 per share (the "Series A Preferred Stock"), for an aggregate purchase price of $480,000, or one thousand dollars per share. In accordance with the Investment Agreement, we purchased 172.5 shares of Series A Preferred Stock on June 9, 2017 for $172,500 (the "Initial Closing"), and will purchase the remaining 307.5 shares for $307,500 at a future date (the "Additional Closing"), subject to satisfaction of certain customary closing conditions, including, among others, obtaining clearance under the Hart-Scott-Rodino Act.

Beginning on the date of the Additional Closing (or if the Investment Agreement is terminated prior to the Additional Closing, the date of such termination), the Series A Preferred Stock is convertible at the option of the holders at any time into shares of common stock of Pandora ("Pandora Common Stock") at an initial conversion price of $10.50 per share of Pandora Common Stock and an initial conversion rate of 95.2381 shares of Pandora Common Stock per share of Series A Preferred Stock, subject to certain customary anti-dilution adjustments. Holders of the Series A Preferred Stock are entitled to a cumulative dividend at the rate of 6.0% per annum, payable quarterly in arrears, if and when declared. During the three and six months ended June 30, 2017, we recognized $604 related to the dividend which was recorded to Other (expense) income in our unaudited consolidated statements of comprehensive income and Long-term investment within our unaudited consolidated balance sheets. Any conversion of Series A Preferred Stock may be settled by Pandora, at its option, in shares of Pandora Common Stock, cash or any combination thereof. However, unless and until Pandora's stockholders have approved the issuance of greater than 19.99% of the outstanding Pandora Common Stock, the Series A Preferred Stock may not be converted into more than 19.99% of Pandora's outstanding Pandora Common Stock as of the Initial Closing.

The investment includes a mandatory redemption feature on any date after the fifth anniversary of the Additional Closing (or, if the Additional Closing does not occur, the fifth anniversary of the Initial Closing) at 100% of the liquidation preference plus accrued and unpaid dividends and therefore the investment qualifies as a debt security under ASC 320. As the investment will include a conversion option upon the Additional Closing, we have elected to account for this investment under the fair value option to reduce the accounting asymmetry that would otherwise arise when recognizing the changes in the fair value of available-for-sale investments. Under the fair value option, any gains (losses) associated with the change in fair value will be recognized in Other (expense) income within our unaudited consolidated statements of comprehensive income. There was no gain or loss recognized during the three or six months ended June 30, 2017 associated with this investment.

Pursuant to the Investment Agreement, upon the Additional Closing, Pandora has agreed to appoint three individuals, including the Chairman, to be designated by us to Pandora's board of directors. Once this occurs, we will reclassify the investment to related parties.

Our right to designate directors will fall away once we and our affiliates fail to beneficially own shares of Series A Preferred Stock and/or Pandora Common Stock issued upon conversion thereof equal to (on an as-converted basis) at least 50% of the number of shares of Pandora Common Stock issuable upon conversion of the Series A Preferred Stock purchased under the Investment Agreement. Following the earlier to occur of (i) the second anniversary of the Additional Closing and (ii) the date on which we and our affiliates fail to beneficially own shares of Series A Preferred Stock and/or Pandora Common Stock that were issued upon conversion of Series A Preferred Stock equal to (on an as-converted basis) at least 75% of the number of shares of Pandora Common Stock issuable upon conversion of the Series A Preferred Stock purchased under the Investment Agreement, we have the right to designate only two directors.

We are subject to certain standstill restrictions, including, among other things, that we are restricted from acquiring additional securities of Pandora for eighteen months after the Initial Closing.

The Investment Agreement may be terminated by either party if the Additional Closing has not occurred by February 1, 2018, subject to extension in certain circumstances. However, if all applicable closing conditions have been satisfied as of such date other than with respect to the expiration or early termination of the applicable waiting period under the HSR Act, such termination date will be extended for an additional 60 days.

Beginning on the date of the Additional Closing, we are entitled to vote as a single class with the holders of Pandora Common Stock on an as-converted basis (up to a maximum of 19.99% of the Pandora Common Stock outstanding on the date of the Initial Closing, unless stockholder approval has been received). Effective as of the date of the Initial Closing, we are also entitled to a separate class vote with respect to certain amendments to Pandora's organizational documents, issuances by Pandora of securities that are senior to, or equal in priority with, the Series A Preferred Stock and the incurrence of certain indebtedness by Pandora.

Upon certain change of control events involving Pandora, Pandora is required to repurchase all of the Series A Preferred Stock at a price equal to the greater of (1) an amount in cash equal to 100% of the liquidation preference thereof plus all accrued but unpaid dividends through the fifth anniversary of the Initial Closing (assuming such shares of Series A Preferred Stock remain outstanding through such date) and (2) the consideration the holders would have received if they had converted their shares of Series A Preferred Stock into Pandora Common Stock immediately prior to the change of control event (disregarding the 19.99% cap).

Beginning (i) after the third anniversary of the date of the Additional Closing (or, if the Additional Closing does not occur, the third anniversary of the Initial Closing) or (ii) after the Investment Agreement is terminated prior to the Additional Closing, if the volume weighted average price per share of Pandora Common Stock exceeds $18.375, as may be adjusted, for at least 20 trading days in any period of 30 consecutive trading days, Pandora may redeem all of the outstanding Series A Preferred Stock at 100% of the liquidation preference thereof plus all accrued but unpaid dividends for, at the election of Pandora, cash, shares of Pandora Common Stock or a combination thereof, provided that Pandora may not settle the redemption for shares of Pandora Common Stock to the extent the 19.99% cap would be exceeded.

Pursuant to a registration rights agreement entered into with Pandora, we have certain customary registration rights with respect to the Series A Preferred Stock and Pandora Common Stock issued upon conversion thereof.

SIRIUS XM RADIO INC. AND SUBSIDIARIES
(a wholly-owned subsidiary of Sirius XM Holdings Inc.)
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
(UNAUDITED)
(Dollars and shares in thousands, except per share amounts)

(11) Debt

Our debt as of June 30, 2017 and December 31, 2016 consisted of the following:

Issuer / Borrower	Issued	Debt	Maturity Date	Interest Payable	Principal Amount at June 30, 2017	Carrying value[a] at June 30, 2017	Carrying value[a] at December 31, 2016
Sirius XM (b)(e)(f)	May 2013	4.25% Senior Notes (the "4.25% Notes")	May 15, 2020	semi-annually on May 15 and November15	$ 500,000	$ 497,476	$ 497,069
Sirius XM (b)(f)	August 2013	5.75% Senior Notes (the "5.75% Notes")	August 1, 2021	semi-annually on February 1 and August 1	600,000	596,735	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	496,375	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	1,487,268	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	990,806	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	989,693	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	396,522	396,232
Sirius XM (d)(f)	December 2012	Senior Secured Revolving Credit Facility (the "Credit Facility")	June 16, 2020	variable fee paid quarterly	1,750,000	1,000,000	390,000
Sirius XM	Various	Capital leases	Various	n/a	n/a	10,832	13,559
Total Debt						6,465,707	5,855,512
Less: total current maturities						5,160	5,485
Less: total deferred financing costs for Notes						6,790	7,263
Total long-term debt						$ 6,453,757	$ 5,842,764

(a) The carrying value of the obligations is net of any remaining unamortized original issue discount.
(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) Our obligations under the Credit Facility are guaranteed by certain of our material domestic subsidiaries and are secured by a lien on substantially all of our assets and the assets of our material domestic subsidiaries. Interest on borrowings is payable on a monthly basis and accrues at a rate based on LIBOR plus an applicable rate. We are also required to pay a variable fee on the average daily unused portion of the Credit Facility which is payable on a quarterly basis. The variable rate for the unused portion of the Credit Facility was 0.25% per annum as of June 30, 2017. Our outstanding borrowings under the Credit Facility are classified as Long-term debt within our unaudited consolidated balance sheets due to the long-term maturity of this debt.
(e) On June 27, 2017, we issued a redemption notice pursuant to the indenture governing the 4.25% Notes to redeem all of its 4.25% Notes.
(f) For a discussion of subsequent events related to this debt refer to Note 16.

Covenants and Restrictions

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

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

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

At June 30, 2017 and December 31, 2016, we were in compliance with our debt covenants.

(12) Stockholder Equity

Common Stock, par value $0.001 per share

We are authorized to issue up to 9,000,000 shares of common stock. As of June 30, 2017 and December 31, 2016, there were one thousand shares of common stock of Sirius XM issued and outstanding, which was owned by Holdings.

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 June 30, 2017 and December 31, 2016.

(13) Benefit Plans

We recognized share-based payment expense of $30,251 and $24,177 for the three months ended June 30, 2017 and 2016, respectively, and $59,697 and $47,870 for the six months ended June 30, 2017 and 2016, respectively.

2015 Long-Term Stock Incentive Plan

In May 2015, Holdings' stockholders approved the Sirius XM Holdings Inc. 2015 Long-Term Stock Incentive Plan (the “2015 Plan”). Employees, consultants and members of Holdings' 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 Holdings' 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 expire ten 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. PRSU awards are subject to the achievement of performance goals and generally 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 June 30, 2017, 182,345 shares of common stock were available for future grants under the 2015 Plan.

Other Plans

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

SIRIUS XM RADIO INC. AND SUBSIDIARIES
(a wholly-owned subsidiary of Sirius XM Holdings Inc.)
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
(UNAUDITED)
(Dollars and shares in thousands, except per share amounts)

The following table summarizes the weighted-average assumptions used to compute the fair value of options granted to employees and members of Holdings' board of directors:

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
	2017	2016	2017	2016
Risk-free interest rate	1.6%	1.2%	1.6%	1.2%
Expected life of options — years	4.35	3.79	4.07	3.78
Expected stock price volatility	26%	24%	26%	24%
Expected dividend yield	0.8%	0.0%	0.8%	0.0%

There were no options granted to third parties during the three and six months ended June 30, 2017 and 2016. Since we did not historically pay dividends on Holdings' common stock prior to the fourth quarter of 2016, the expected dividend yield used in the Black-Scholes option pricing model was zero for the three and six months ended June 30, 2016.

The following table summarizes stock option activity under our share-based plans for the six months ended June 30, 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	3,047	$ 4.91		
Exercised	(21,616)	$ 2.78		
Forfeited, cancelled or expired	(2,657)	$ 3.76		
Outstanding as of June 30, 2017	311,422	$ 3.56	6.94	$ 593,984
Exercisable as of June 30, 2017	21,616	$ 2.91	5.73	$ 291,021

The weighted average grant date fair value per share of options granted during the six months ended June 30, 2017 was $1.04. The total intrinsic value of stock options exercised during the six months ended June 30, 2017 and 2016 was $47,572 and $12,942, respectively.

We recognized share-based payment expense associated with stock options of $20,125 and $18,987 for the three months ended June 30, 2017 and 2016, respectively, and $39,637 and $38,026 for the six months ended June 30, 2017 and 2016, respectively.

The following table summarizes the restricted stock unit, including PRSUs, activity under our share-based plans for the six months ended June 30, 2017:

	Shares	Grant Date Fair Value Per Share
Nonvested as of December 31, 2016	29,893	$ 4.03
Granted	1,660	$ 4.52
Vested	(978)	$ 3.83
Forfeited	(490)	$ 4.09
Nonvested as of June 30, 2017	30,085	$ 4.07

The total intrinsic value of restricted stock units vesting during the six months ended June 30, 2017 and 2016 was $4,802 and $765, respectively. During the six months ended June 30, 2017, we granted 603 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 dividends paid during the six months ended June 30, 2017, we granted 108 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 six months ended June 30, 2017.

We recognized share-based payment expense associated with restricted stock units, including PRSUs, of $10,126 and $5,190 for the three months ended June 30, 2017 and 2016, respectively, and $20,060 and $9,844 for the six months ended June 30, 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 Holdings' board of directors and third parties at June 30, 2017 and December 31, 2016 were $231,049 and $266,045, respectively. The total unrecognized compensation costs at June 30, 2017 are expected to be recognized over a weighted-average period of 2.2 years.

401(k) Savings Plan

We sponsor the Sirius XM Radio Inc. 401(k) Savings Plan (the “Sirius XM Plan”) for eligible employees. The Sirius XM Plan allows eligible employees to voluntarily contribute from 1% to 50% of their pre-tax eligible earnings, subject to certain defined limits. We match 50% of an employee’s voluntary contributions per pay period on the first 6% of an employee’s pre-tax salary up to a maximum of 3% of eligible compensation. We may also make additional discretionary matching, true-up matching and non-elective contributions to the Sirius XM Plan. Employer matching contributions under the Sirius XM Plan vest at a rate of 33.33% for each year of employment and are fully vested after three years of employment for all current and future contributions. Our cash employer matching contributions are not used to purchase shares of Holdings' common stock on the open market, unless the employee elects Holdings' common stock as their investment option for this contribution. We recognized $1,835 and $1,526 in expense during three months ended June 30, 2017 and 2016, respectively, and $3,517 and $3,217 in expense during six months ended June 30, 2017 and 2016, respectively, in connection with the Sirius XM Plan.

Sirius XM Holdings Inc. Deferred Compensation Plan

In 2015, Holdings' adopted the Sirius XM Holdings Inc. Deferred Compensation Plan (the “DCP”). The DCP allows members of Holdings' board of directors and certain eligible employees to defer all or a portion of their base salary, cash incentive compensation and/or board of directors’ cash compensation, as applicable. Pursuant to the terms of the DCP, Holdings or any of its subsidiaries may elect to make additional contributions beyond amounts deferred by participants, but is under no obligation to do so. Holdings has established a grantor (or “rabbi”) trust to facilitate the payment of its obligations under the DCP.

Contributions to the DCP, net of withdrawals, for the three months ended June 30, 2017 and 2016, were $334 and $156, respectively, and for the six months ended June 30, 2017 and 2016, were $7,355 and $3,954, respectively. As of June 30, 2017, the fair value of the investments held in the trust was $13,111, 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 (expense) income within our unaudited consolidated statements of comprehensive income. The associated liability is recorded within Other long-term liabilities in our unaudited consolidated balance sheets, and any increase or decrease in the liability is recorded in General and administration expense within our unaudited consolidated statements of comprehensive income. For the three and six months ended June 30, 2017 and 2016, we recorded an immaterial amount of unrealized gains on investments held in the trust.

SIRIUS XM RADIO INC. AND SUBSIDIARIES
(a wholly-owned subsidiary of Sirius XM Holdings Inc.)
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - Continued
(UNAUDITED)
(Dollars and shares in thousands, except per share amounts)

(14) Commitments and Contingencies

The following table summarizes our expected contractual cash commitments as of June 30, 2017:

	2017	2018	2019	2020	2021	Thereafter	Total
Debt obligations	$ 2,759	$ 4,477	$ 3,169	$1,500,427	$ 600,000	$ 4,400,000	$ 6,510,832
Cash interest payments	164,721	328,828	328,734	302,898	276,125	782,563	2,183,869
Satellite and transmission	55,576	67,922	51,760	25,749	19,296	6,667	226,970
Programming and content	163,057	314,120	290,215	244,738	165,939	206,100	1,384,169
Marketing and distribution	11,475	16,367	13,637	7,870	7,043	274	56,666
Satellite incentive payments	6,179	14,302	10,652	9,310	8,448	71,337	120,228
Operating lease obligations	18,726	43,037	39,409	37,154	31,317	153,103	322,746
Other	41,373	22,815	14,961	1,861	527	30	81,567
Total [1]	$ 463,866	$ 811,868	$ 752,537	$2,130,007	$ 1,108,695	$ 5,620,074	$10,887,047

(1) The table does not include our reserve for uncertain tax positions, which at June 30, 2017 totaled $6,570, 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 the five 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 Holdings' stock acquired in Holdings' capital return program but not paid for as of June 30, 2017 was 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 those discussed below.

We record a liability when we believe that it is both probable that a liability will be incurred, and the amount of loss can be reasonably estimated. We evaluate developments in legal matters that could affect the amount of liability that has been previously accrued and make adjustments as appropriate. Significant judgment is required to determine both probability and the estimated amount of a loss or potential loss. We may be unable to 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 June 30, 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.

(15) Income Taxes

For the three months ended June 30, 2017 and 2016, income tax expense was $119,513 and $106,310, respectively, and $233,486 and $214,552 for the six months ended June 30, 2017 and 2016, respectively.

Our effective tax rate for the three months ended June 30, 2017 and 2016 was 37.2% and 37.8%, respectively. Our effective tax rate for the six months ended June 30, 2017 and 2016 was 36.3% and 38.2%, respectively. The rate for the three and six months ended June 30, 2017 and 2016 was impacted by the recognition of excess tax benefits or shortfalls related to share based compensation. We estimate our annual effective tax rate for the year ending December 31, 2017 will be 37.4%.

As of June 30, 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.

(16) Subsequent Events

Debt Transactions

On June 27, 2017, we issued a redemption notice pursuant to the indenture governing the 4.25% Notes to redeem all of our 4.25% Notes. The 4.25% Notes were redeemed on July 27, 2017 at 101.063% of the principal amount thereof plus accrued and unpaid interest thereon from May 15 through July 26, 2017 for a total amount of $509,565. This redemption will result in a Loss on extinguishment of debt and credit facilities, net of approximately $8,393 in the third quarter of 2017.

On July 5, 2017, we issued a redemption notice pursuant to the indenture governing the 5.75% Notes to redeem all of our 5.75% Notes. The 5.75% Notes will be redeemed on August 4, 2017 at 102.875% of the principal amount thereof plus accrued and unpaid interest thereon from August 1 through August 3, 2017 for a total amount of $617,538. This redemption will result in a Loss on extinguishment of debt and credit facilities, net, of approximately $20,963 in the third quarter of 2017.

On July 5, 2017, we issued $750,000 aggregate principal amount of 3.875% Senior Notes due 2022 (the “3.875% Notes”) and $1,250,000 aggregate principal amount of 5.00% Senior Notes due 2027 (the “5.00% Notes”). For both series of notes, interest is payable semi-annually in arrears on February 1 and August 1, commencing on February 1, 2018. The 3.875% Notes will mature on August 1, 2022 and the 5.00% Notes will mature on August 1, 2027.

Holdings' Capital Return Program

For the period from July 1, 2017 to July 25, 2017, we repurchased $72,135 of Holdings' common stock on the open market, including fees and commissions.

On July 11, 2017, Holdings' board of directors declared a quarterly dividend on Holdings' common stock in the amount of $0.01 per share of common stock payable on August 31, 2017 to Holdings' stockholders of record as of the close of business on August 10, 2017.

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

All amounts referenced in this discussion and analysis 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 and with Holdings' Annual Report on Form 10-K for the year ended December 31, 2016.

Special Note Regarding Forward-Looking Statements

The following cautionary statements identify important factors that could cause our actual results to differ materially from those projected in forward-looking statements made in this Quarterly Report and in other reports and documents published by us from time to time. Any statements about our beliefs, plans, objectives, expectations, assumptions, future events or performance are not historical facts and may be forward-looking. These statements are often, but not always, made through the use of words or phrases such as “will likely result,” “are expected to,” “will continue,” “is anticipated,” “estimated,” “intend,” “plan,” “projection” and “outlook.” Any forward-looking statements are qualified in their entirety by reference to the factors discussed throughout this Quarterly Report and in other reports and documents published by us from time to time, particularly the risk factors described under “Risk Factors” in Part I, Item 1A, of Holdings' 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 Holdings' 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;

- Holdings' principal stockholder has significant influence, including over actions requiring Holdings' stockholder approval, and its interests may differ from the interests of other holders of Holdings' 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; and
- our business may be impaired by third-party intellectual property rights.

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 June 30, 2017, we had approximately 32.0 million subscribers of which approximately 26.7 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 June 30, 2017, Liberty Media beneficially owned, directly and indirectly, approximately 68% of the outstanding shares of Holdings' common stock. As a result, Holdings is a "controlled company" for the purposes of the NASDAQ corporate governance requirements. Liberty Media owns interests in a range of media, communications and entertainment businesses.

Recent Transactions

During the three months ended June 30, 2017, we entered into several strategic transactions.

Acquisition of Automatic Labs. On April 18, 2017, we acquired Automatic Labs Inc. ("Automatic"), a connected vehicle device and mobile application company, for an aggregate purchase price of $107,488, net of cash and restricted cash acquired. Automatic is included in connected vehicle services.

Recapitalization of Sirius XM Canada. On May 25, 2017, we completed a recapitalization (the "Transaction") of Sirius XM Canada Holdings Inc. ("Sirius XM Canada"), which is now a privately held corporation.

Following the Transaction, we hold a 70% equity interest and 33% voting interest in Sirius XM Canada, with the remainder of the voting power and equity interest held by two of Sirius XM Canada's previous shareholders. The total consideration from us to Sirius XM Canada, excluding transaction costs, during the three and six months ended June 30, 2017 was $308,526, which included $129,676 in cash and Holdings issued common stock with an aggregate value of $178,850 to the holders of the shares of Sirius XM Canada acquired in the Transaction. We received common stock, non-voting common stock and preferred stock of Sirius XM Canada. We now own a total of 590,950 shares of preferred stock of Sirius XM Canada, which has a liquidation preference of one Canadian dollar per share. Future dividends on the common stock of Sirius XM Canada are expected to be declared on a 6.0% annual basis.

In connection with the Transaction, we also made a contribution in the form of a loan to Sirius XM Canada in the aggregate amount of $130,794 on May 25, 2017. The loan is denominated in Canadian dollars and is considered a long-term investment with any unrealized gains or losses reported within Accumulated other comprehensive (loss) income. Such loan has a term of fifteen years, bears interest at a rate of 7.62% per annum and includes customary covenants and events of default, including an event of default relating to Sirius XM Canada's failure to maintain specified leverage ratios. In addition, the terms of the loan require Sirius XM Canada to prepay a portion of the outstanding principal amount of the loan within sixty days of the end of each fiscal year in an amount equal to any cash on hand in excess of C$10,000 at the last day of the financial year if all target dividends have been paid in full.

In connection with the Transaction, we also entered into a Services Agreement and an Advisory Services Agreement with Sirius XM Canada. Each agreement has a thirty year term. Pursuant to the Services Agreement, Sirius XM Canada will pay us 25% of its gross revenues on a monthly basis through December 31, 2021 and 30% of its gross revenues on a monthly basis thereafter. Pursuant to the Advisory Services Agreement, Sirius XM Canada will pay us 5% of its gross revenues on a monthly basis. These agreements supersede and replace the existing agreements between Sirius XM Canada and its predecessors and us.

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

Investment in Pandora Media, Inc. On June 9, 2017, we entered into an agreement to purchase a 19% interest, or approximately 16% on an as converted basis, in Pandora Media, Inc. ("Pandora") for $480,000. Pandora operates an internet-based music discovery platform, offering a personalized experience for listeners.

The Investment Agreement with Pandora relates to the issuance and sale of 480 shares of Pandora's Series A Convertible Preferred Stock, par value $0.0001 per share (the "Series A Preferred Stock"), for an aggregate purchase price of $480,000, or one thousand dollars per share. In accordance with the Investment Agreement, we purchased 172.5 shares of Series A Preferred Stock on June 9, 2017 for $172,500 (the "Initial Closing"), and will purchase the remaining 307.5 shares for $307,500 at a future date (the "Additional Closing"), subject to satisfaction of certain customary closing conditions, including, among others, obtaining clearance under the Hart-Scott-Rodino Act.

Beginning on the date of the Additional Closing (or if the Investment Agreement is terminated prior to the Additional Closing, the date of such termination), the Series A Preferred Stock is convertible at the option of the holders at any time into shares of common stock of Pandora ("Pandora Common Stock") at an initial conversion price of $10.50 per share of Pandora Common Stock and an initial conversion rate of 95.2381 shares of Pandora Common Stock per share of Series A Preferred Stock, subject to certain customary anti-dilution adjustments. Holders of the Series A Preferred Stock are entitled to a cumulative dividend at the rate of 6.0% per annum, payable quarterly in arrears, if and when declared. During the three and six months ended June 30, 2017, we recognized $604 related to the dividend which was recorded to Other (expense) income in our unaudited consolidated statements of comprehensive income and Long-term investment within our unaudited consolidated balance sheets. Any conversion of Series A Preferred Stock may be settled by Pandora, at its option, in shares of Pandora Common Stock, cash or any combination thereof. However, unless and until Pandora's stockholders have approved the issuance of greater than 19.99% of the outstanding Pandora Common Stock, the Series A Preferred Stock may not be converted into more than 19.99% of Pandora's outstanding Pandora Common Stock as of the Initial Closing.

The investment includes a mandatory redemption feature on any date after the fifth anniversary of the Additional Closing (or, if the Additional Closing does not occur, the fifth anniversary of the Initial Closing) at 100% of the liquidation preference plus accrued and unpaid dividends and therefore the investment qualifies as a debt security under ASC 320. As the investment will include a conversion option upon the Additional Closing, we have elected to account for this investment under the fair value option to reduce the accounting asymmetry that would otherwise arise when recognizing the changes in the fair value of available-for-sale investments. Under the fair value option, any gains (losses) associated with the change in fair value will be recognized in Other (expense) income within our unaudited consolidated statements of comprehensive income. There was no gain or loss recognized during the three or six months ended June 30, 2017 associated with this investment.

Pursuant to the Investment Agreement, upon the Additional Closing, Pandora has agreed to appoint three individuals, including the Chairman, to be designated by us to Pandora's board of directors. Once this occurs, we will reclassify the investment to related parties.

Our right to designate directors will fall away once we and our affiliates fail to beneficially own shares of Series A Preferred Stock and/or Pandora Common Stock issued upon conversion thereof equal to (on an as-converted basis) at least 50% of the number of shares of Pandora Common Stock issuable upon conversion of the Series A Preferred Stock purchased under the Investment Agreement. Following the earlier to occur of (i) the second anniversary of the Additional Closing and (ii) the date on which we and our affiliates fail to beneficially own shares of Series A Preferred Stock and/or Pandora Common Stock that were issued upon conversion of Series A Preferred Stock equal to (on an as-converted basis) at least 75% of the number of shares of Pandora Common Stock issuable upon conversion of the Series A Preferred Stock purchased under the Investment Agreement, we have the right to designate only two directors.

We are subject to certain standstill restrictions, including, among other things, that we are restricted from acquiring additional securities of Pandora for eighteen months after the Initial Closing.

The Investment Agreement may be terminated by either party if the Additional Closing has not occurred by February 1, 2018, subject to extension in certain circumstances. However, if all applicable closing conditions have been satisfied as of such date other than with respect to the expiration or early termination of the applicable waiting period under the HSR Act, such termination date will be extended for an additional 60 days.

Beginning on the date of the Additional Closing, we are entitled to vote as a single class with the holders of Pandora Common Stock on an as-converted basis (up to a maximum of 19.99% of the Pandora Common Stock outstanding on the date of the Initial Closing, unless stockholder approval has been received). Effective as of the date of the Initial Closing, we are also entitled to a separate class vote with respect to certain amendments to Pandora's organizational documents, issuances by Pandora of securities that are senior to, or equal in priority with, the Series A Preferred Stock and the incurrence of certain indebtedness by Pandora.

Upon certain change of control events involving Pandora, Pandora is required to repurchase all of the Series A Preferred Stock at a price equal to the greater of (1) an amount in cash equal to 100% of the liquidation preference thereof plus all accrued but unpaid dividends through the fifth anniversary of the Initial Closing (assuming such shares of Series A Preferred Stock remain outstanding through such date) and (2) the consideration the holders would have received if they had converted their shares of Series A Preferred Stock into Pandora Common Stock immediately prior to the change of control event (disregarding the 19.99% cap).

Beginning (i) after the third anniversary of the date of the Additional Closing (or, if the Additional Closing does not occur, the third anniversary of the Initial Closing) or (ii) after the Investment Agreement is terminated prior to the Additional Closing, if the volume weighted average price per share of Pandora Common Stock exceeds $18.375, as may be adjusted, for at least 20 trading days in any period of 30 consecutive trading days, Pandora may redeem all of the outstanding Series A Preferred Stock at 100% of the liquidation preference thereof plus all accrued but unpaid dividends for, at the election of Pandora, cash, shares of Pandora Common Stock or a combination thereof, provided that Pandora may not settle the redemption for shares of Pandora Common Stock to the extent the 19.99% cap would be exceeded.

Pursuant to a registration rights agreement entered into with Pandora, we have certain customary registration rights with respect to the Series A Preferred Stock and Pandora Common Stock issued upon conversion thereof.

Results of Operations

Set forth below are our results of operations for the three and six months ended June 30, 2017 compared with the three and six months ended June 30, 2016.

	For the Three Months Ended June 30,		For the Six Months Ended June 30,		2017 vs 2016 Change			
					Three Months		Six Months	
	2017	2016	2017	2016	Amount	%	Amount	%
Revenue:								
Subscriber revenue	$1,111,011	$1,033,284	$2,189,268	$2,042,966	$ 77,727	8 %	$ 146,302	7 %
Advertising revenue	40,178	33,521	76,194	65,062	6,657	20 %	11,132	17 %
Equipment revenue	29,674	27,858	59,332	54,979	1,816	7 %	4,353	8 %
Other revenue	166,706	140,903	316,841	273,569	25,803	18 %	43,272	16 %
Total revenue	1,347,569	1,235,566	2,641,635	2,436,576	112,003	9 %	205,059	8 %
Operating expenses:								
Cost of services:								
Revenue share and royalties	292,893	264,385	570,193	516,129	28,508	11 %	54,064	10 %
Programming and content	96,255	83,645	191,799	168,745	12,610	15 %	23,054	14 %
Customer service and billing	95,324	93,712	192,099	190,579	1,612	2 %	1,520	1 %
Satellite and transmission	19,603	34,847	40,179	58,385	(15,244)	(44)%	(18,206)	(31)%
Cost of equipment	9,371	9,728	16,283	19,507	(357)	(4)%	(3,224)	(17)%
Subscriber acquisition costs	125,154	128,956	252,642	261,405	(3,802)	(3)%	(8,763)	(3)%
Sales and marketing	106,707	91,358	203,616	180,084	15,349	17 %	23,532	13 %
Engineering, design and development	27,783	18,893	51,600	38,334	8,890	47 %	13,266	35 %
General and administrative	84,607	81,178	162,808	158,683	3,429	4 %	4,125	3 %
Depreciation and amortization	73,519	66,708	150,223	134,335	6,811	10 %	15,888	12 %
Total operating expenses	931,216	873,410	1,831,442	1,726,186	57,806	7 %	105,256	6 %
Income from operations	416,353	362,156	810,193	710,390	54,197	15 %	99,803	14 %
Other income (expense):								
Interest expense	(82,794)	(83,396)	(164,451)	(161,796)	602	1 %	(2,655)	(2)%
Other (expense) income	(11,937)	2,515	(3,074)	13,363	(14,452)	(575)%	(16,437)	(123)%
Total other expense	(94,731)	(80,881)	(167,525)	(148,433)	(13,850)	(17)%	(19,092)	(13)%
Income before income taxes	321,622	281,275	642,668	561,957	40,347	14 %	80,711	14 %
Income tax expense	(119,513)	(106,310)	(233,486)	(214,552)	(13,203)	(12)%	(18,934)	(9)%
Net income attributable to Sirius XM Radio Inc.'s sole stockholder	$ 202,109	$ 174,965	$ 409,182	$ 347,405	$ 27,144	16 %	$ 61,777	18 %

Total Revenue

Subscriber Revenue includes subscription, activation and other fees.

For the three months ended June 30, 2017 and 2016, subscriber revenue was $1,111,011 and $1,033,284, respectively, an increase of 8%, or $77,727. For the six months ended June 30, 2017 and 2016, subscriber revenue was $2,189,268 and $2,042,966, respectively, an increase of 7%, or $146,302. The increases were primarily attributable to a 5% increase in the daily weighted average number of subscribers as well as a 3% 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 June 30, 2017 and 2016, advertising revenue was $40,178 and $33,521, respectively, an increase of 20%, or $6,657. For the six months ended June 30, 2017 and 2016, advertising revenue was $76,194 and $65,062, respectively, an increase of 17%, or $11,132. The increases were 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 June 30, 2017 and 2016, equipment revenue was $29,674 and $27,858, respectively, an increase of 7%, or $1,816. For the six months ended June 30, 2017 and 2016, equipment revenue was $59,332 and $54,979, respectively, an increase of 8%, or $4,353. The increases were driven by an increase in royalty revenue on certain modules starting in the second quarter of 2016 due to our transition to a new generation of chipsets and revenue from the sales of devices since the acquisition of Automatic, partially offset by lower sales to distributors and consumers.

We expect equipment revenue to increase due to the increases in royalty revenues associated with certain modules related to our transition to a new generation of chipsets.

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

For the three months ended June 30, 2017 and 2016, other revenue was $166,706 and $140,903, respectively, an increase of 18%, or $25,803. For the six months ended June 30, 2017 and 2016, other revenue was $316,841 and $273,569, respectively, an increase of 16%, or $43,272. The increases were primarily driven by the timing of higher royalties from the new Sirius XM Canada service and advisory agreements, a one-time activation revenue resolution with Sirius XM Canada, 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, for the six month period, 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 new service and advisory 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 June 30, 2017 and 2016, revenue share and royalties were $292,893 and $264,385, respectively, an increase of 11%, or $28,508, and increased as a percentage of total revenue. For the six months ended June 30, 2017 and 2016, revenue share and royalties were $570,193 and $516,129, respectively, an increase of 10%, or $54,064, and increased as a percentage of total revenue. The increases were 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 possibly 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 June 30, 2017 and 2016, programming and content expenses were $96,255 and $83,645, respectively, an increase of 15%, or $12,610, and increased as a percentage of total revenue. For the six months ended June 30, 2017 and 2016, programming and content expenses were $191,799 and $168,745, respectively, an increase of 14%, or $23,054, and increased as a percentage of total revenue. The increases were primarily due to the addition of video content rights 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 June 30, 2017 and 2016, customer service and billing expenses were $95,324 and $93,712, respectively, an increase of 2%, or $1,612, and decreased as a percentage of total revenue. For the six months ended June 30, 2017 and 2016, customer service and billing expenses were $192,099 and $190,579, respectively, an increase of 1%, or $1,520, and decreased as a percentage of total revenue. The increases were primarily due to increased transaction fees from a higher subscriber base and higher bad debt expense, partially offset by lower call center costs due to lower agent rates and lower contact rates.

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 June 30, 2017 and 2016, satellite and transmission expenses were $19,603 and $34,847, respectively, a decrease of 44%, or $15,244, and decreased as a percentage of total revenue. For the six months ended June 30, 2017 and 2016, satellite and transmission expenses were $40,179 and $58,385, respectively, a decrease of 31%, or $18,206, and decreased as a percentage of total revenue. The decreases were primarily due to the loss on disposal of certain obsolete satellite parts of $12,912, recorded in the three months ended June 30, 2016 as well as lower wireless costs associated with our connected vehicle services, and lower terrestrial repeater costs driven by the elimination of duplicative repeater sites.

We expect satellite and transmission expenses to increase as costs associated with our investment in Internet streaming services increase.

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

For the three months ended June 30, 2017 and 2016, cost of equipment was $9,371 and $9,728, respectively, a decrease of 4%, or $357, and decreased as a percentage of equipment revenue. For the six months ended June 30, 2017 and 2016, cost of equipment was $16,283 and $19,507, respectively, a decrease of 17%, or $3,224, and decreased as a percentage of equipment revenue. The decreases were primarily due to lower sales to distributors and consumers, partially offset by costs associated with the sales of devices since the acquisition of Automatic.

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 June 30, 2017 and 2016, subscriber acquisition costs were $125,154 and $128,956, respectively, a decrease of 3%, or $3,802, and decreased as a percentage of total revenue. For the six months ended June 30, 2017 and 2016, subscriber acquisition costs were $252,642 and $261,405, respectively, a decrease of 3%, or $8,763, and decreased as a percentage of total revenue. The decrease for the three month period was driven by reductions to OEM hardware subsidy rates, lower subsidized costs related to the transition of chipsets, and a decrease in installations. The decrease for the six month period was driven by reductions to OEM hardware subsidy rates and lower subsidized costs related to the transition of chipsets; partially offset by an increase in 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 June 30, 2017 and 2016, sales and marketing expenses were $106,707 and $91,358, respectively, an increase of 17%, or $15,349, and increased as a percentage of total revenue. For the six months ended June 30, 2017 and 2016, sales and marketing expenses were $203,616 and $180,084, respectively, an increase of 13%, or $23,532, and increased as a percentage of total revenue. The increases were primarily due to additional subscriber communications, retention programs and acquisition campaigns partially offset by the timing of OEM marketing 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 June 30, 2017 and 2016, engineering, design and development expenses were $27,783 and $18,893, respectively, an increase of 47%, or $8,890, and increased as a percentage of total revenue. For the six months ended June 30, 2017 and 2016, engineering, design and development expenses were $51,600 and $38,334, respectively, an increase of 35%, or $13,266, and increased as a percentage of total revenue. The increases were driven primarily by additional costs associated with the development of our audio and video streaming products, increased personnel-related costs and costs from the acquisition of Automatic.

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 June 30, 2017 and 2016, general and administrative expenses were $84,607 and $81,178, respectively, an increase of 4%, or $3,429, and decreased as a percentage of total revenue. For the six months ended June 30, 2017 and 2016, general and administrative expenses were $162,808 and $158,683, respectively, an increase of 3%, or $4,125, and decreased as a percentage of total revenue. The increases were primarily driven by higher personnel-related 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 June 30, 2017 and 2016, depreciation and amortization expense was $73,519 and $66,708, respectively, an increase of 10%, or $6,811, and increased as a percentage of total revenue. For the six months ended June 30, 2017 and 2016, depreciation and amortization expense was $150,223 and $134,335, respectively, an increase of 12%, or $15,888, and increased as a percentage of total revenue. The increases were driven by acceleration of amortization related to a shorter useful life of certain software as well as additional assets placed in-service.

Other Income (Expense)

Interest Expense includes interest on outstanding debt.

For the three months ended June 30, 2017 and 2016, interest expense was $82,794 and $83,396, respectively, a decrease of 1%, or $602. For the six months ended June 30, 2017 and 2016, interest expense was $164,451 and $161,796, respectively, an increase of 2%, or $2,655. The decrease for the three month period was driven by the timing of the redemption of our 5.875% Senior Notes due 2020 in the fourth quarter of 2016, partially offset by the issuance of our 5.375% Senior Notes due 2026 late in the second quarter of 2016. The increase for the six month period was primarily due to higher average debt during the six months ended June 30, 2017 compared to the six months ended June 30, 2016.

Other (Expense) Income primarily includes realized gains and losses, interest and dividend income, our share of the income or loss of Sirius XM Canada, and transaction costs related to non-operating investments.

For the three and six months ended June 30, 2017 other expense was $11,937 and $3,074, respectively, driven by transaction costs associated with our investment in Pandora and our share of Sirius XM Canada's net loss. For the three months ended June 30, 2016 other income was $2,515 driven by our share of Sirius XM Canada's net income. For the six months ended June 30, 2016 other income was $13,363 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 June 30, 2017 and 2016, income tax expense was $119,513 and $106,310, respectively, and $233,486 and $214,552 for the six months ended June 30, 2017 and 2016, respectively.

Our effective tax rate for the three months ended June 30, 2017 and 2016 was 37.2% and 37.8%, respectively. Our effective tax rate for the six months ended June 30, 2017 and 2016 was 36.3% and 38.2%, respectively. The rate for the three and six months ended June 30, 2017 and 2016 was primarily impacted by the recognition of excess tax benefits or shortfalls related to share based compensation. We estimate our annual effective tax rate for the year ending December 31, 2017 will be 37.4%.

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 40 through 43 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 40 through 43) 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 June 30, 2017 compared to June 30, 2016:

	As of June 30		2017 vs 2016 Change	
	2017	2016	Amount	%
Self-pay subscribers	26,675	25,143	1,532	6 %
Paid promotional subscribers	5,372	5,503	(131)	(2)%
Ending subscribers [(a)]	32,048	30,646	1,402	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 and six months ended June 30, 2017 and 2016:

	For the Three Months Ended June 30,		For the Six Months Ended June 30,		2017 vs 2016 Change			
					Three Months		Six Months	
	2017	2016	2017	2016	Amount	%	Amount	%
Self-pay subscribers	466	507	725	855	(41)	(8)%	(130)	(15)%
Paid promotional subscribers	(20)	80	(23)	197	(100)	(125)%	(220)	(112)%
Net additions [(a)]	445	587	702	1,052	(142)	(24)%	(350)	(33)%
Daily weighted average number of subscribers	31,746	30,329	31,559	30,044	1,417	5 %	1,515	5 %
Average self-pay monthly churn	1.7%	1.8%	1.8%	1.8%	(0.1)%	(6)%	0%	0 %
New vehicle consumer conversion rate	40%	40%	40%	39%	0 %	0 %	1%	3 %
ARPU	$ 13.22	$ 12.78	$ 13.08	$ 12.72	$ 0.44	3 %	$ 0.36	3 %
SAC, per installation	$ 31	$ 32	$ 30	$ 33	$ (1)	(3)%	$ (3)	(9)%
Customer service and billing expenses, per average subscriber	$ 0.94	$ 0.97	$ 0.95	$ 0.99	$ (0.03)	(3)%	$ (0.04)	(4)%
Adjusted EBITDA	$ 521,936	$ 467,766	$1,023,739	$ 909,133	$ 54,170	12 %	$ 114,606	13 %
Free cash flow	$ 416,725	$ 394,946	$ 665,664	$ 723,163	$ 21,779	6 %	$ (57,499)	(8)%

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

Subscribers. At June 30, 2017, we had approximately 32.0 million subscribers, an increase of 1.4 million subscribers, or 5%, from the approximately 30.6 million subscribers as of June 30, 2016. The increase in total subscribers was primarily due to growth in our self-pay subscriber base, which increased 1.5 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 131 thousand decrease in paid promotional subscribers.

For the three months ended June 30, 2017 and 2016, net additions were 445 thousand and 587 thousand, respectively, a decrease of 24%. For the six months ended June 30, 2017 and 2016, net additions were 702 thousand and 1,052 thousand, respectively, a decrease of 33%. 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 mitigated by growth in gross additions.

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 40 through 43 for more details.)

For the three months ended June 30, 2017 and 2016, our average self-pay monthly churn rate was 1.7% and 1.8%, respectively. For the six months ended June 30, 2017 and 2016, our average self-pay monthly churn rate was 1.8%. The decrease in the three month churn was primarily driven by improvements in non-pay and voluntary 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 40 through 43 for more details.)

For the three months ended June 30, 2017 and 2016, our new vehicle consumer conversion rate was 40%. For the six months ended June 30, 2017 and 2016, our new vehicle consumer conversion rate was 40% and 39%, respectively. The increase in new vehicle consumer conversion rate for the six month period was driven by improvements in conversion of trialers who are also current self-pay subscribers as well as trialers who are first time buyers of vehicles enabled with our service.

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 40 through 43 for more details.)

For the three months ended June 30, 2017 and 2016, ARPU was $13.22 and $12.78, respectively. For the six months ended June 30, 2017 and 2016, ARPU was $13.08 and $12.72, respectively. The increases were 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 for the six month period, 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 (excluding connected vehicle services), divided by the number of satellite radio installations in new vehicles and shipments of aftermarket radios for the period. (See the accompanying glossary on pages 40 through 43 for more details.)

For the three months ended June 30, 2017 and 2016, SAC, per installation, was $31 and $32, respectively. For the six months ended June 30, 2017 and 2016, SAC, per installation, was $30 and $33, respectively. The decreases were 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 40 through 43 for more details.)

For the three months ended June 30, 2017 and 2016, customer service and billing expenses, per average subscriber, was $0.94 and $0.97, respectively. For the six months ended June 30, 2017 and 2016, customer service and billing expenses, per average subscriber, was $0.95 and $0.99, respectively. The decreases were primarily related to lower call center costs due to lower contact rates and lower agent rates, partially offset by higher transaction fees.

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, share-based payment expense and loss on disposal of assets. (See the accompanying glossary on pages 40 through 43 for a reconciliation to GAAP and for more details.)

For the three months ended June 30, 2017 and 2016, adjusted EBITDA was $521,936 and $467,766, respectively, an increase of 12%, or $54,170. For the six months ended June 30, 2017 and 2016, adjusted EBITDA was $1,023,739 and $909,133, respectively, an increase of 13%, or $114,606. The increases were 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 40 through 43 for a reconciliation to GAAP and for more details.)

For the three months ended June 30, 2017 and 2016, free cash flow was $416,725 and $394,946, respectively, an increase of $21,779, or 6%. For the six months ended June 30, 2017 and 2016, free cash flow was $665,664 and $723,163, respectively, a decrease of $57,499, or 8%. The increase for the three month period was driven by higher net cash provided by operating activities resulting from improved operating performance, partially offset by an increase in additions to property and equipment resulting from new satellite construction. The decrease for the six month period was driven by a payment for a legal settlement during the first quarter of 2017, an increase in additions to property and equipment resulting primarily from new satellite construction, and timing of interest payments; partially offset by higher net cash provided by operating activities resulting from improved operating performance.

Liquidity and Capital Resources

Cash Flows for the six months ended June 30, 2017 compared with the six months ended June 30, 2016.

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

	For the Six Months Ended June 30,		
	2017	2016	2017 vs 2016
Net cash provided by operating activities	$ 769,941	$ 788,909	$ (18,968)
Net cash used in investing activities	(667,680)	(71,125)	(596,555)
Net cash used in financing activities	(273,462)	(353,169)	79,707
Net (decrease) increase in cash and cash equivalents	(171,201)	364,615	(535,816)
Cash and cash equivalents at beginning of period	213,939	111,838	102,101
Cash and cash equivalents at end of period	$ 42,738	$ 476,453	$ (433,715)

Cash Flows Provided by Operating Activities

Cash flows provided by operating activities decreased by $18,968 to $769,941 for the six months ended June 30, 2017 from $788,909 for the six months ended June 30, 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, partially offset by improved operating performance.

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 half of 2017 were primarily due to our investment in Pandora of $172,500, loans to related parties of $130,794, payments to acquire additional ownership in related parties (net of transaction costs) of $129,676, the acquisition of Automatic for $107,488 (net of cash and restricted cash acquired), and additional spending to construct replacement satellites of $35,494, improve our terrestrial repeater network, and for capitalized software. 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 cash dividends. 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 Holdings' common stock.

Cash flows used in financing activities in the six months ended June 30, 2017 were primarily due to the purchase and retirement of shares of Holdings' common stock under Holdings' repurchase program and the payment of cash dividends on Holdings' common stock for $877,462, partially offset by net borrowings of $610,000 under the Credit Facility. Cash flows used in financing activities in the six months ended June 30, 2016 were primarily due to the purchase and retirement for $995,632 of shares of Holdings' common stock under Holdings' repurchase program, partially offset by net borrowings of $642,463.

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 June 30, 2017, $750,000 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 Holdings' stock repurchases, future dividend payments on Holdings' common stock 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.

Holdings' Capital Return Program

As of June 30, 2017, Holdings' board of directors had approved for repurchase an aggregate of $10,000,000 of Holdings common stock. As of June 30, 2017, Holdings' cumulative repurchases since December 2012 totaled $8,749,538, and $1,250,462 remained available under Holdings' stock repurchase program.

On July 11, 2017, Holdings' board of directors declared a quarterly dividend on Holdings' common stock in the amount of $0.01 per share of common stock payable on August 31, 2017 to Holdings' stockholders of record as of the close of business on August 10, 2017. Holdings' board of directors expects to declare regular quarterly dividends, in an aggregate annual amount of $0.04 per share of Holdings' common stock.

Debt Transactions

On June 27, 2017, we issued a redemption notice pursuant to the indenture governing the 4.25% Senior Notes due 2020 (the "4.25% Notes") to redeem all of our 4.25% Notes. The 4.25% Notes were redeemed on July 27, 2017 at 101.063% of the principal amount thereof plus accrued and unpaid interest thereon from May 15 through July 26, 2017 for a total amount of $509,565.

On July 5, 2017, we issued a redemption notice pursuant to the indenture governing the 5.75% Senior Notes due 2021 (the "5.75% Notes") to redeem all of our 5.75% Notes on August 4, 2017. The 5.75% Notes will be redeemed at 102.875% of the principal amount thereof plus accrued and unpaid interest thereon from August 1 through August 3, 2017 for a total amount of $617,538.

On July 5, 2017, we issued $750,000 aggregate principal amount of 3.875% Senior Notes due 2022 (the “3.875% Notes”) and $1,250,000 aggregate principal amount of 5.00% Senior Notes due 2027 (the “5.00% Notes”). For both series of notes, interest is payable semi-annually in arrears on February 1 and August 1, commencing on February 1, 2018. The 3.875% Notes will mature on August 1, 2022 and the 5.00% Notes will mature on August 1, 2027.

Debt Covenants

The indentures governing our senior notes and the agreement governing the Credit Facility include restrictive covenants. As of June 30, 2017, we were in compliance with such covenants. For a discussion of our “Debt Covenants,” refer to Note 11 to our unaudited consolidated financial statements in this Quarterly Report.

Off-Balance Sheet Arrangements

We do not have any significant off-balance sheet arrangements other than those disclosed in Note 14 to our unaudited consolidated financial statements in this Quarterly Report that are reasonably likely to have a material effect on our financial condition, results of operations, liquidity, capital expenditures or capital resources.

Contractual Cash Commitments

For a discussion of our “Contractual Cash Commitments,” refer to Note 14 to our unaudited consolidated financial statements in this Quarterly Report.

Related Party Transactions

For a discussion of “Related Party Transactions,” refer to Note 9 to our unaudited consolidated financial statements in this Quarterly Report.

Critical Accounting Policies and Estimates

For a discussion of our “Critical Accounting Policies and Estimates,” refer to “Management's Discussion and Analysis of Financial Condition and Results of Operations” in our Annual Report for the year ended December 31, 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 June 30,		For the Six Months Ended June 30,	
	2017	2016	2017	2016
Net income:	$ 202,109	$ 174,965	$ 409,182	$ 347,405
Add back items excluded from Adjusted EBITDA:				
Purchase price accounting adjustments:				
Revenues	1,813	1,813	3,626	3,626
Loss on disposal of assets	—	12,912	—	12,912
Share-based payment expense	30,251	24,177	59,697	47,870
Depreciation and amortization	73,519	66,708	150,223	134,335
Interest expense	82,794	83,396	164,451	161,796
Other expense (income)	11,937	(2,515)	3,074	(13,363)
Income tax expense	119,513	106,310	233,486	214,552
Adjusted EBITDA	$ 521,936	$ 467,766	$ 1,023,739	$ 909,133

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 June 30,		For the Six Months Ended June 30,	
	2017	2016	2017	2016
Subscriber revenue, excluding connected vehicle services	$ 1,090,356	$ 1,011,422	$ 2,148,410	$ 1,996,406
Add: advertising revenue	40,178	33,521	76,194	65,062
Add: other subscription-related revenue	128,179	117,522	252,647	231,593
	$ 1,258,713	$ 1,162,465	$ 2,477,251	$ 2,293,061
Daily weighted average number of subscribers	31,746	30,329	31,559	30,044
ARPU	$ 13.22	$ 12.78	$ 13.08	$ 12.72

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 June 30,		For the Six Months Ended June 30,	
	2017	2016	2017	2016
Customer service and billing expenses, excluding connected vehicle services	$ 90,388	$ 89,210	$ 182,508	$ 180,381
Less: share-based payment expense	(1,029)	(819)	(2,040)	(1,625)
	$ 89,359	$ 88,391	$ 180,468	$ 178,756
Daily weighted average number of subscribers	31,746	30,329	31,559	30,044
Customer service and billing expenses, per average subscriber	$ 0.94	$ 0.97	$ 0.95	$ 0.99

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. In a capital intensive business, with significant investments in satellites, we look at our operating cash flow, net of these investing cash outflows, to determine cash available for future subscriber acquisition and capital expenditures, to repurchase or retire debt, to acquire other companies and to evaluate our ability to return capital to stockholders. We exclude from free cash flow certain items that do not relate to the on-going performance of our business such as cash outflows for acquisitions, strategic investments and loans to related parties. 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 June 30,		For the Six Months Ended June 30,	
	2017	2016	2017	2016
Cash Flow information				
Net cash provided by operating activities	$ 476,225	$ 428,077	$ 769,941	$ 788,909
Net cash used in investing activities	$ (607,294)	$ (37,156)	$ (667,680)	$ (71,125)
Net cash used in financing activities	$ (56,681)	$ (16,420)	$ (273,462)	$ (353,169)
Free Cash Flow				
Net cash provided by operating activities	$ 476,225	$ 428,077	$ 769,941	$ 788,909
Equity-related transactions for Holdings [(a)]	6,986	4,025	22,595	5,379
Additions to property and equipment	(66,152)	(37,001)	(119,517)	(67,172)
Purchases of restricted and other investments	(334)	(155)	(7,355)	(3,953)
Free cash flow	$ 416,725	$ 394,946	$ 665,664	$ 723,163

(a) Subsequent to our corporate reorganization in November 2013, certain equity-related transactions are reported as related party transactions within Sirius XM's unaudited consolidated statements of cash flows. For the six months ended June 30, 2017 and 2016, this included payments of $22,595 and $5,379, respectively, for taxes paid in lieu of shares issued for stock-based compensation. These equity-related transactions are classified as Cash flows provided by financing activities within Holdings' unaudited consolidated statements of cash flows, and therefore, are adjusted to reflect free cash flow at Sirius XM.

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 (excluding connected vehicle services), divided by the number of satellite radio installations in new vehicles and shipments of aftermarket radios for the period. SAC, per installation, is calculated as follows:

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
	2017	2016	2017	2016
Subscriber acquisition costs	$ 125,154	$ 128,956	$ 252,642	$ 261,405
Less: margin from sales of radios and accessories, excluding connected vehicle	(20,285)	(18,130)	(43,031)	(35,472)
	$ 104,869	$ 110,826	$ 209,611	$ 225,933
Installations	3,362	3,476	6,946	6,906
SAC, per installation	$ 31	$ 32	$ 30	$ 33