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

FORM 10-Q

	QUARTERLY REPORT P	URSUA	NT TO SECTION 13 OR 1	5(d) OF T	HE SECURITIES EXCH	ANGE ACT OF 1934
		FOR THI	E QUARTERLY PERIOD ENDEI OR	SEPTEME	BER 30, 2020	
	TRANSITION REPORT P	URSUA	NT TO SECTION 13 OR 1	5(d) OF T	HE SECURITIES EXCH	ANGE ACT OF 1934
		FO	R THE TRANSITION PERIOD F COMMISSION FILE NUMBE			
			RIUS XM HOLDI (Exact name of registrant as specific			
	Delaware				38-3916511	
	(State or other jurisdic incorporation or organi				(I.R.S. Employer Identification	ı No.)
		1221	Avenue of the Americas, 35th Flo (Address of Principal Executive 10020 (Zip Code)		rk, NY	
	Former na	ne, former	ant's telephone number, including ar address and former fiscal year, if cha curities registered pursuant to Sectio	inged since la	st report: Not Applicable	
	Title of each class		Trading Symbol(s)		Name of exchange on	which registered
	Common stock, \$0.001 par value		SIRI		NASDAQ Global S	Select Market
preceding 12 90 days. Y Ind during the p	dicate by check mark whether the registr receding 12 months (or for such shorter dicate by check mark whether the registr pany. See the definitions of "large accel	ant has sub period that ant is a lar	rant was required to file such reports omitted electronically every Interacti t the registrant was required to subm ge accelerated filer, an accelerated fi	ye Data File hit such files) iler, a non-ac	been subject to such filing require required to be submitted pursuant. Yes ☑ No □ celerated filer, a smaller reporting	ements for the past t to Rule 405 of Regulation S-T g company or an emerging
	Large accelerated filer		Accelerated filer		Non-accelerated filer	
	Smaller reporting company		Emerging growth company			
financial acc	an emerging growth company, indicate l counting standards provided pursuant to dicate by check mark whether the registr dicate the number of shares outstanding	Section 13 ant is a she	s(a) of the Exchange Act. ☐ ell company (as defined in Rule 12b-	2 of the Act). Yes□ No ☑	ying with any new or revised
	(Class)				(Outstanding as of October 20), 2020)
	Common stock, \$0.001	par value			4,249,501,448 shares	

SIRIUS XM HOLDINGS INC. AND SUBSIDIARIES INDEX TO FORM 10-Q

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

	1	For the Three Months	Ended Sep	tember 30,	For the Nine Months Ended September 30,				
(in millions, except per share data)		2020		2019	2020		2019		
Revenue:				_					
Subscriber revenue	\$	1,594	\$	1,556	\$ 4,757	\$	4,551		
Advertising revenue		345		366	866		933		
Equipment revenue		47		45	113		127		
Other revenue		39		44	115		121		
Total revenue		2,025	·	2,011	5,851		5,732		
Operating expenses:									
Cost of services:									
Revenue share and royalties		602		592	1,759		1,684		
Programming and content		123		116	351		338		
Customer service and billing		119		119	359		352		
Transmission		46		46	129		117		
Cost of equipment		5		8	13		20		
Subscriber acquisition costs		110		101	257		313		
Sales and marketing		222		233	664		648		
Engineering, design and development		64		78	196		206		
General and administrative		131		124	357		379		
Depreciation and amortization		125		118	381		344		
Acquisition and restructuring costs					24		83		
Total operating expenses	<u></u>	1,547		1,535	4,490		4,484		
Income from operations		478		476	1,361		1,248		
Other (expense) income:									
Interest expense		(96)		(104)	(297)		(291)		
Loss on extinguishment of debt		(40)		(56)	(40)		(57)		
Other income (expense)		2		_	10		(2)		
Total other (expense) income		(134)		(160)	(327)		(350)		
Income before income taxes		344		316	1,034		898		
Income tax expense		(72)		(70)	(226)		(227)		
Net income	\$	272	\$	246	\$ 808	\$	671		
Foreign currency translation adjustment, net of tax		7	-	(5)	(8)		9		
Total comprehensive income	\$	279	\$	241	\$ 800	\$	680		
Net income per common share:						-			
Basic	\$	0.06	\$	0.06	\$ 0.19	\$	0.15		
Diluted	\$	0.06	\$	0.05	\$ 0.18	\$	0.15		
Weighted average common shares outstanding:		3.00	· ·			<u> </u>	0.12		
Basic		4,326		4,450	4,367		4,529		
Diluted		4.415		4.564	4.465	_	4.641		
Direct		4,415		4,364	4,465	. —	4,041		

SIRIUS XM HOLDINGS INC. AND SUBSIDIARIES CONSOLIDATED BALANCE SHEETS

(in millions, except per share data)	Septe	ember 30, 2020	Decen	nber 31, 2019
ASSETS	(u	ınaudited)		
Current assets:				
Cash and cash equivalents	\$	33	\$	106
Receivables, net		582		670
Inventory, net		10		11
Related party current assets		10		22
Prepaid expenses and other current assets		194		194
Total current assets		829		1,003
Property and equipment, net		1,587		1,626
Intangible assets, net		3,360		3,467
Goodwill		3,860		3,843
Related party long-term assets		514		452
Deferred tax assets		_		153
Operating lease right-of-use assets		423		466
Other long-term assets		129		139
Total assets	\$	10,702	\$	11,149
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)				
Current liabilities:				
Accounts payable and accrued expenses	\$	1,088	\$	1,151
Accrued interest		84		160
Current portion of deferred revenue		1,792		1,930
Current maturities of debt		2		2
Operating lease current liabilities		47		46
Related party current liabilities		1		4
Total current liabilities		3,014		3,293
Long-term deferred revenue		121		130
Long-term debt		7,845		7,842
Deferred tax liabilities		91		70
Operating lease liabilities		416		456
Other long-term liabilities		126		94
Total liabilities		11,613		11,885
Commitments and contingencies (Note 16)				
Stockholders' equity (deficit):				
Common stock, par value \$0.001 per share; 9,000 shares authorized; 4,283 and 4,412 shares issued; 4,278 and 4,412 shares outstanding at September 30, 2020 and December 31, 2019, respectively		4		4
Accumulated other comprehensive income, net of tax		_		8
Additional paid-in capital		_		395
Treasury stock, at cost; 5 and 0 shares of common stock at September 30, 2020 and December 31, 2019, respectively		(24)		_
Accumulated deficit		(891)		(1,143)
Total stockholders' equity (deficit)		(911)		(736)
Total liabilities and stockholders' equity (deficit)	\$	10,702	\$	11,149

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

For the Nine Months Ended September 30, 2020

	Common Stock Shares Amount		Accumulated		Treasu	ry Stock		
(in millions)			Other Comprehensive Income (Loss)	Additional Paid-in Capital	Shares	Amount	Accumulated Deficit	Total Stockholders' Equity (Deficit)
Balance at December 31, 2019	4,412	\$ 4	\$ 8	\$ 395		<u> </u>	\$ (1,143)	\$ (736)
Comprehensive income (loss), net of tax	_	_	(8)	_	_	_	808	800
Share-based payment expense	_	_	_	178	_	_	_	178
Exercise of stock options and vesting of restricted stock units	22	_	_	_	_	_	_	_
Withholding taxes on net share settlement of stock- based compensation	_	_	_	(84)	_	_	_	(84)
Cash dividends paid on common stock, \$0.03993 per share	_	_	_	(139)	_	_	(36)	(175)
Common stock repurchased	_	_	_	_	156	(894)	_	(894)
Common stock retired	(151)	_	_	(350)	(151)	870	(520)	_
Balance at September 30, 2020	4,283	\$ 4	\$ <u> </u>	\$ —	5	\$ (24)	\$ (891)	\$ (911)

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

For the Three Months Ended September 30, 2020

	Comm	on Stock	Accumu	lated			Treasu	ıry Sto	ock			
(in millions)	Shares Amount		Compreh	Other Comprehensive Income (Loss)		dditional Paid-in Capital	Shares	A	mount	Accumulated Deficit	Total Stockholders' Equity (Deficit)	
Balance at June 30, 2020	4,355	\$ 4	\$	(7)	\$	(49)	2	\$	(9)	\$ (607)	\$ (668)	
Comprehensive income, net of tax	_	_		7		_	_		_	272	279	
Share-based payment expense	_	_		_		63	_		_	_	63	
Exercise of stock options and vesting of restricted stock units	11	_		_		_	_		_	_	_	
Withholding taxes on net share settlement of stock- based compensation	_	_		_		(41)	_		_	_	(41)	
Cash dividends paid on common stock, \$0.01331 per share	_	_		_		(22)	_		_	(36)	(58)	
Common stock repurchased	_	_		_		_	86		(486)	_	(486)	
Common stock retired	(83)	_		_		49	(83)		471	(520)	_	
Balance at September 30, 2020	4,283	\$ 4	\$	_	\$		5	\$	(24)	\$ (891)	\$ (911)	

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

For the Nine Months Ended September 30, 2019

	Commo	on Stock	Accumulated		Treasu	ıry Stock		m . 1	
(in millions)	Shares	Amount	Other Comprehensive Income (Loss)	Additional Paid-in Capital	Shares	Amount	Accumulated Deficit	Total Stockholders' Equity (Deficit)	
Balance at December 31, 2018	4,346	\$ 4	\$ (6)	\$ 242	_	\$ —	\$ (2,057)	\$ (1,817)	
Comprehensive income, net of tax	_	_	9	_	_	_	671	680	
Share-based payment expense	_	_	_	201	_	_	_	201	
Exercise of stock options and vesting of restricted stock units	30	_	_	8	_	_	_	8	
Withholding taxes on net share settlement of stock- based compensation	_	_	_	(104)	_	_	_	(104)	
Cash dividends paid on common stock, \$0.0363 per share	_	_	_	(167)	_	_	_	(167)	
Issuance of common stock as part of Pandora Acquisition	392	1	_	2,354	_	_	_	2,355	
Equity component of convertible note	_	_	_	62	_	_	_	62	
Common stock repurchased	_	_	_	_	335	(1,966)	_	(1,966)	
Common stock retired	(334)	(1)	_	(1,958)	(334)	1,959	_	_	
Balance at September 30, 2019	4,434	\$ 4	\$ 3	\$ 638	1	\$ (7)	\$ (1,386)	\$ (748)	

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

For the Three Months Ended September 30, 2019

	Commo	on Stock	Accumulated			Treasu	ıry S	tock				
(in millions)	Shares Amount		Other Comprehensive Income (Loss)		Additional Paid-in Capital	Shares	A	Amount	Accumulated Deficit		Total Stockholders' Equity (Deficit)	
Balance at June 30, 2019	4,497	\$ 4	\$ 8	\$	1,159	5	\$	(28)	\$ (1,632	2) \$	\$ (489)	
Comprehensive income (loss), net of tax	_	_	(5)		_	_		_	246	5	241	
Share-based payment expense	_	_	_		67	_		_	_	-	67	
Exercise of stock options and vesting of restricted stock units	17	_	_		8	_		_	_	-	8	
Withholding taxes on net share settlement of stock- based compensation	_	_	_		(57)	_		_	_	-	(57)	
Cash dividends paid on common stock, \$0.0121 per share	_	_	_		(54)	_		_	_		(54)	
Common stock repurchased	_	_	_		_	76		(464)	_	-	(464)	
Common stock retired	(80)	_	_		(485)	(80)		485	_	-	_	
Balance at September 30, 2019	4,434	\$ 4	\$ 3	\$	638	1	\$	(7)	\$ (1,386	5) \$	\$ (748)	

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

	For the Nine Months Ende	
(in millions)	2020	2019
Cash flows from operating activities:		
Net income	\$ 808 \$	671
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	381	344
Non-cash interest expense, net of amortization of premium	15	12
Provision for doubtful accounts	48	40
Amortization of deferred income related to equity method investment	(2)	(2
Loss on extinguishment of debt	40	51
Loss on unconsolidated entity investments, net	8	10
Dividend received from unconsolidated entity investment	1	1
Loss on restructuring	24	_
Gain on other investments	(1)	(3
Share-based payment expense	165	192
Deferred income taxes	175	210
Amortization of right-of-use assets	42	16
Changes in operating assets and liabilities:		
Receivables	39	(85
Inventory	(2)	8
Related party, net	10	_
Prepaid expenses and other current assets	(2)	(9
Other long-term assets	14	8
Accounts payable and accrued expenses	(83)	79
Accrued interest	(76)	(24
Deferred revenue	(147)	(46
Operating lease liabilities	(39)	(4
Other long-term liabilities	32	4
Net cash provided by operating activities	1,450	1,48
Cash flows from investing activities:	•	ŕ
Additions to property and equipment	(230)	(239
Purchases of other investments	(8)	(7
Acquisition of business, net of cash acquired	(28)	313
Sale of short-term investments	_	73
Investments in related parties and other equity investees	(89)	(14
Repayment from related party	11	_
Net cash (used in) provided by investing activities	(344)	120
Cash flows from financing activities:	(311)	120
Proceeds from exercise of stock options	_	8
Taxes paid from net share settlements for stock-based compensation	(81)	(104
Revolving credit facility, net of deferred financing costs	_	(374
Proceeds from long-term borrowings, net of costs	1,481	2,71:
Proceeds from sale of capped call security	-	2,713
Principal payments of long-term borrowings	(1,506)	(1,663
Payment of premiums on redemption of debt	(1,300)	
		(45
Common stock repurchased and retired	(870)	(1,959
Dividends paid	(175)	(167
Net cash used in financing activities	(1,182)	(1,586
Net (decrease) increase in cash, cash equivalents and restricted cash	(76)	25
Cash, cash equivalents and restricted cash at beginning of period ⁽¹⁾	120	6:
Cash, cash equivalents and restricted cash at end of period ⁽¹⁾	<u>\$ 44 </u> \$	90

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

		For the Nine Months Ended Septembe						
(in millions)		2020		2019				
Supplemental Disclosure of Cash and Non-Cash Flow Information	_							
Cash paid during the period for:								
Interest, net of amounts capitalized	\$	357	\$	300				
Income taxes paid	\$	26	\$	6				
Non-cash investing and financing activities:								
Treasury stock not yet settled	\$	(24)	\$	(7)				
Fair value of shares issued related to acquisition of a business	\$	_	\$	2,355				
Accumulated other comprehensive (loss) income, net of tax	\$	(8)	\$	9				

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

(in millions)	Se	eptember 30, 2020	December 31, 2019	September 30, 2019	December 31, 2018
Cash and cash equivalents	\$	33	\$ 106	\$ 79	\$ 54
Restricted cash included in Other long-term assets		11	14	11	11
Total cash, cash equivalents and restricted cash at end of period	\$	44	\$ 120	\$ 90	\$ 65

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

(1) Business & Basis of Presentation

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

Business

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

Sirius XM

Our Sirius XM business features music, sports, entertainment, comedy, talk, news, traffic and weather channels, as well as infotainment services, in the United States on a subscription fee basis. The Sirius XM service is distributed through our two proprietary satellite radio systems and through the internet via applications for mobile devices, home devices and other consumer electronic equipment. Satellite radios are primarily distributed through automakers, retailers and our website. Our Sirius XM service is also available through our user interface, which we call "360L," that combines our satellite and streaming services into a single, cohesive in-vehicle entertainment experience. The primary source of revenue from our Sirius XM business is generated from subscription fees, with most of our customers subscribing to monthly, quarterly, semi-annual or annual plans. We also derive revenue from advertising on select non-music channels, direct sales of our satellite radios and accessories, and other ancillary services. As of September 30, 2020, our Sirius XM business had approximately 34.4 million subscribers.

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

In May 2020, we terminated the Automatic Labs Inc. ("Automatic") service, which was part of our connected services business. Automatic operated a service for consumers and auto dealers and offered an install-it-yourself adapter and mobile application, which transformed older vehicles into connected vehicles. During the nine months ended September 30, 2020, we recorded \$24 of restructuring expenses in our unaudited consolidated statements of comprehensive income related to this termination of the service. We did not record any restructuring expenses during the three months ended September 30, 2020. Refer to Note 4 for more information.

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

Pandora

Our Pandora business operates a music, comedy and podcast streaming discovery platform, offering a personalized experience for each listener wherever and whenever they want to listen, whether through mobile devices, car speakers or connected devices. Pandora enables listeners to create personalized stations and playlists, discover new content, hear artist- and expert-curated playlists, podcasts and select Sirius XM content as well as search and play songs and albums on-demand. Pandora is available as an adsupported radio service, a radio subscription service, called Pandora Plus, and an on-demand subscription service, called Pandora Premium. As of September 30, 2020, Pandora had approximately 6.4 million subscribers. The majority of revenue from our Pandora business is generated from advertising on our Pandora ad-supported radio service. In addition, Pandora has an arrangement with SoundCloud Holdings, LLC ("SoundCloud") to be its exclusive US ad sales representative. Through this arrangement Pandora is able to offer advertisers the ability to execute campaigns in the US across the Pandora and SoundCloud listening platforms. In addition, through AdsWizz Inc., Pandora provides a comprehensive digital audio and programmatic advertising technology platform, which connects audio publishers and advertisers with a variety of ad insertion, campaign trafficking, yield optimization, programmatic buying, marketplace and podcast monetization solutions.

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

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

On February 10, 2020, Sirius XM invested \$75 in SoundCloud. SoundCloud is the world's largest open audio platform, with a connected community of creators, listeners, and curators. SoundCloud's platform enables its users to upload, promote, share and create audio entertainment. The minority investment complements the existing ad sales relationship between SoundCloud and Pandora. Refer to Note 12 for more information on this investment.

Impact of the coronavirus ("COVID-19") pandemic

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

Liberty Media

As of September 30, 2020, Liberty Media Corporation ("Liberty Media") beneficially owned, directly and indirectly, approximately74% of the outstanding shares of our common stock. As a result, we are a "controlled company" for the purposes of the NASDAQ corporate governance requirements.

Basis of Presentation

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

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

Interim results are not necessarily indicative of the results that may be expected for a full year. This Quarterly Report on Form 10-Q should be read together with our Annual Report on Form 10-K for the year ended December 31, 2019, which was filed with the SEC on February 4, 2020.

Public companies are required to disclose certain information about their reportable operating segments. Operating segments are defined as significant components of an enterprise for which separate financial information is available and is evaluated on a regular basis by the chief operating decision maker in deciding how to allocate resources to an individual segment and in assessing performance of the segment. We have determined that we have two reportable segments as our chief operating decision maker, our Chief Executive Officer, assesses performance and allocates resources based on the financial results of these segments. Refer to Note 18 for information related to our segments.

We have evaluated events subsequent to the balance sheet date and prior to the filing of this Quarterly Report on Form 10-Q for the three and nine months ended September 30, 2020 and have determined that no events have occurred that would require adjustment to our unaudited consolidated financial statements. For a discussion of subsequent events that do not require adjustment to our unaudited consolidated financial statements refer to Note 19.

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

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

judgment and available information. Actual results could differ materially from those estimates. Significant estimates inherent in the preparation of the accompanying unaudited consolidated financial statements include asset impairment, depreciable lives of our satellites, share-based payment expense and income taxes.

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

(2) Summary of Significant Accounting Policies

Fair Value Measurements

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

Our liabilities measured at fair value were as follows:

		September	30, 2020		December 31, 2019						
	Level 1	Level 2	Level 3	Total Fair Value	Level 1	Level 1 Level 2 Level 3					
Liabilities:											
Debt (a)	_	\$ 8,255	— \$	8,255	— \$	8,378	_	\$ 8,378			

(a) The fair value for non-publicly traded debt is based upon estimates from a market maker and brokerage firm. Refer to Note 13 for information related to the carrying value of our debt as of September 30, 2020 and December 31, 2019.

Accumulated Other Comprehensive Income (Loss)

Accumulated other comprehensive loss of \$0 was primarily comprised of the cumulative foreign currency translation adjustments related to our investment in and loan to Sirius XM Canada (refer to Note 12 for additional information). During the three and nine months ended September 30, 2020, we recorded foreign currency translation adjustment income (loss) of \$7 and \$(8), respectively, net of tax (expense) benefit of \$(2) and \$3, respectively. During the three and nine months ended September 30, 2019, we recorded foreign currency translation adjustment (loss) income of \$(5) and \$9, respectively, net of a tax benefit (expense) of \$1 and \$(4), respectively.

(3) Acquisitions

Simplecast

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

Pandora

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

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

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

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

We recognized acquisition related costs of \$83 that were expensed in Acquisition and restructuring costs in our unaudited consolidated statements of comprehensive income during the nine months ended September 30, 2019. We did not record any acquisition related costs during the three months ended September 30, 2019.

Pro Forma Financial Information

Pandora was consolidated into our financial statements starting on the acquisition date, February 1, 2019. The aggregate revenue and net loss of Pandora consolidated into our financial statements was \$447 and \$47, respectively, for the three months ended September 30, 2019 and \$1,139 and \$225, respectively, for the nine months ended September 30, 2019. The following pro forma financial information presents our results as if the Pandora Acquisition had occurred on January 1, 2019:

	For the Three Months	s Ended September 30,		For the Nine Months Ended September 30,				
	 2020	2019		2020	2019			
Total revenue	\$ 2,027	\$ 2	,013 \$	5,857	\$	5,852		
Net income	\$ 272	\$	245 \$	808	\$	690		

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

(4) Restructuring Costs

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

(5) Earnings per Share

Basic net income per common share is calculated by dividing the income available to common stockholders by the weighted average common shares outstanding during each reporting period. Diluted net income per common share adjusts the weighted average number of common shares outstanding for the potential dilution that could occur if common stock equivalents (stock options, restricted stock units and convertible debt) were exercised or converted into common stock, calculated using the treasury stock method. We had no participating securities during the three and nine months ended September 30, 2020 and 2019.

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

Common stock equivalents of 106 and 47 for the three months ended September 30, 2020 and 2019, respectively, and 62 and 76 for the nine months ended September 30, 2020 and 2019, respectively, were excluded from the calculation of diluted net income per common share as the effect would have been anti-dilutive. We issued 392 shares of our common stock in connection with the Pandora Acquisition.

		For the Three Months Ended September 30,				For the Nine Months	d September 30,	
		2020		2019		2020		2019
Numerator:								
Net Income available to common stockholders for basic net income pe common share	er \$	272	\$	246	\$	808	\$	671
Effect of interest on assumed conversions of convertible notes, net of tax		2		2		6		5
Net Income available to common stockholders for dilutive net income per common share	\$	274	\$	248	\$	814	\$	676
Denominator:								
Weighted average common shares outstanding for basic net income per common share		4,326		4,450		4,367		4,529
Weighted average impact of assumed convertible notes		29		29		29		28
Weighted average impact of dilutive equity instruments		60		85		69		84
Weighted average shares for diluted net income per common share		4,415		4,564		4,465		4,641
Net income per common share:								
Basic	\$	0.06	\$	0.06	\$	0.19	\$	0.15
Diluted	\$	0.06	\$	0.05	\$	0.18	\$	0.15
	_		_		_		_	

(6) Receivables, net

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

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

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

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

Receivables, net, consists of the following:

	 September 30, 2020	 December 31, 2019
Gross customer accounts receivable	\$ 464	\$ 546
Allowance for doubtful accounts	(16)	(14)
Customer accounts receivable, net	\$ 448	\$ 532
Receivables from distributors	105	113
Other receivables	29	25
Total receivables, net	\$ 582	\$ 670

(7) Inventory, net

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

Inventory, net, consists of the following:

	September 30, 2020	December 31, 2019
Raw materials	\$	\$ 3
Finished goods	12	13
Allowance for obsolescence	(2)	(5)
Total inventory, net	\$ 10	\$ 11

(8) Goodwill

Goodwill represents the excess of the purchase price over the estimated fair value of the net tangible and identifiable intangible assets acquired in business combinations. Our annual impairment assessment of our two reporting units is performed as of the fourth quarter of each year, and an assessment is performed at other times if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount. ASC 350, *Intangibles - Goodwill and Other*, states that an entity should perform its annual or interim goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount and recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value. ASC 350 also states that a reporting unit with a zero or negative carrying amount is not required to perform a qualitative assessment. Our Sirius XM reporting unit, which has an allocated goodwill balance of \$2,290, had a negative carrying amount as of September 30, 2020.

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

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

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

(9) Intangible Assets

Our intangible assets include the following:

		September 30, 2020				December 31, 2019						
	Weighted Average Useful Lives	Gross Carrying Value		Accumulated Amortization		Net Carrying Value		Gross Carrying Value		Accumulated Amortization		et Carrying Value
Indefinite life intangible assets:												
FCC licenses	Indefinite	\$ 2,084	\$	S —	\$	2,084	\$	2,084	\$	_	\$	2,084
Trademarks	Indefinite	250		_		250		251		_		251
Definite life intangible assets:												
OEM relationships	15 years	220		(101)		119		220		(90)		130
Licensing agreements	12 years	45		(44)		1		45		(42)		3
Software and technology	7 years	30		(16)		14		35		(25)		10
Due to Pandora Acquisition:												
Indefinite life intangible assets:												
Trademarks	Indefinite	\$ 331	\$	S —	\$	331	\$	331	\$	_	\$	331
Definite life intangible assets:												
Customer relationships	8 years	403		(89)		314		403		(49)		354
Software and technology	5 years	373		(126)		247		373		(69)		304
Total intangible assets		\$ 3,736	\$	(376)	\$	3,360	\$	3,742	\$	(275)	\$	3,467

Indefinite Life Intangible Assets

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

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

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

Definite Life Intangible Assets

Amortization expense for all definite life intangible assets was \$37 and \$38 for the three months ended September 30, 2020 and 2019, respectively, and \$13 and \$103 for the nine months ended September 30, 2020 and 2019, respectively. There were retirements of definite lived intangible assets of \$17, which included a loss of \$4, due to the termination of the Automatic service, during the nine months ended September 30, 2020. As part of the Simplecast acquisition, \$12 was allocated to identifiable intangible assets subject to amortization and related to the assessed fair value of software and technology, which was determined by using the multi-period excess earnings method, as of the acquisition date.

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

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

Years ending December 31,	 Amount
2020 (remaining)	\$ 37
2021	146
2022	146
2023	136
2024	70
Thereafter	160
Total definite life intangible assets, net	\$ 695

(10) Property and Equipment

Property and equipment, net, consists of the following:

	September 30, 2020	December 31, 2019
Satellite system	\$ 1,587	\$ 1,587
Terrestrial repeater network	103	100
Leasehold improvements	106	105
Broadcast studio equipment	123	137
Capitalized software and hardware	1,201	1,086
Satellite telemetry, tracking and control facilities	93	87
Furniture, fixtures, equipment and other	91	89
Land	38	38
Building	63	63
Construction in progress	569	505
Total property and equipment	3,974	3,797
Accumulated depreciation and amortization	(2,387)	(2,171)
Property and equipment, net	\$ 1,587	\$ 1,626

Construction in progress consists of the following:

	Septer	September 30, 2020		ember 31, 2019
Satellite system	\$	406	\$	371
Terrestrial repeater network		8		7
Capitalized software and hardware		144		107
Other		11		20
Construction in progress	\$	569	\$	505

Depreciation and amortization expense on property and equipment was \$88 and \$80 for the three months ended September 30, 2020 and 2019, respectively, and \$268 and \$241 for the nine months ended September 30, 2020 and 2019, respectively. Property and equipment of \$5, which included a loss of \$13 related to the termination of the Automatic service, was retired during the nine months ended September 30, 2020. There were no retirements of property and equipment during the three and nine months ended September 30, 2019.

We capitalize a portion of the interest on funds borrowed to finance the construction and launch of our satellites. Capitalized interest is recorded as part of the asset's cost and depreciated over the satellite's useful life. Capitalized interest costs were \$5 and \$4 for the three months ended September 30, 2020 and 2019, respectively, and \$14 and \$12 for the nine months ended September 30, 2020 and 2019, respectively, which related to the construction of our SXM-7 and SXM-8

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

satellites. We also capitalize a portion of share-based compensation related to employee time for capitalized software projects. Capitalized share-based compensation costs were \$4 and \$2 for the three months ended September 30, 2020 and 2019, respectively, and \$13 and \$9 for the nine months ended September 30, 2020 and 2019, respectively.

Satellites

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

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

(11) Leases

We have operating and finance leases for offices, terrestrial repeaters, data centers and certain equipment. Our leases have remaining lease terms of less than 1 year to 17 years, some of which may include options to extend the leases for up to 5 years, and some of which may include options to terminate the leases within1 year. We elected the practical expedient to account for the lease and non-lease components as a single component. Additionally, we elected the practical expedient to not recognize right-of-use assets or lease liabilities for short-term leases, which are those leases with a term of twelve months or less at the lease commencement date.

The components of lease expense were as follows:

	For th	e Three Months Ended Se	ptember 30,	For the Nine Months Ended September 30,			
	2	020	2019	2020	2019		
Operating lease cost	\$	20 \$	22 \$	61	\$ 60		
Finance lease cost		—	1	1	4		
Sublease income		_	(1)	(1)	(3)		
Total lease cost	\$	20 \$	22 \$	61	\$ 61		

(12) Related Party Transactions

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

Liberty Media

As of September 30, 2020, Liberty Media beneficially owned, directly and indirectly, approximately74% of the outstanding shares of our common stock. Liberty Media has one executive, one senior advisor and one of its directors on our board of directors. Gregory B. Maffei, the President and Chief Executive Officer of Liberty Media, is the Chairman of our board of directors.

Sirius XM Canada

Sirius XM holds a 70% equity interest and 33% voting interest in Sirius XM Canada, a privately held corporation. We own 591 shares of preferred stock of Sirius XM Canada, which has a liquidation preference of one Canadian dollar per share. Sirius XM also made a loan to Sirius XM Canada in the aggregate amount of \$131. The loan is denominated in Canadian

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

dollars and is considered a long-term investment with any unrealized gains or losses reported within Accumulated other comprehensive (loss) income. During the nine months ended September 30, 2020 and 2019, Sirius XM Canada repaid \$11 and less than \$1 of the principal amount of the loan, respectively.

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

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

Our related party long-term assets as of September 30, 2020 and December 31, 2019 included the carrying value of our investment balance in Sirius XM Canada of \$20 and \$321, respectively, and, as of September 30, 2020 and December 31, 2019, also included \$117 and \$131, respectively, for the long-term value of the outstanding loan to Sirius XM Canada

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

We recorded revenue from Sirius XM Canada as Other revenue in our unaudited consolidated statements of comprehensive income of \$25 during both the three months ended September 30, 2020 and 2019, and \$73 during both the nine months ended September 30, 2020 and 2019.

SoundCloud

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

In addition to our investment in SoundCloud, Pandora has an agreement with SoundCloud to be its exclusive US ad sales representative. Through this arrangement Pandora offers advertisers the ability to execute campaigns in the US across the Pandora and SoundCloud listening platforms. We recorded revenue share expense of \$13 related to this agreement during both the three months ended September 30, 2020 and 2019, and \$36 and \$24 for the nine months ended September 30, 2020 and 2019, respectively. We also had related party liabilities of \$18 as of September 30, 2020 related to this agreement.

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

(13) Debt

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

						Carrying	g value ^(a) at		
Issuer / Borrower	Issued	Debt	Maturity Date	Interest Payable	Principal Amount at September 30, 2020	September 30, 2020	December 31, 2019		
Pandora (b) (c)	December 2015	1.75% Convertible Senior Notes	December 1, 2020	semi-annually on June 1 and December 1	\$ 1	\$ 1	\$ 1		
Sirius XM (d)	July 2017	3.875% Senior Notes	August 1, 2022	semi-annually on February 1 and August 1	1,000	997	995		
Sirius XM (d) (g)	May 2013	4.625% Senior Notes	May 15, 2023	semi-annually on May 15 and November 15	_	_	498		
Pandora (b) (e)	June 2018	1.75% Convertible Senior Notes	December 1, 2023	semi-annually on June 1 and December 1	193	168	163		
Sirius XM (d)	July 2019	4.625% Senior Notes	July 15, 2024	semi-annually on January 15 and July 15	1,500	1,487	1,485		
Sirius XM (d) (g)	March 2015	5.375% Senior Notes	April 15, 2025	semi-annually on April 15 and October 15	_	_	993		
Sirius XM (d)	May 2016	5.375% Senior Notes	July 15, 2026	semi-annually on January 15 and July 15	1,000	993	992		
Sirius XM (d)	July 2017	5.00% Senior Notes	August 1, 2027	semi-annually on February 1 and August 1	1,500	1,489	1,488		
Sirius XM (d)	June 2019	5.500% Senior Notes	July 1, 2029	semi-annually on January 1 and July 1	1,250	1,237	1,236		
Sirius XM (d)	June 2020	4.125% Senior Notes	July 1, 2030	semi-annually on January 1 and July 1	1,500	1,484	_		
Sirius XM (f)	December 2012	Senior Secured Revolving Credit Facility (the "Credit Facility")	June 29, 2023	variable fee paid quarterly	_	_	_		
Sirius XM	Various	Finance leases	Various	n/a	n/a	1	2		
Total Debt						7,857	7,853		
Less: total cur	rent maturities					2	2		
	erred financing costs					10	9		
Total long-term d	ebt					\$ 7,845	\$ 7,842		

- (a) The carrying value of the obligations is net of any remaining unamortized original issue discount.
- (b) Holdings has unconditionally guaranteed all of the payment obligations of Pandora under these notes.
- (c) We acquired \$152 in principal amount of the 1.75% Convertible Senior Notes due 2020 as part of the Pandora Acquisition. On February 14, 2019, Pandora announced a tender offer to repurchase for cash any and all of its outstanding 1.75% Convertible Senior Notes due 2020 at a price equal to 100% of the aggregate principal amount thereof plus accrued and unpaid interest thereon to, but not including, the repurchase date. On March 18, 2019, we purchased \$151 in aggregate principal amount of the 1.75% Convertible Senior Notes due 2020 that had been validly tendered and not validly withdrawn in the repurchase offer. We recorded a \$1 Loss on extinguishment of debt in connection with this transaction. In addition, we unwound a capped call security acquired as part of the Pandora Acquisition in March 2019 for \$3.
- (d) All material domestic subsidiaries, including Pandora and its subsidiaries, that guarantee the Credit Facility have guaranteed these notes.
- (e) We acquired \$193 in principal amount of the 1.75% Convertible Senior Notes due 2023 as part of the Pandora Acquisition. We allocate the principal amount of the 1.75% Convertible Senior Notes due 2023 between the liability and equity components. The value assigned to the debt components of the 1.75% Convertible Senior Notes due 2023 is the estimated fair value as of the issuance date of similar debt without the conversion feature. The difference between the fair value of the debt and this estimated fair value represents the value which has been assigned to the equity component. The equity component is recorded to additional paid-in capital and is not remeasured as long as it continues to meet the conditions for equity classification. The excess of the principal amount of the Notes

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

over the carrying amount of the liability component is recorded as a debt discount and is being amortized to interest expense using the effective interest method through the December 1, 2023 maturity date. The 1.75% Convertible Senior Notes due 2023 were not convertible into common stock and not redeemable as of September 30, 2020. As a result, we have classified the debt as Long-term within our unaudited consolidated balance sheets.

- (f) The \$1,750 Credit Facility expires in June 2023. Sirius XM's obligations under the Credit Facility are guaranteed by certain of its material domestic subsidiaries, including Pandora and its subsidiaries, and are secured by a lien on substantially all of Sirius XM's assets and the assets of its material domestic subsidiaries. Interest on borrowings is payable on a monthly basis and accrues at a rate based on LIBOR plus an applicable rate. Sirius XM is also required to pay a variable fee on the average daily unused portion of the Credit Facility which is payable on a quarterly basis. The variable rate for the unused portion of the Credit Facility was 0.25% per annum as of September 30, 2020. All of Sirius XM's outstanding borrowings under the Credit Facility are classified as Long-term debt within our unaudited consolidated balance sheets due to the long-term maturity of this debt. Additionally, the amount available for future borrowing under the Credit Facility is reduced by letters of credit issued for the benefit of Pandora, which were \$1 as of September 30, 2020.
- (g) On July 9, 2020, Sirius XM redeemed \$500 in outstanding principal amount of the 4.625% Senior Notes due 2023 for an aggregate purchase price, including premium and interest, of \$507. On July 9, 2020, Sirius XM also redeemed \$1,000 in outstanding principal amount of the 5.375% Senior Notes due 2025 for an aggregate purchase price, including premium and interest, of \$1,039. Sirius XM used the proceeds from the 4.125% Senior Notes due 2030 for both redemptions. During the three and nine months ended September 30, 2020, we recognized \$40 to Loss on extinguishment of debt, consisting primarily of unamortized discount, deferred financing fees and redemption premium, as a result of this redemption.

Covenants and Restrictions

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

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

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

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

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

Pandora Convertible Notes

Pandora's 1.75% Convertible Senior Notes due 2020 (the "Pandora 2020 Notes") and Pandora's1.75% Convertible Senior Notes due 2023 (the "Pandora 2023 Notes" and, together with the Pandora 2020 Notes, the "Pandora Convertible Notes") are unsecured, senior obligations of Pandora. Holdings has guaranteed the payment and performance obligations of Pandora under the Pandora Convertible Notes and the indentures governing the Pandora Convertible Notes.

The Pandora 2020 Notes will mature on December 1, 2020, unless earlier repurchased or redeemed by Pandora or converted in accordance with their terms. As of September 30, 2020, the conversion rate applicable to the Pandora 2020 Notes

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

was 88.5816 shares of Holdings' common stock per one thousand principal amount of the Pandora 2020 Notes plus carryforward adjustments not yet effected pursuant to the terms of the indenture governing the Pandora 2020 Notes. Pandora has irrevocably elected and determined to settle all conversion obligations from and after February 1, 2019 with respect to the Pandora 2020 Notes solely in cash. During the nine months ended September 30, 2019, we purchased \$151 in aggregate principal amount of the Pandora 2020 Notes. See footnote (c) to the table above.

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

(14) Stockholders' Equity

Common Stock, par value \$0.001 per share

We are authorized to issue up to 9,000 shares of common stock. There were 4,283 and 4,412 shares of common stock issued and 4,278 and 4,412 shares of common stock outstanding on September 30, 2020 and December 31, 2019, respectively.

As of September 30, 2020, there were 272 shares of common stock reserved for issuance in connection with outstanding stock-based awards to members of our board of directors, employees and third parties.

Quarterly Dividends

During the nine months ended September 30, 2020, we declared and paid the following dividends:

Declaration Date	Dividend Per Share	Record Date	Total Amount	Payment Date
January 30, 2020	\$ 0.01331	February 12, 2020	\$ 59	February 28, 2020
April 21, 2020	\$ 0.01331	May 8, 2020	\$ 58	May 29, 2020
July 14, 2020	\$ 0.01331	August 7, 2020	\$ 58	August 31, 2020

Stock Repurchase Program

As of September 30, 2020, our board of directors had approved for repurchase an aggregate of \$6,000 of our common stock. Our board of directors did not establish an end date for this stock repurchase program. Shares of common stock may be purchased from time to time on the open market, pursuant to pre-set trading plans meeting the requirements of Rule 10b5-1 under the Exchange Act, in privately negotiated transactions, including transactions with Liberty Media and its affiliates, or otherwise. As of September 30, 2020, our cumulative repurchases since December 2012 under our stock repurchase program totaled 3,203 shares for \$13,728, and \$2,272 remained available for future share repurchases under our stock repurchase program.

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

	September	30, 2020	September	30, 2019	
Share Repurchase Type	Shares	Amount	Shares	Amount	
Open Market Repurchases (a)	156	\$ 894	335	\$ 1,966	

(a) As of September 30, 2020, \$24 of common stock repurchases had not settled, nor been retired, and were recorded as Treasury stock within our unaudited consolidated balance sheets and unaudited consolidated statement of stockholders' equity (deficit).

Preferred Stock, par value \$0.001 per share

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

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

(15) Benefit Plans

We recognized share-based payment expense of \$58 and \$65 for the three months ended September 30, 2020 and 2019, respectively, and \$165 and \$192 for the nine months ended September 30, 2020 and 2019, respectively. This amount includes \$21 of share-based compensation expense recorded in Acquisition and restructuring costs in our unaudited consolidated statements of comprehensive income during the nine months ended September 30, 2019.

2015 Long-Term Stock Incentive Plan

In May 2015, our stockholders approved the Sirius XM Holdings Inc. 2015 Long-Term Stock Incentive Plan (the "2015 Plan"). Employees, consultants and members of our board of directors are eligible to receive awards under the 2015 Plan. The 2015 Plan provides for the grant of stock options, restricted stock awards, restricted stock units and other stock-based awards that the compensation committee of our board of directors deems appropriate. Stock-based awards granted under the 2015 Plan are generally subject to a graded vesting requirement, which is generally three to four years from the grant date. Stock options generally expireten years from the date of grant. Restricted stock units include performance-based restricted stock units ("PRSUs"), the vesting of which are subject to the achievement of performance goals and the employee's continued employment and generally cliff vest on the third anniversary of the grant date. Each restricted stock unit entitles the holder to receive one share of common stock upon vesting. As of September 30, 2020, 142 shares of common stock were available for future grants under the 2015 Plan.

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

Other Plans

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

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

	For the Three Months Ended September 30,	For the Nine Months	Ended September 30,
	2020	2020	2019
Risk-free interest rate	0.2%	1.3%	2.5%
Expected life of options — years	3.79	3.82	3.36
Expected stock price volatility	34%	25%	26%
Expected dividend yield	0.9%	0.7%	0.8%

There were no options granted to employees during the three months ended September 30, 2019.

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

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

	Options	 Weighted- Average Exercise Price Per Share	Weighted- Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value	
Outstanding as of December 31, 2019	208	\$ 4.46			
Granted	8	\$ 7.16			
Exercised	(18)	\$ 3.69			
Forfeited, cancelled or expired	(2)	\$ 6.21			
Outstanding as of September 30, 2020	196	\$ 4.61	4.77	\$ 206	
Exercisable as of September 30, 2020	154	\$ 4.25	4.13	\$ 195	

The weighted average grant date fair value per stock option granted during the nine months ended September 30, 2020 was \$.42. The total intrinsic value of stock options exercised during the nine months ended September 30, 2020 and 2019 was \$53 and \$83, respectively. During the nine months ended September 30, 2020, the number of net settled shares issued as a result of stock option exercises was 5.

We recognized share-based payment expense associated with stock options of \$11 and \$14 for the three months ended September 30, 2020 and 2019, respectively, and \$34 and \$49 for the nine months ended September 30, 2020 and 2019, respectively.

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

	Shares	Grant Date Fair Value Per Share
Nonvested as of December 31, 2019	75	\$ 5.95
Granted	33	\$ 6.14
Vested	(28)	\$ 5.82
Forfeited	(4)	\$ 6.00
Nonvested as of September 30, 2020	76	\$ 6.07

The total intrinsic value of restricted stock units, including PRSUs, vesting during the nine months ended September 30, 2020 and 2019 was \$68 and \$192, respectively. During the nine months ended September 30, 2020, the number of net settled shares issued as a result of restricted stock units vesting totaled 17. During the nine months ended September 30, 2020, we granted 3 PRSUs to certain employees. We believe it is probable that the performance target applicable to these PRSUs will be achieved.

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

We recognized share-based payment expense associated with restricted stock units, including PRSUs, of \$47 and \$51 for the three months ended September 30, 2020 and 2019, respectively, and \$131 and \$143 for the nine months ended September 30, 2020 and 2019, respectively.

Total unrecognized compensation costs related to unvested share-based payment awards for stock options and restricted stock units, including PRSUs, granted to employees, members of our board of directors and third parties at September 30, 2020 and December 31, 2019 was \$418 and \$415, respectively. The total unrecognized compensation costs at September 30, 2020 are expected to be recognized over a weighted-average period of 2.7 years.

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

401(k) Savings Plans

Sirius XM Radio Inc. 401(k) Savings Plan

Sirius XM sponsors the Sirius XM Radio Inc. 401(k) Savings Plan (the "Sirius XM Plan") for eligible employees. The Sirius XM Plan allows eligible employees to voluntarily contribute from 1% to 50% of their pre-tax eligible earnings, subject to certain defined limits. We match50% of an employee's voluntary contributions per pay period on the first 6% of an employee's pre-tax salary up to a maximum of 3% of eligible compensation. We may also make additional discretionary matching, true-up matching and non-elective contributions to the Sirius XM Plan. Employer matching contributions under the Sirius XM Plan vest at a rate of 33.33% for each year of employment and are fully vested after three years of employment for all current and future contributions. Our cash employer matching contributions are not used to purchase shares of our common stock on the open market, unless the employee elects our common stock as their investment option for this contribution.

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

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

We recognized expenses of \$4 and \$2 for the three months ended September 30, 2020 and 2019, respectively, and \$12 and \$6 for the nine months ended September 30, 2020 and 2019, respectively, in connection with the Sirius XM and Pandora Plans.

Sirius XM Holdings Inc. Deferred Compensation Plan

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

Contributions to the DCP, net of withdrawals, for the three months ended September 30, 2020 and 2019 were \$\\$\\$\$ and less than \$1\$, respectively, and were \$\\$\\$\$ and \$\\$7\$ for the nine months ended September 30, 2020 and 2019, respectively. As of September 30, 2020 and December 31, 2019, the fair value of the investments held in the trust were \$\\$43\$ and \$\\$34\$, respectively, which is included in Other long-term assets in our unaudited consolidated balance sheets and classified as trading securities. Trading gains and losses associated with these investments are recorded in Other (expense) income within our unaudited consolidated statements of comprehensive income. The associated iability is recorded within Other long-term liabilities in our unaudited consolidated balance sheets, and any increase or decrease in the liability is recorded in General and administrative expense within our unaudited consolidated statements of comprehensive income. We recorded gains on investments held in the trust of \$\\$2\$ and less than \$1\$ for the three months ended September 30, 2020 and 2019, respectively, and \$1 and \$3\$ for the nine months ended September 30, 2020 and 2019, respectively.

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

(16) Commitments and Contingencies

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

	2020	2021	2022	2023	2024	Thereafter	Total
Debt obligations	\$ 1	\$ 1	\$ 1,000	\$ 193	\$ 1,500	\$ 5,250	\$ 7,945
Cash interest payments	3	379	375	335	329	1,048	2,469
Satellite and transmission	19	48	2	1	1	2	73
Programming and content	72	261	169	89	43	97	731
Sales and marketing	14	28	18	9	3	8	80
Satellite incentive payments	1	8	9	9	9	47	83
Operating lease obligations	15	75	67	60	46	180	443
Royalties, minimum guarantees and other	130	279	196	22	7	_	634
Total (1)	\$ 255	\$ 1,079	\$ 1,836	\$ 718	\$ 1,938	\$ 6,632	\$ 12,458

(1) The table does not include our reserve for uncertain tax positions, which at September 30, 2020 totaled \$26.

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

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

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

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

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

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

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

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

Royalties, Minimum Guarantees and Other. We have entered into music royalty arrangements that include fixed payments. Certain of our content agreements also contain minimum guarantees and require that we make upfront minimum guaranteed payments. During the nine months ended September 30, 2020, we prepaid \$5 in content costs related to minimum guarantees. As of September 30, 2020, we had future fixed minimum guarantee commitments of \$35, of which \$22 will be

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

paid in 2020 and the remainder will be paid thereafter. On a quarterly basis, we record the greater of the cumulative actual content costs incurred or the cumulative minimum guarantee based on forecasted usage for the minimum guarantee period. The minimum guarantee period is the period of time that the minimum guarantee relates to, as specified in each agreement, which may be annual or a longer period. The cumulative minimum guarantee, based on forecasted usage, considers factors such as listening hours, revenue, subscribers and other terms of each agreement that impact our expected attainment or recoupment of the minimum guarantees based on the relative attribution method.

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

We have also entered into various agreements with third parties for general operating purposes. The cost of our common stock acquired in our capital return program but not paid for as of September 30, 2020 was also included in this category.

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

Legal Proceedings

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

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

Pre-1972 Sound Recording Litigation. On October 2, 2014, Flo & Eddie Inc. filed a class action suit against Pandora in the federal district court for the Central District of California. The complaint alleges a violation of California Civil Code Section 980, unfair competition, misappropriation and conversion in connection with the public performance of sound recordings recorded prior to February 15, 1972 (which we refer to as, "pre-1972 recordings"). On December 19, 2014, Pandora filed a motion to strike the complaint pursuant to California's Anti-Strategic Lawsuit Against Public Participation ("Anti-SLAPP") statute, which following denial of Pandora's motion was appealed to the Ninth Circuit Court of Appeals. In March 2017, the Ninth Circuit requested certification to the California Supreme Court on the substantive legal questions. The California Supreme Court accepted certification. In May 2019, the California Supreme Court issued an order dismissing consideration of the certified questions on the basis that, following the enactment of the Orrin G. Hatch-Bob Goodlatte Music Modernization Act, Pub. L. No. 115-264, 132 Stat. 3676 (2018) (the "MMA"), resolution of the questions posed by the Ninth Circuit Court of Appeals was no longer "necessary to . . . settle an important question of law."

The MMA grants a potential federal preemption defense to the claims asserted in the aforementioned lawsuits. In July 2019, Pandora took steps to avail itself of this preemption defense, including making the required payments under the MMA for

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

certain of its uses of pre-1972 recordings. Based on the federal preemption contained in the MMA (along with other considerations), Pandora asked the Ninth Circuit to order the dismissal of the Flo & Eddie, Inc. v. Pandora Media, Inc. case. On October 17, 2019, the Ninth Circuit Court of Appeals issued a memorandum disposition concluding that the question of whether the MMA preempts Flo and Eddie's claims challenging Pandora's performance of pre-1972 recordings "depends on various unanswered factual questions" and remanded the case to the District Court for further proceedings.

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

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

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

During the summer, the CRB held a multi-week hearing which concluded in September 2020. An initial determination by the CRB is expected to be issued during the first half of 2021.

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.

(17) Income Taxes

We file a consolidated federal income tax return for all of our wholly owned subsidiaries. For the three months ended September 30, 2020 and 2019, income tax expense was \$72 and \$70, respectively, and \$226 and \$227 for the nine months ended September 30, 2020 and 2019, respectively.

Our effective tax rate for the three months ended September 30, 2020 and 2019 was 20.9% and 22.2%, respectively. Our effective tax rate for the nine months ended September 30, 2020 and 2019 was 21.9% and 25.3%, respectively. The effective tax rates for the three and nine months ended September 30, 2020 were primarily impacted by federal and state tax credits and the recognition of excess tax benefits related to share-based compensation. The effective tax rate for the three months ended September 30, 2019 was primarily impacted by the recognition of excess tax benefits related to share-based compensation. The effective tax rate for the nine months ended September 30, 2019 was primarily impacted by the increase to the valuation allowance related to certain federal research and development credits that are no longer expected to be realizable. We estimate our effective tax rate for the year ending December 31, 2020 will be approximately 23%.

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

As of September 30, 2020 and December 31, 2019, we had a valuation allowance related to deferred tax assets of \$9 and \$70, respectively, that was not likely to be realized due to certain net operating loss limitations, including tax credits, and acquired net operating losses that were not more likely than not going to be utilized.

(18) Segments and Geographic Information

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

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

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

	For the Three Months Ended September 30, 2020					
	Sirius XM		Pandora		Total	
Revenue						
Subscriber revenue	\$ 1,462	\$	132	\$	1,594	
Advertising revenue	39		306		345	
Equipment revenue	47		_		47	
Other revenue	39		_		39	
Total revenue	1,587		438		2,025	
Cost of services (a)	(610)		(274)		(884)	
Segment gross profit	\$ 977	\$	164	\$	1,141	

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

	For the Three Months Ended September 30, 2020			
Segment Gross Profit	\$	1,141		
Subscriber acquisition costs		(110)		
Sales and marketing (a)		(205)		
Engineering, design and development (a)		(53)		
General and administrative (a)		(112)		
Depreciation and amortization		(125)		
Share-based payment expense		(58)		
Total other (expense) income		(134)		
Consolidated income before income taxes	\$	344		

⁽a) Share-based payment expense of \$11 related to cost of services, \$17 related to sales and marketing, \$11 related to engineering, design and development and \$19 related to general and administrative has been excluded.

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

For the Three Months Ended September 30, 2019

	Tot the Three Months Ended September 50, 2015				
	 Sirius XM	Pandora		Total	
Revenue					
Subscriber revenue	\$ 1,424	\$ 13	2 \$	1,556	
Advertising revenue	51	31	5	366	
Equipment revenue	45	_	_	45	
Other revenue	44	-	-	44	
Cotal revenue	 1,564	44	7	2,011	
Cost of services (b)	(597)	(27:	3)	(870)	
Segment gross profit	\$ 967	\$ 17	\$	1,141	

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

	For the Three Months Ended September 30, 2019			
Segment Gross Profit	\$	1,141		
Subscriber acquisition costs		(101)		
Sales and marketing (b)		(210)		
Engineering, design and development (b)		(63)		
General and administrative (b)		(108)		
Depreciation and amortization		(118)		
Share-based payment expense		(65)		
Total other (expense) income		(160)		
Consolidated income before income taxes	\$	316		

(b) Share-based payment expense of \$11 related to cost of services, \$23 related to sales and marketing, \$15 related to engineering, design and development and \$16 related to general and administrative has been excluded.

For the Nine Months Ended September 30, 2020 Sirius XM Pandora Total Revenue \$ 4,372 \$ 385 \$ 4,757 Subscriber revenue Advertising revenue 108 758 866 Equipment revenue 113 113 Other revenue 115 115 1,143 Total revenue 4,708 5,851 Cost of services (c) (1,796)(783) (2,579)2,912 360 3,272 Segment gross profit

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

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

	For the Nine Months Ended September 30, 2020			
Segment Gross Profit	\$	3,272		
Subscriber acquisition costs		(257)		
Sales and marketing (c)		(614)		
Engineering, design and development (c)		(165)		
General and administrative (c)		(305)		
Depreciation and amortization		(381)		
Share-based payment expense		(165)		
Acquisition and restructuring costs		(24)		
Total other (expense) income		(327)		
Consolidated income before income taxes	\$	1,034		

(c) Share-based payment expense of \$32 related to cost of services, \$50 related to sales and marketing, \$31 related to engineering, design and development and \$52 related to general and administrative has been excluded.

For the Nine Months Ended September 30, 2019

	For the Nine Worth's Ended September 30, 2017					
	Sirius XM	Pandora		Total		
Revenue						
Subscriber revenue	\$ 4,196	\$ 355	\$	4,551		
Advertising revenue	149	784		933		
Equipment revenue	127	_		127		
Other revenue	121	_		121		
Total revenue	4,593	1,139		5,732		
Cost of services (d)	(1,761)	(720)		(2,481)		
Segment gross profit	\$ 2,832	\$ 419	\$	3,251		

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

	For the Nine Months Ended September 30, 2019	
Segment Gross Profit	\$	3,251
Subscriber acquisition costs		(313)
Sales and marketing (d)		(591)
Engineering, design and development (d)		(169)
General and administrative (d)		(332)
Depreciation and amortization		(344)
Share-based payment expense		(171)
Acquisition and restructuring costs		(83)
Total other (expense) income		(350)
Consolidated income before income taxes	\$	898

⁽d) Share-based payment expense of \$30 related to cost of services, \$57 related to sales and marketing, \$37 related to engineering, design and development and \$47 related to general and administrative has been excluded.

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

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

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

(19) Subsequent Events

Capital Return Program

For the period from October 1, 2020 to October 20, 2020 we repurchased 29 shares of our common stock on the open market for an aggregate purchase price of \$68, including fees and commissions.

On October 6, 2020, our board of directors declared a quarterly dividend on our common stock in the amount of **9**.014641 per share of common stock payable on November 30, 2020 to stockholders of record as of the close of business on November 6, 2020.

Stitcher Acquisition

On July 13, 2020, Sirius XM entered into an agreement with The E.W. Scripps Company and certain of its subsidiaries ("Scripps") to acquire the assets of Stitcher, a pioneer in podcast production, distribution, and ad sales. On October 16, 2020, Sirius XM closed the acquisition of the assets of Stitcher. Under the terms of the asset purchase agreement, Sirius XM paid Scripps \$272 in cash, which amount includes a working capital adjustment. The agreement provides that Sirius XM will potentially make up to \$60 in additional contingent payments to Scripps based on Stitcher achieving certain financial metrics in 2020 and 2021.

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

All amounts referenced in this Item 2 are in millions, except subscriber amounts are in thousands and per subscriber and per installation amounts are in ones, unless otherwise stated.

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

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

Special Note Regarding Forward-Looking Statements

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

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

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

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

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

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

The statements set forth below should be read in combination with the information contained in this Item 2., "Management's Discussion and Analysis of Financial Condition and Results of Operations," contained in this Quarterly Report on Form 10-Q.

General

In general, the COVID-19 pandemic, has had, and is continuing to have, a widespread and broad reaching effect on the economy. Vehicle sales have declined and concerts have been postponed indefinitely. The impact of the COVID-19 pandemic on the travel industry has been far-reaching, adversely affecting airlines, hotels, cruise ships and theme parks. Unemployment rates, while improving, remain high. Similarly, although media spending by businesses is recovering, spending continues to be down compared to prior periods. While certain regions of the United States are in various phases of reopening, it remains unclear what a full economic recovery will look like as the United States continues to struggle with rolling outbreaks of the virus.

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

Liquidity

To date, the COVID-19 pandemic and its related economic impact has not affected our capital and financial resources, including our liquidity position. We believe that we have sufficient cash and cash equivalents, as well as debt capacity, to cover our estimated short-term and long-term funding needs, including amounts necessary to construct, launch and insure replacement satellites, as well as fund future stock repurchases, future dividend payments and pursue strategic opportunities. We expect to

continue repurchasing our common stock. These repurchases are subject to numerous factors, including but not limited to market conditions. We have not suspended our quarterly common stock dividend payments as a result of the COVID-19 pandemic. As of September 30, 2020, we had approximately \$33 of cash on hand and \$1,749 was available for future borrowing under our revolving credit facility (after giving effect to outstanding letters of credit).

The COVID-19 pandemic to date has not impacted our ability to access our traditional funding sources. The pandemic has not increased our costs of or reduced our access to capital under our revolving credit facility or in the debt capital markets, and we do not believe it is reasonably likely to do so in the near-term. In addition, we do not expect the pandemic to affect our ongoing ability to meet the covenants in our debt instruments, including under our revolving credit facility.

Business Performance Update

We remain focused on the well-being of our employees, customers and all those we serve while also taking responsive measures to adapt to the current environment. Against the backdrop of the COVID-19 pandemic we are seeing certain positive trends in certain key indicators that support our business. For example, in the quarter ended September 30, 2020, new vehicle sales recovered compared to the prior three and six month periods. Similarly, we have seen recent increases in advertising orders, although the outlook for advertising revenue remains uncertain and we cannot reasonably predict when advertising activity will return to pre-pandemic levels. For more information regarding the trends in our businesses, including the trends in revenues and expenses, see the information contained under "Management's Discussion and Analysis of Financial Condition and Results of Operations," contained in this Quarterly Report on Form 10-Q.

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

We have undertaken and are continually in the process of making a diverse range of operational adjustments in response to the effects of COVID-19 pandemic. From a customer care and support perspective, we have adjusted our operations with call center vendors. These adjustments have included shifting call center demand to "chat" platforms, activating interactive voice response (or "IVR") systems and online capabilities, and working with call center vendors to increase the capability for customer service agents to work remotely. We are focused on optimizing customer support performance in this new environment.

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

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

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

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

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

many of the other "Risk factors" included in our Annual Report on Form 10-K for the year ended December 31, 2019 and in our Quarterly Report on Form 10-Q for the three months ended March 31, 2020.

Executive Summary

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

Sirius XM

Our Sirius XM business features music, sports, entertainment, comedy, talk, news, traffic and weather channels, as well as infotainment services, in the United States on a subscription fee basis. The Sirius XM service is distributed through our two proprietary satellite radio systems and through the internet via applications for mobile devices, home devices and other consumer electronic equipment. Satellite radios are primarily distributed through automakers, retailers and our website. Our Sirius XM service is also available through our user interface, which we call "360L," that combines our satellite and streaming services into a single, cohesive in-vehicle entertainment experience. The primary source of revenue from our Sirius XM business is generated from subscription fees, with most of our customers subscribing to monthly, quarterly, semi-annual or annual plans. We also derive revenue from advertising on select non-music channels, direct sales of our satellite radios and accessories, and other ancillary services. As of September 30, 2020, our Sirius XM business had approximately 34.4 million subscribers.

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

In May 2020, we terminated the Automatic Labs Inc. ("Automatic") service, which was part of our connected services business. Automatic operated a service for consumers and auto dealers and offered an install-it-yourself adapter and mobile application, which transformed older vehicles into connected vehicles. During the nine months ended September 30, 2020, we recorded \$24 of restructuring expenses in our unaudited consolidated statements of comprehensive income related to this termination of the service. We did not record any restructuring expenses during the three months ended September 30, 2020.

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

Pandora

Our Pandora business operates a music, comedy and podcast streaming discovery platform, offering a personalized experience for each listener wherever and whenever they want to listen, whether through mobile devices, car speakers or connected devices. Pandora enables listeners to create personalized stations and playlists, discover new content, hear artist- and expert-curated playlists, podcasts and select Sirius XM content as well as search and play songs and albums on-demand. Pandora is available as an adsupported radio service, a radio subscription service, called Pandora Plus, and an on-demand subscription service, called Pandora Premium. As of September 30, 2020, Pandora had approximately 6.4 million subscribers. The majority of revenue from our Pandora business is generated from advertising on our Pandora ad-supported radio service. Pandora is the exclusive US ad sales representative for SoundCloud. Through this arrangement Pandora offers advertisers the ability to execute campaigns in the US across the Pandora and SoundCloud listening platforms. In addition, through AdsWizz, Pandora provides a comprehensive digital audio advertising technology platform, which connects audio publishers and advertisers with a variety of ad insertion, campaign trafficking, yield optimization, programmatic buying, marketplace and podcast monetization solutions. As of September 30, 2020, our Pandora business had approximately 58.6 million monthly active users.

On June 16, 2020, Sirius XM acquired Simplecast for \$28 in cash. Simplecast is a podcast management and analytics platform. Refer to Note 3 to our unaudited consolidated financial statements in Part I, Item I, of this Quarterly Report on Form 10-Q for more information on this acquisition.

In February 2020, Sirius XM completed a \$75 investment in SoundCloud. SoundCloud is the world's largest open audio platform, with a connected community of creators, listeners, and curators. SoundCloud's platform enables its users to upload,

promote, share and create audio entertainment. The minority investment complements the existing ad sales relationship between SoundCloud and Pandora.

Liberty Media

As of September 30, 2020, Liberty Media beneficially owned, directly and indirectly, approximately 74% of the outstanding shares of our common stock. As a result, we are a "controlled company" for the purposes of the NASDAQ corporate governance requirements.

Results of Operations

Actual Results

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

2020 vs 2019 Change For the Three Months Ended For the Nine Months Ended September 30, September 30, Three Months Nine Months 2020 2019 2020 2019 Amount % Amount % Revenue Sirius XM: 4 % 1,462 1,424 4,372 4,196 38 3 % \$ 176 Subscriber revenue 39 51 108 149 (12)(24)% (28)% Advertising revenue (41)47 45 113 127 2 4 % (14)(11)% Equipment revenue Other revenue 39 44 115 121 (5) (11)% (6) (5)% Total Sirius XM revenue 1,587 1,564 4,708 4,593 23 1 % 115 3 % Pandora: Subscriber revenue 132 132 385 355 **--** % 30 8 % Advertising revenue 306 315 758 784 (9) (3)% (26)(3)% Total Pandora revenue 438 447 1,143 1,139 (9) (2)% 4 **--** % 2,025 Total consolidated revenue 2,011 5,851 5,732 14 1 % 119 2 % Cost of services Sirius XM: 1,100 1,065 3 % 35 3 % Revenue share and royalties 369 358 11 114 113 330 2 Programming and content 328 1 1 % 1 % Customer service and billing 99 99 291 296 **-** % (5) (2)% 4 Transmission 33 29 90 79 14 % 11 14 % Cost of equipment 5 8 13 20 (3) (38)% (7) (35)% Total Sirius XM cost of services 620 607 1,824 1,788 13 2 % 36 2 % Pandora: Revenue share and royalties 233 234 659 619 **--** % 40 6 % (1) 9 3 21 10 200 % 11 110 % Programming and content 6 Customer service and billing 20 20 68 56 **--** % 12 21 % 39 3 % Transmission 13 17 38 (4) (24)% 1 Total Pandora cost of services 275 274 787 723 64 9 % 1 **--** % 14 895 2,611 2,511 2 % 100 Total consolidated cost of services 881 4 % Subscriber acquisition costs 257 9 9 % (18)% 110 101 313 (56)Sales and marketing 222 233 664 (11)2 % 648 (5)% 16 Engineering, design and development 64 78 196 206 (14)(18)%(10)(5)% General and administrative 131 124 357 379 7 6 % (22)(6)% Depreciation and amortization 125 118 381 344 7 6 % 37 11 % Acquisition and restructuring costs 24 83 nm (59)(71)% Total operating expenses 1,547 1,535 4,490 4,484 12 1 % 6 **--** % Income from operations 2 478 476 1,361 1,248 113 9 % **-** % Other (expense) income: (291) (104)(297)8 Interest expense 8 % (2)% (96)(6)Loss on extinguishment of debt (40)16 29 % (56)(40)(57)17 30 % Other income (expense) 2 10 2 12 600 % (2) nm (160)(327)23 Total other (expense) income (134)(350)26 16 % 7 % Income before income taxes 344 316 1,034 898 28 9 % 136 15 % Income tax expense (72)(70)(226)(227)(2) (3)% -- % 1 Net income 272 246 808 671 26 137 20 % 11 %

nm - not meaningful

Sirius XM Revenue

Refer to page 44 for our discussion on Sirius XM revenue.

Pandora Revenue

The nine months ended September 30, 2020 includes Pandora's revenue for the entire period while the nine months ended September 30, 2019 includes Pandora's revenue from the acquisition date, February 1, 2019. Refer to page 44 for our discussion on Pandora revenue.

Sirius XM Cost of Services

Refer to page 45 for our discussion on Sirius XM cost of services.

Pandora Cost of Services

The nine months ended September 30, 2020 includes Pandora's cost of services for the entire period while the nine months ended September 30, 2019 includes Pandora's cost of services from the acquisition date, February 1, 2019. Refer to page 46 for our discussion on Pandora cost of services.

Operating Costs

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

For the three months ended September 30, 2020 and 2019, subscriber acquisition costs were \$110 and \$101, respectively, an increase of 9%, or \$9, and increased as a percentage of total revenue. For the nine months ended September 30, 2020 and 2019, subscriber acquisition costs were \$257 and \$313, respectively, a decrease of 18% or \$56, and decreased as a percentage of total revenue. The increase for the three month period was driven by higher OEM installations as automakers pushed to produce pre-COVID-19 volumes, partially offset by lower hardware subsidies as certain subsidy rates decreased. The decrease for the nine month period was driven by a decline in OEM installations as a result of the COVID-19 pandemic as well as lower hardware subsidies as certain subsidy rates decreased.

We expect subscriber acquisition costs to fluctuate with OEM installations; 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 and other incentives to induce OEMs to include our technology in their vehicles.

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

For the three months ended September 30, 2020 and 2019, sales and marketing expenses were \$222 and \$233, respectively, a decrease of 5%, or \$11, and decreased as a percentage of total revenue. For the nine months ended September 30, 2020 and 2019, sales and marketing expenses were \$664 and \$648, respectively, an increase of 2% or \$16, and increased as a percentage of total revenue. The decrease for the three month period was primarily due to lower travel and entertainment and personnel-related costs. The increase for the nine month period was primarily due to the inclusion of Pandora for a full nine months in 2020, and additional subscriber communications, streaming services and products, retention programs and acquisition campaigns; partially offset by lower travel and entertainment costs.

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 and listeners.

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

For the three months ended September 30, 2020 and 2019, engineering, design and development expenses were \$64 and \$78, respectively, a decrease of 18%, or \$14, and decreased as a percentage of total revenue. For the nine months ended September 30, 2020 and 2019, engineering, design and development expenses were \$196 and \$206, respectively, a decrease of 5% or \$10, and decreased as a percentage of total revenue. The decreases were driven by lower personnel-related costs. The decrease for the nine-month period was partially offset by the inclusion of Pandora for a full nine months in 2020.

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 September 30, 2020 and 2019, general and administrative expenses were \$131 and \$124, respectively, an increase of 6%, or \$7, and increased as a percentage of total revenue. For the nine months ended September 30, 2020 and 2019, general and administrative expenses were \$357 and \$379, respectively, a decrease of 6% or \$22, and decreased as a percentage of total revenue. The increase for the three month period was primarily driven by higher personnel-related and legal costs. The decrease for the nine month period was driven by a one-time \$25 legal settlement reserve associated with Do-Not-Call litigation recorded in the first quarter of 2019, lower personnel-related costs, the closure of a sales and use tax audit in the second quarter of 2020, and lower travel and entertainment costs, partially offset by the inclusion of Pandora for a full nine months in 2020 and higher legal costs.

We expect our general and administrative expenses to 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 September 30, 2020 and 2019, depreciation and amortization expense was \$125 and \$118, respectively, an increase of 6%, or \$7. For the nine months ended September 30, 2020 and 2019, depreciation and amortization expense was \$381 and \$344, respectively, an increase of 11% or \$37. The increase was driven by additional assets placed in-service. The increase for the nine month period was also impacted by the inclusion of Pandora for a full nine months in 2020.

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

For the three months ended September 30, 2020 and 2019, there were no acquisition and restructuring costs. For the nine months ended September 30, 2020 and 2019, acquisition and restructuring costs were \$24 and \$83, respectively. The acquisition and restructuring costs for the nine months ended September 30, 2020 include costs associated with the termination of the Automatic service and costs associated with the acquisition of Simplecast. The acquisition and restructuring costs for the nine months ended September 30, 2019 include costs associated with the Pandora Acquisition as well as related reorganization costs.

Other (Expense) Income

Interest Expense includes interest on outstanding debt.

For the three months ended September 30, 2020 and 2019, interest expense was \$96 and \$104, respectively. For the nine months ended September 30, 2020 and 2019, interest expense was \$297 and \$291, respectively. The decrease for the three month period was primarily driven by lower average debt and interest rates. The increase for the nine month period was primarily driven by higher average debt due to the issuances of Sirius XM's 5.500% Senior Notes due 2029, 4.625% Senior Notes due 2024, and the 4.125% Senior Notes due 2030; partially offset by the redemption of Sirius XM's 6.00% Senior Notes due 2024, redemption of the Pandora convertible notes in 2019, and lower interest rates.

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

We recorded a \$40 loss on extinguishment of debt during the three and nine months ended September 30, 2020 and losses on extinguishment of debt of \$56 and \$57 during the three and nine months ended September 30, 2019, respectively The loss on extinguishment of debt recorded in 2020 was due to the redemption of \$500 principal amount of Sirius XM's 4.625% Senior Notes due 2023 and \$1,000 principal amount of Sirius XM's 5.375% Senior Notes due 2025. The loss recorded in 2019 was due to the repurchase of \$151 principal amount of Pandora's 1.75% Convertible Senior Notes due 2020.

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

For the three months ended September 30, 2020 and 2019, other income (expense) was \$2 and \$0, respectively. For the nine months ended September 30, 2020 and 2019, other income (expense) was \$10 and \$(2), respectively. During the nine months ended September 30, 2020, we recorded a one-time lawsuit settlement of \$7.

Income Taxes

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

For the three months ended September 30, 2020 and 2019, income tax expense was \$72 and \$70, respectively, and \$226 and \$227 for the nine months ended September 30, 2020 and 2019, respectively.

Our effective tax rate for the three months ended September 30, 2020 and 2019 was 20.9% and 22.2%, respectively. Our effective tax rate for the nine months ended September 30, 2020 and 2019 was 21.9% and 25.3%, respectively. The effective tax rates for the three and nine months ended September 30, 2020 were primarily impacted by federal and state tax credits and the recognition of excess tax benefits related to share-based compensation. The effective tax rate for the three months ended September 30, 2019 was primarily impacted by the recognition of excess tax benefits related to share-based compensation. The effective tax rate for the nine months ended September 30, 2019 was primarily impacted by the increase to the valuation allowance related to certain federal research and development credits that are no longer expected to be realizable. We estimate our effective tax rate for the year ending December 31, 2020 will be approximately 23%.

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

Unaudited Pro Forma Results

Set forth below are our pro forma results of operations for the three and nine months ended September 30, 2020 compared with the three and nine months ended September 30, 2019. These pro forma results are based on estimates and assumptions, which we believe are reasonable. They are not the results that would have been realized had the Pandora Acquisition actually occurred on January 1, 2019 and are not indicative of our consolidated results of operations in future periods. The pro forma results primarily include adjustments related to amortization of acquired intangible assets, depreciation of property and equipment, acquisition costs, fair value gain or loss on the Pandora investment and associated tax impacts. Pro forma adjustments are not included for the acquisition of Simplecast. Please refer to the Footnotes to Results of Operations (pages 49 through 54) following our discussion of results of operations.

										2020 vs 2019 Change							
	For th		ths End	ded September	Fo	r the Nine Mont	hs End 30,	ded September		Three M	onths		Nine M	onths			
		2020		2019		2020		2019		Amount	%	Α	Amount	%			
Revenue	(P:	ro Forma)		(Pro Forma)		(Pro Forma)		(Pro Forma)									
Sirius XM:																	
Subscriber revenue	\$	1,462	\$	1,424	\$	4,372	\$	4,196	\$	38	3 %	\$	176	4 %			
Advertising revenue		39		51		108		149		(12)	(24)%		(41)	(28)%			
Equipment revenue		47		45		113		127		2	4 %		(14)	(11)%			
Other revenue		41		46		121		127		(5)	(11)%		(6)	(5)%			
Total Sirius XM revenue		1,589		1,566		4,714		4,599		23	1 %		115	3 %			
Pandora:																	
Subscriber revenue		132		132		385		401		_	— %		(16)	(4)%			
Advertising revenue		306		315		758		852		(9)	(3)%		(94)	(11)%			
Total Pandora revenue		438		447		1,143		1,253		(9)	(2)%		(110)	(9)%			
Total consolidated revenue	<u> </u>	2,027		2,013		5,857		5,852		14	1 %		5	— %			
Cost of services																	
Sirius XM:																	
Revenue share and royalties		369		358		1,100		1,065		11	3 %		35	3 %			
Programming and content		114		113		330		328		1	1 %		2	1 %			
Customer service and billing		99		99		291		296		_	— %		(5)	(2)%			
Transmission		33		29		90		79		4	14 %		11	14 %			
Cost of equipment		5		8		13		20		(3)	(38)%		(7)	(35)%			
Total Sirius XM cost of services		620		607		1,824	-	1,788	-	13	2 %		36	2 %			
Pandora:																	
Revenue share and royalties		235		238		665		701		(3)	(1)%		(36)	(5)%			
Programming and content		9		3		21		10		6	200 %		11	110 %			
Customer service and billing		20		20		68		64		_	— %		4	6 %			
Transmission		13		17		39		43		(4)	(24)%		(4)	(9)%			
Total Pandora cost of services		277		278	_	793		818		(1)	- %		(25)	(3)%			
Total consolidated cost of services		897		885		2,617		2,606		12	1 %		11	- %			
Subscriber acquisition costs		110		101		257		313		9	9 %		(56)	(18)%			
Sales and marketing		222		233		664		684		(11)	(5)%		(20)	(3)%			
Engineering, design and development		64		78		196		220		(14)	(18)%		(24)	(11)%			
General and administrative		131		124		357		395		7	6 %		(38)	(10)%			
Depreciation and amortization		125		118		381		359		7	6 %		22	6 %			
Acquisition and restructuring costs		_		_		24		_			nm		24	nm			
Total operating expenses		1,549		1,539	_	4,496		4,577		10	1 %		(81)	(2)%			
Income from operations		478		474		1,361		1,275		4	1 %		86	7 %			
Other (expense) income:		170		.,.		1,501		1,275		•	1 /0		00	7 70			
Interest expense		(96)		(104)		(297)		(293)		8	8 %		(4)	(1)%			
Loss on extinguishment of debt		(40)		(56)		(40)		(57)		16	29 %		17	30 %			
Other income (expense)		2		(30)		10		(1)		2	nm		11	1100 %			
Total other (expense) income		(134)	_	(160)	_	(327)	_	(351)	_	26	16 %		24	7 %			
Income before income taxes		344		314	_	1,034		924		30	10 %	_					
													110	12 %			
Income tax expense	Φ.	(72)	Ф.	(69)	Ф	(226)	e	(234)	e.	(3)	(4)%	Φ.	8	3 %			
Net income	\$	272		245	_	808	_	690	_	27	11 %		118	17 %			
Adjusted EBITDA	\$	661	\$	657	\$	1,915	\$	1,841	\$	4	1 %	\$	74	4 %			

nm - not meaningful

Sirius XM Revenue

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

For the three months ended September 30, 2020 and 2019, subscriber revenue was \$1,462 and \$1,424, respectively, an increase of 3%, or \$38. For the nine months ended September 30, 2020 and 2019, subscriber revenue was \$4,372 and \$4,196, respectively, an increase of 4% or \$176. The increases were primarily driven by higher self-pay revenue as a result of increases in certain subscription plans and higher U.S. Music Royalty Fees due to a higher music royalty rate, partially offset by lower paid promotional revenue.

We expect subscriber revenues to increase based on the growth of our subscriber base, increases in the average price charged and the sale of additional services to subscribers.

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

For the three months ended September 30, 2020 and 2019, advertising revenue was \$39 and \$51, respectively, a decrease of 24%, or \$12. For the nine months ended September 30, 2020 and 2019, advertising revenue was \$108 and \$149, respectively, a decrease of 28% or \$41. The decreases were due to lower advertising as a result of the impact of the COVID-19 pandemic primarily on news and sports channels related to the cancellation of live sporting events.

We expect our Sirius XM advertising revenue to grow as we continue our recovery to pre-COVID-19 levels.

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

For the three months ended September 30, 2020 and 2019, equipment revenue was \$47 and \$45, respectively, an increase of 4% or \$2. For the nine months ended September 30, 2020 and 2019, equipment revenue was \$113 and \$127, respectively, a decrease of 11% or \$14. The increase for the three month period was driven by higher royalty revenue as new vehicle production increased as automakers pushed to get back to pre-COVID-19 levels. The decrease for the nine month period was driven by lower royalty revenue as new vehicle production decreased due to the impact of the COVID-19 pandemic and by lower direct sales to consumers.

We expect equipment revenue to increase as royalty revenue associated with certain new chipsets increases.

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

For the three months ended September 30, 2020 and 2019, other revenue was \$41 and \$46, respectively, a decrease of 11%, or \$5. For the nine months ended September 30, 2020 and 2019, other revenue was \$121 and \$127, respectively, a decrease of 5% or \$6. The decreases were primarily driven by lower revenue generated by our connected vehicle services.

We expect other revenue to remain relatively flat.

Pandora Revenue

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

For the three months ended September 30, 2020 and 2019, Pandora subscriber revenue was \$132. For the nine months ended September 30, 2020 and 2019, Pandora subscriber revenue was \$385 and \$401, respectively, a decrease of 4% or \$16. For the three month period, higher revenue from growth in Pandora Premium plans was offset by a decrease due to the expiration in 2019 of the one-year promotional subscriptions generated through an expired agreement with T-Mobile. The decrease for the nine month period was primarily due to the expiration of the one-year promotional subscriptions generated through an expired agreement with T-Mobile.

We expect Pandora subscriber revenues to increase with growth of our Pandora subscriber base.

Pandora Advertising Revenue is generated primarily from audio, display and video advertising from on-platform and off-platform advertising.

For the three months ended September 30, 2020 and 2019, Pandora advertising revenue was \$306 and \$315, respectively, a decrease of 3%, or \$9. For the nine months ended September 30, 2020 and 2019, Pandora advertising revenue was \$758 and \$852, respectively, a decrease of 11% or \$94. The decreases were primarily due to lower advertising as a result of the impact of the COVID-19 pandemic.

We expect our advertising revenue to increase due to our off-platform advertising opportunities and as we continue to recover to pre-COVID-19 levels.

Total Consolidated Revenue

Total Consolidated Revenue for the three months ended September 30, 2020 and 2019, was \$2,027 and \$2,013, respectively, an increase of 1%, or \$14. Total Consolidated Revenue for the nine months ended September 30, 2020 and 2019, was \$5,857 and \$5,852, respectively, an increase of \$5.

Sirius XM Cost of Services

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

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

For the three months ended September 30, 2020 and 2019, revenue share and royalties were \$369 and \$358, respectively, an increase of 3%, or \$11, and increased as a percentage of total Sirius XM revenue. For the nine months ended September 30, 2020 and 2019, revenue share and royalties were \$1,100 and \$1,065, respectively, an increase of 3%, or \$35, and increased as a percentage of total Sirius XM revenue. The increases were driven by overall greater revenues subject to music royalties and revenue share.

We expect our Sirius XM revenue share and royalty costs to increase as our revenues grow.

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

For the three months ended September 30, 2020 and 2019, programming and content expenses were \$114 and \$113, respectively, an increase of 1%, or \$1, and decreased as a percentage of total Sirius XM revenue. For the nine months ended September 30, 2020 and 2019, programming and content expenses were \$330 and \$328, respectively, a slight increase of \$2, but decreased as a percentage of total Sirius XM revenue. The increase for the three month period was driven by higher content licensing costs. The increase for the nine month period was primarily driven by higher content licensing costs as well as greater personnel-related costs partially offset by one-time benefits for reduced sports programming as a result of shortened sports seasons due to the COVID-19 pandemic.

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

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

For the three months ended September 30, 2020 and 2019, customer service and billing expenses were \$99. For the nine months ended September 30, 2020 and 2019, customer service and billing expenses were \$291 and \$296, respectively, a decrease of 2%, or \$5, and decreased as a percentage of total Sirius XM revenue. The decrease for the nine-month period was driven by reduced staffing resulting from stay at home orders issued in countries in which our vendors operate call centers.

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

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

For the three months ended September 30, 2020 and 2019, transmission expenses were \$33 and \$29, respectively, an increase of 14%, or \$4, and increased as a percentage of total Sirius XM revenue. For the nine months ended September 30, 2020 and 2019, transmission expenses were \$90 and \$79, respectively, an increase of 14%, or \$11, and increased as a percentage of total Sirius XM revenue. The increases were primarily driven by higher cloud hosting and wireless costs associated with our 360L platform and our streaming and connected vehicle services.

We expect our Sirius XM transmission expenses to increase as costs associated with our 360L platform and investments in internet streaming grow.

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

For the three months ended September 30, 2020 and 2019, cost of equipment was \$5 and \$8, respectively, a decrease of 38%, or \$3, and decreased as a percentage of equipment revenue. For the nine months ended September 30, 2020 and 2019, cost of equipment was \$13 and \$20, respectively, a decrease of 35%, or \$7, and decreased as a percentage of equipment revenue. The decreases were primarily due to lower direct sales to consumers and lower inventory reserves.

We expect our Sirius XM cost of equipment to fluctuate with the sales of our satellite radios.

Pandora Cost of Services

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

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

For the three months ended September 30, 2020 and 2019, revenue share and royalties were \$235 and \$238, respectively, a decrease of 1%, or \$3, but increased as a percentage of total Pandora revenue. For the nine months ended September 30, 2020 and 2019, revenue share and royalties were \$665 and \$701, respectively, a decrease of 5%, or \$36, but increased as a percentage of total Pandora revenue. The decrease for the three month period was primarily due to lower listening hours. The decrease for the nine month period was primarily driven by a reversal of a pre-acquisition reserve of \$16 for royalties during the first quarter of 2020, lower listening hours, and lower costs resulting from the presence of minimum guarantees associated with direct license agreements with major record labels which ended in 2019.

We expect our Pandora revenue share to increase as off-platform revenue increases and our royalty costs to increase due to higher music royalty rates.

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

For the three months ended September 30, 2020 and 2019, programming and content expenses were \$9 and \$3, respectively, an increase of 200%, or \$6, and increased as a percentage of total Pandora revenue. For the nine months ended September 30, 2020 and 2019, programming and content expenses were \$21 and \$10, respectively, an increase of 110%, or \$11, and increased as a percentage of total Pandora revenue. The increases were primarily attributable to higher production costs and personnel-related costs

We expect our Pandora programming and content costs to increase as we offer additional programming and continue to produce live listener events and promotions.

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

For the three months ended September 30, 2020 and 2019, customer service and billing expenses were \$20, remaining relatively flat, but increased as a percentage of total Pandora revenue. For the nine months ended September 30, 2020 and 2019, customer service and billing expenses were \$68 and \$64, respectively, an increase of 6%, or \$4, and increased as a percentage of total Pandora revenue. The increase was primarily driven by higher bad debt expense, partially offset by lower transaction costs.

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

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

For the three months ended September 30, 2020 and 2019, transmission expenses were \$13 and \$17, respectively, a decrease of 24%, or \$4, and decreased as a percentage of total Pandora revenue. For the nine months ended September 30, 2020 and 2019, transmission expenses were \$39 and \$43, respectively, a decrease of 9%, or \$4, and decreased as a percentage of total Pandora revenue. The decreases were driven by lower streaming costs driven by lower listener hours.

We expect our Pandora transmission costs to fluctuate with changes in listener hours.

Operating Costs

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

For the three months ended September 30, 2020 and 2019, subscriber acquisition costs were \$110 and \$101, respectively, an increase of 9%, or \$9, and increased as a percentage of total revenue. For the nine months ended September 30, 2020 and 2019, subscriber acquisition costs were \$257 and \$313, respectively, a decrease of 18%, or \$56, and decreased as a percentage of total revenue. The increase for the three month period was driven by higher OEM installations as automakers pushed to regain pre-COVID-19 volumes, partially offset by lower hardware subsidies as certain subsidy rates decreased. The decrease for the nine month period was driven by a decline in OEM installations as a result of the COVID-19 pandemic as well as lower hardware subsidies as certain subsidy rates decreased.

We expect subscriber acquisition costs to fluctuate with OEM installations; 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 and other incentives to induce OEMs to include our technology in their vehicles.

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

For the three months ended September 30, 2020 and 2019, sales and marketing expenses were \$222 and \$233, respectively, a decrease of 5%, or \$11, and decreased as a percentage of total revenue. For the nine months ended September 30, 2020 and 2019, sales and marketing expenses were \$664 and \$684, respectively, a decrease of 3%, or \$20, and decreased as a percentage of total revenue. The decreases were primarily due to lower personnel-related costs and lower travel and entertainment costs, partially offset by additional subscriber communications and acquisition campaigns.

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

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 September 30, 2020 and 2019, engineering, design and development expenses were \$64 and \$78, respectively, a decrease of 18%, or \$14, and decreased as a percentage of total revenue. For the nine months ended September 30, 2020 and 2019, engineering, design and development expenses were \$196 and \$220, respectively, a decrease of 11%, or \$24, and decreased as a percentage of total revenue. The decreases were driven by lower personnel-related costs.

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

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

For the three months ended September 30, 2020 and 2019, general and administrative expenses were \$131 and \$124, respectively, an increase of 6%, or \$7, and increased as a percentage of total revenue. For the nine months ended September 30, 2020 and 2019, general and administrative expenses were \$357 and \$395, respectively, a decrease of 10%, or \$38, and decreased as a percentage of total revenue. The increase for the three month period was primarily driven by higher personnel-related costs. The decrease for the nine month period was primarily driven by a one-time \$25 legal settlement reserve associated with Do-Not-Call litigation recorded in the first quarter of 2019, lower personnel-related costs, and the closure of a sales and use tax audit in the second quarter of 2020, partially offset by higher legal costs.

We expect our general and administrative expenses to 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 September 30, 2020 and 2019, depreciation and amortization expense was \$125 and \$118, respectively, an increase of 6%, or \$7. For the nine months ended September 30, 2020 and 2019, depreciation and amortization expense was \$381 and \$359, respectively, an increase of 6%, or \$22. The increases were driven by additional assets placed in-service.

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

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

Other (Expense) Income

Interest Expense includes interest on outstanding debt.

For the three months ended September 30, 2020 and 2019, interest expense was \$96 and \$104, respectively, a decrease of 8%, or \$8. For the nine months ended September 30, 2020 and 2019, interest expense was \$297 and \$293, respectively, an increase of 1%, or \$4. The decrease for the three month period was primarily driven by lower average debt and lower average interest rates. The increase for the nine month period was primarily driven by higher average debt due to the issuances of the 5.500% Senior Notes due 2029, the 4.625% Senior Notes due 2024 and the 4.125% Senior Notes due 2030; partially offset by the redemption of the 6.00% Senior Notes due 2024 and lower average interest rates.

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

We recorded a \$40 loss on extinguishment of debt during the three and nine months ended September 30, 2020 and losses on extinguishment of debt of \$56 and \$57 loss during the three and nine months ended September 30, 2019, respectively. The loss on extinguishment of debt recorded in 2020 was due to the redemption of \$500 principal amount of Sirius XM's 4.625% Senior Notes due 2023 and \$1,000 principal amount of Sirius XM's 5.375% Senior Notes due 2025. The loss on extinguishment of debt recorded in 2019 was due to the repurchase of \$151 principal amount of Pandora's 1.75% Convertible Senior Notes due 2020.

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

For the three months ended September 30, 2020 and 2019, other income (expense) was \$2 and \$0, respectively. For the nine months ended September 30, 2020 and 2019, other income (expense) was \$10 and \$(1), respectively. During the nine months ended September 30, 2020, we recorded a one-time lawsuit settlement of \$7.

Income Taxes

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

For the three months ended September 30, 2020 and 2019, income tax expense was \$72 and \$69, respectively, and \$226 and \$234 for the nine months ended September 30, 2020 and 2019, respectively.

Our effective tax rate for the three months ended September 30, 2020 and 2019 was 20.9% and 22.0%, respectively. Our effective tax rate for the nine months ended September 30, 2020 and 2019 was 21.9% and 25.3%, respectively. The effective tax rates for the three and nine months ended September 30, 2020 were primarily impacted by federal and state tax credits and the recognition of excess tax benefits related to share-based compensation. The effective tax rate for the three months ended September 30, 2019 was primarily impacted by the recognition of excess tax benefits related to share-based compensation. The effective tax rate for the nine months ended September 30, 2019 was primarily impacted by the increase to the valuation allowance related to certain federal research and development credits that are no longer expected to be realizable. We estimate our effective tax rate for the year ending December 31, 2020 will be approximately 23%.

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

Footnotes to Pro Forma Results of Operations

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

Net income

		Unaudited for the Three Months Ended September 30, 2020							
	As Reported	Predecessor Financial Information	Purchase Price Accounting Adjustments	Ref	Pro Forma				
Revenue	As Reported		Accounting Aujustinents	Kei	110 Forma				
Sirius XM:									
Subscriber revenue	\$ 1,462	\$ —	\$ _		\$ 1,462				
Advertising revenue	39	_	_		39				
Equipment revenue	47	_	_		47				
Other revenue	39	_	2	(a)	41				
Total Sirius XM revenue	1,587				1,589				
Pandora:	,				,				
Subscriber revenue	132	_	_		132				
Advertising revenue	306	_	_		306				
Total Pandora revenue	438	_		_	438				
Total consolidated revenue	2,025			-	2,027				
Cost of services					_,				
Sirius XM:									
Revenue share and royalties	369	_	_		369				
Programming and content	114	_	_		114				
Customer service and billing	99	_	_		99				
Transmission	33	_	_		33				
Cost of equipment	5	_	_		5				
Total Sirius XM cost of services	620			•	620				
Pandora:									
Revenue share and royalties	233	_	2	(b)	235				
Programming and content	9	_	_	,	9				
Customer service and billing	20	_	_		20				
Transmission	13	_	_		13				
Total Pandora cost of services	275	_		-	277				
Total consolidated cost of services	895	_	2	_	897				
Subscriber acquisition costs	110	_	_		110				
Sales and marketing	222	_	_		222				
Engineering, design and development	64	_	_		64				
General and administrative	131	_	_		131				
Depreciation and amortization	125	_	_		125				
Acquisition and restructuring costs	_	_	_		_				
Total operating expenses	1,547	_		-	1,549				
Income from operations	478	_		•	478				
Other (expense) income:									
Interest expense	(96)	_	_		(96)				
Loss on extinguishment of debt	(40)		_		(40)				
Other income (expense)	2	_	_		2				
Total other (expense) income	(134)	_			(134)				
Income before income taxes	344			_	344				
Income tax expense	(72)	_	_		(72)				
	(72)	·-		_	(72)				

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

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Net income

		Unaudited for the Thi	ree Months Ended September	30, 2019	
	As Reported	Predecessor Financial Information	Purchase Price Accounting Adjustments	Ref	Pro Forma
Revenue	As Reported	Information	Accounting Aujustinents	Kei	110 Forma
Sirius XM:					
Subscriber revenue	\$ 1,424	\$ _	\$ _		\$ 1,424
Advertising revenue	51	_	_		51
Equipment revenue	45	_	_		45
Other revenue	44	_	2	(c)	46
Total Sirius XM revenue	1,564		2		1,566
Pandora:	,				,
Subscriber revenue	132	_	_		132
Advertising revenue	315	_	_		315
Total Pandora revenue	447				447
Total consolidated revenue	2,011		2		2,013
Cost of services	_,,				_,,,,,
Sirius XM:					
Revenue share and royalties	358	_	_		358
Programming and content	113	_	_		113
Customer service and billing	99	_	_		99
Transmission	29	_	_		29
Cost of equipment	8	_	_		8
Total Sirius XM cost of services	607				607
Pandora:					
Revenue share and royalties	234	_	4	(d)	238
Programming and content	3	_	_	,	3
Customer service and billing	20	_	_		20
Transmission	17	_	_		17
Total Pandora cost of services	274		4	-	278
Total consolidated cost of services	881		4	_	885
Subscriber acquisition costs	101	_	_		101
Sales and marketing	233	_	_		233
Engineering, design and development	78	_	_		78
General and administrative	124	_	_		124
Depreciation and amortization	118	_	_		118
Acquisition and restructuring costs	_	_	_		_
Total operating expenses	1,535		4	-	1,539
Income from operations	476		(2)	•	474
Other (expense) income:			(-)		
Interest expense	(104)	_	_		(104)
Loss on extinguishment of debt	(56)	_	_		(56)
Other income (expense)	=	_	_		_
Total other (expense) income	(160)			-	(160)
Income before income taxes	316		(2)	-	314
Income tax expense	(70)	_	1	(e)	(69)
The other way expense	(70)		1	_ (0)	(0)

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(1)

 ⁽c) This adjustment eliminates the impact of additional revenue associated with certain programming agreements recorded as part of the XM Merger.
 (d) This adjustment includes the impact of additional expense associated with minimum guarantee royalty contracts recorded as part of the Pandora Acquisition.
 (e) This adjustment to income taxes was calculated by applying Sirius XM's statutory tax rate at September 30, 2019 to the pro forma adjustments of \$(2)\$.

Income tax expense

Net income

		Unaudited for the Ni	ne Months Ended September 3	30, 2020	
	As Reported	Predecessor Financial Information	Purchase Price Accounting Adjustments	Ref	Pro Forma
Revenue					
Sirius XM:					
Subscriber revenue	\$ 4,372	\$	\$		\$ 4,372
Advertising revenue	108	_	_		108
Equipment revenue	113	_	_		113
Other revenue	115		6	(f)	121
Total Sirius XM revenue	4,708	_	6		4,714
Pandora:					
Subscriber revenue	385	_	_		385
Advertising revenue	758	_	_		758
Total Pandora revenue	1,143		_	_'	1,143
Total consolidated revenue	5,851	_	6		5,857
Cost of services					
Sirius XM:					
Revenue share and royalties	1,100	_	_		1,100
Programming and content	330	_	_		330
Customer service and billing	291	_	_		291
Transmission	90	_	_		90
Cost of equipment	13	_	_		13
Total Sirius XM cost of services	1,824	_		='	1,824
Pandora:					
Revenue share and royalties	659	_	6	(g)	665
Programming and content	21	_	_		21
Customer service and billing	68	_	_		68
Transmission	39	_	_		39
Total Pandora cost of services	787	_	6	='	793
Total consolidated cost of services	2,611	_	6		2,617
Subscriber acquisition costs	257	_	_		257
Sales and marketing	664	_	_		664
Engineering, design and development	196	_	_		196
General and administrative	357	_	_		357
Depreciation and amortization	381	_	_		381
Acquisition and restructuring costs	24	_	_		24
Total operating expenses	4,490	_	6	-	4,496
Income from operations	1,361		_		1,361
Other (expense) income:					
Interest expense	(297)	_	_		(297)
Loss on extinguishment of debt	(40)	_	_		(40)
Other income (expense)	10	_	_		10
Total other (expense) income	(327)		_		(327)
Income before income taxes	1,034		_		1,034
•	(00.5)				

(226)

808

(226)

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

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

	Unaudited for the Nine Months Ended September 30, 2019						
	As Reported	Predecessor Financial Information (h)	Purchase Price Accounting Adjustments	Ref	Pro Forma		
Revenue	•						
Sirius XM:							
Subscriber revenue	\$ 4,196	\$	\$		\$ 4,196		
Advertising revenue	149	_	_		149		
Equipment revenue	127	_	_		127		
Other revenue	121	_	6	(i)	127		
Total Sirius XM revenue	4,593	_	6	·	4,599		
Pandora:							
Subscriber revenue	355	46	_		401		
Advertising revenue	784	68	_		852		
Total Pandora revenue	1,139	114		·	1,253		
Total consolidated revenue	5,732	114	6		5,852		
Cost of services							
Sirius XM:							
Revenue share and royalties	1,065	_	_		1,065		
Programming and content	328	_	_		328		
Customer service and billing	296	_	_		296		
Transmission	79	_	_		79		
Cost of equipment	20	_	_		20		
Total Sirius XM cost of services	1,788		_	· -	1,788		
Pandora:							
Revenue share and royalties	619	71	11	(j)	701		
Programming and content	10	_	_		10		
Customer service and billing	56	8	_		64		
Transmission	38	5	_		43		
Total Pandora cost of services	723	84	11	· -	818		
Total consolidated cost of services	2,511	84	11		2,606		
Subscriber acquisition costs	313	_	_		313		
Sales and marketing	648	36	_		684		
Engineering, design and development	206	14	_		220		
General and administrative	379	16	_		395		
Depreciation and amortization	344	6	9	(k)	359		
Acquisition and restructuring costs	83	1	(84)	(1)	_		
Total operating expenses	4,484	157	(64)	•	4,577		
Income from operations	1,248	(43)	70		1,275		
Other (expense) income:		· · ·					
Interest expense	(291)	(2)	_		(293)		
Loss on extinguishment of debt	(57)		_		(57)		
Other income (expense)	(2)	1	_		(1)		
Total other (expense) income	(350)	(1)	_		(351)		
Income before income taxes	898	(44)	70	•	924		

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

Income tax expense

Net income

(227)

671

(44)

(7) (m)

63

(234)

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

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

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

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

(m) This adjustment to income taxes was calculated by applying Sirius XM's statutory tax rate at September 30, 2019 to the pro forma adjustments of \$70 and Pandora's loss before income tax of \$44.

Key Financial and Operating Performance Metrics

In this section, we present certain financial performance measures some of which are presented as Non-GAAP items, which include free cash flow and adjusted EBITDA. We also present certain operating performance measures. Our adjusted EBITDA excludes the impact of share-based payment expense and certain purchase price accounting adjustments related to the XM Merger and the Pandora Acquisition. Additionally, when applicable, our adjusted EBITDA metric excludes the effect of significant items that do not relate to the on-going performance of our business. We use these Non-GAAP financial and operating performance measures to manage our business, to set operational goals and as a basis for determining performance-based compensation for our employees. See the accompanying glossary on pages 60 through 63 for more details and for the reconciliation to the most directly comparable GAAP measure (where applicable).

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

Our Non-GAAP financial measures should be viewed in addition to, and not as an alternative for or superior to, our reported results prepared in accordance with GAAP. In addition, our Non-GAAP financial measures may not be comparable to similarly-titled measures by other companies. Please refer to the glossary (pages 60 through 63) for a further discussion of such Non-GAAP financial and operating performance measures and reconciliations to the most directly comparable GAAP measure (where applicable). Subscribers and subscription related revenues and expenses associated with our connected vehicle services and Sirius XM Canada are not included in Sirius XM's subscriber count or subscriber-based operating metrics.

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

	As of Sep	tember 30,	2020 vs 201	19 Change
(subscribers in thousands)	2020	2019	Amount	%
Sirius XM				
Self-pay subscribers	30,480	29,637	843	3 %
Paid promotional subscribers	3,955	4,917	(962)	(20)%
Ending subscribers	34,435	34,554	(119)	%
Traffic users	9,430	9,378	52	1 %
Sirius XM Canada subscribers	2,612	2,706	(94)	(3)%
Pandora				
Monthly active users - all services	58,583	63,100	(4,517)	(7)%
Self-pay subscribers	6,361	6,257	104	2 %
Paid promotional subscribers	43	45	(2)	(4)%
Ending subscribers	6,404	6,302	102	2 %

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

							2020 vs 2019 Change								
	 For the Three Septer		 For the Nine Septe				Three Mon	ths		Nine Mont	hs				
(subscribers in thousands)	2020	2019	2020		2019 (1)		Amount	%		Amount	%				
Sirius XM															
Self-pay subscribers	169	302	502		723		(133)	(44)%		(221)	(31)%				
Paid promotional subscribers	17	(92)	 (975)		(207)		109	(118)%		(768)	371 %				
Net additions	186	210	(473)		516		(24)	(11)%		(989)	(192)%				
Weighted average number of subscribers	34,330	34,397	34,480		34,181		(67)	— %		299	1 %				
Average self-pay monthly churn	1.7 %	1.7 %	1.7 %)	1.7 %	ó	— %	— %		— %	— %				
ARPU (2)	\$ 14.15	\$ 13.90	\$ 14.02	\$	13.75	\$	0.25	2 %	\$	0.27	2 %				
SAC, per installation	\$ 20.98	\$ 21.01	\$ 20.49	\$	22.62	\$	(0.03)	%	\$	(2.13)	(9)%				
Pandora															
Self-pay subscribers	105	33	196		343		72	218 %		(147)	(43)%				
Paid promotional subscribers	(3)	(688)	(6)		(711)		685	(100)%		705	(99)%				
Net additions	102	(655)	190		(368)		757	(116)%		558	(152)%				
Weighted average number of subscribers	6,376	6,753	6,281		6,778		(377)	(6)%		(497)	(7)%				
ARPU	\$ 6.83	\$ 6.46	\$ 6.79	\$	6.56	\$	0.37	6 %	\$	0.23	4 %				
Ad supported listener hours (in billions)	3.12	3.32	9.53		10.23		(0.20)	(6)%		(0.70)	(7)%				
Advertising revenue per thousand listener hours (RPM)	\$ 84.46	\$ 85.33	\$ 68.83	\$	75.96	\$	(0.87)	(1)%	\$	(7.13)	(9)%				
Licensing costs per thousand listener hours															
(LPM)	\$ 40.16	\$ 39.05	\$ 38.11	\$	37.83	\$	1.11	3 %		0.28	1 %				
Licensing costs per paid subscriber (LPU)	\$ 4.19	\$ 4.09	\$ 4.12	\$	4.07	\$	0.10	2 %	\$	0.05	1 %				
Total Company															
Adjusted EBITDA	\$ 661	\$ 657	\$ 1,915	\$	1,841	\$	4	1 %	\$	74	4 %				
Free cash flow (3)	\$ 361	\$ 465	\$ 1,212	\$	1,239	\$	(104)	(22)%	\$	(27)	(2)%				

2020 vs 2019 Change

- (1) Includes Pandora's results for the nine month period, including pre-acquisition results for the period January 1, 2019 through January 31, 2019.
- (2) ARPU for Sirius XM excludes subscriber revenue from our connected vehicle services of \$44 and \$41 for the three months and \$130 and \$116 for the nine months ended September 30, 2020 and 2019, respectively.
- (3) Free cash flow has not been adjusted for Pandora's pre-acquisition results.

Sirius XM

Subscribers. At September 30, 2020, Sirius XM had approximately 34,435 subscribers, a decrease of 119, from the approximately 34,554 subscribers as of September 30, 2019. The decrease was due to the decrease in paid promotional subscribers, partially offset by growth in our self-pay subscriber base from subsequent owner trial conversions as well as subscriber win back programs.

For the three months ended September 30, 2020 and 2019, net subscriber additions were 186 and 210, respectively. For the nine months ended September 30, 2020 and 2019, net subscriber additions were (473) and 516, respectively. For the three month period, paid promotional subscribers increased as shipments and trial subscription starts from automakers offering paid subscriptions rebounded from the impact of the COVID-19 pandemic. For the nine month period, paid promotional subscribers decreased as shipments and trial subscription starts from automakers offering paid subscriptions declined as a result of the COVID-19 pandemic. Self-pay net additions decreased year over year as increases in subsequent owner trial conversions and reductions in vehicle related and non-pay churn were offset by reduced additions from win back programs, new car conversions, and aftermarket programs as well as increases in voluntary churn.

Traffic Users. We offer services that provide graphic information as to road closings, traffic flow and incident data to consumers with compatible in-vehicle navigation systems. At September 30, 2020, Sirius XM had approximately 9,430 traffic users, an increase of 52 users, or 1%, from the approximately 9,378 traffic users as of September 30, 2019.

Sirius XM Canada Subscribers. At September 30, 2020, Sirius XM Canada had approximately 2,612 subscribers, a decrease of 94, or 3%, from the approximately 2,706 Sirius XM Canada subscribers as of September 30, 2019.

Average Self-pay Monthly Churn is derived by dividing the monthly average of self-pay deactivations for the period by the average number of self-pay subscribers for the period. (See accompanying glossary on pages 60 through 63 for more details.)

For both the three months ended September 30, 2020 and 2019, our average self-pay monthly churn rate was 1.7%. For both the nine months ended September 30, 2020 and 2019, our average self-pay monthly churn rate was 1.7%. Lower vehicle and non-pay churn was offset by increased voluntary churn.

ARPU is derived from total earned Sirius XM subscriber revenue (excluding revenue derived from our connected vehicle services) and net advertising revenue, divided by the number of months in the period, divided by the daily weighted average number of subscribers for the period. (See the accompanying glossary on pages 60 through 63 for more details.)

For the three months ended September 30, 2020 and 2019, subscriber ARPU - Sirius XM was \$14.15 and \$13.90, respectively. For the nine months ended September 30, 2020 and 2019, subscriber ARPU - Sirius XM was \$14.02 and \$13.75, respectively. The increase was driven by an increase in certain subscription rates and the U.S. Music Royalty Fee.

SAC, Per Installation, is derived from subscriber acquisition costs and margins from the sale of radios, components and accessories (excluding connected vehicle services), divided by the number of satellite radio installations in new vehicles and shipments of aftermarket radios for the period. (See the accompanying glossary on pages 60 through 63 for more details.)

For the three months ended September 30, 2020 and 2019, SAC, per installation, was \$20.98 and \$21.01, respectively. For the nine months ended September 30, 2020 and 2019, SAC, per installation, was \$20.49 and \$22.62, respectively. The decreases were driven by reductions to OEM hardware subsidy rates.

Pandora

Monthly Active Users. At September 30, 2020, Pandora had approximately 58,583 monthly active users, a decrease of 4,517 monthly active users, or 7%, from the 63,100 monthly active users as of September 30, 2019. The decrease in monthly active users was driven by an increase in ad-supported listener churn and a decrease in the number of new users.

Subscribers. At September 30, 2020, Pandora had approximately 6,404 subscribers, an increase of 102, or 2%, from the approximately 6,302 as of September 30, 2019.

For the three months ended September 30, 2020 and 2019, net subscriber additions were 102 and (655), respectively. For the nine months ended September 30, 2020 and 2019, net subscriber additions were 190 and (368), respectively. The increases were a result of the expiration of an agreement with T-Mobile during the nine months ended September 30, 2019.

ARPU is defined as average monthly revenue per paid subscriber on our Pandora subscription services. (See the accompanying glossary on pages 60 through 63 for more details.)

For the three months ended September 30, 2020 and 2019, subscriber ARPU - Pandora was \$6.83 and \$6.46, respectively. For the nine months ended September 30, 2020 and 2019, subscriber ARPU - Pandora was \$6.79 and \$6.56, respectively. The increases in subscriber ARPU were primarily driven by the expiration of a lower rate T-Mobile plan in 2019 and a continued shift in subscriber mix toward more Pandora Premium plans.

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

For the three months ended September 30, 2020 and 2019, ad supported listener hours were 3,120 and 3,320, respectively. For the nine months ended September 30, 2020 and 2019, ad supported listener hours were 9,530 and 10,230, respectively. The decrease in ad supported listener hours was primarily driven by the decline in monthly active users, partially offset by higher hours per active user.

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

For the three months ended September 30, 2020 and 2019, RPM was \$84.46 and \$85.33, respectively. For the nine months ended September 30, 2020 and 2019, RPM was \$68.83 and \$75.96, respectively. The decreases were a result of lower sell-through percentages as a result of the COVID-19 pandemic.

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

For the three months ended September 30, 2020 and 2019, LPM was \$40.16 and \$39.05, respectively. For the nine months ended September 30, 2020 and 2019, LPM was \$38.11 and \$37.83, respectively. The increases were primarily due to an increase in track rates.

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

For the three months ended September 30, 2020 and 2019, LPU was \$4.19 and \$4.09, respectively. For the nine months ended September 30, 2020 and 2019, LPU was \$4.12 and \$4.07, respectively. The increases were due to increased Pandora subscriber ARPU.

Total Company

Adjusted EBITDA. Adjusted EBITDA is defined as net income before interest expense, income tax expense and depreciation and amortization, adjusted for pro forma information which includes of the predecessor periods. (Pandora's results for the period January 1, 2019 through January 31, 2019.) Adjusted EBITDA excludes the impact of other expense (income), loss on extinguishment of debt, other non-cash charges, such as certain purchase price accounting adjustments, share-based payment expense, legal settlements and reserves, and acquisition and restructuring costs (if applicable). (See the accompanying glossary on pages 60 through 63 for a reconciliation to GAAP and for more details.)

For the three months ended September 30, 2020 and 2019, adjusted EBITDA was \$661 and \$657, respectively, an increase of 1%, or \$4. For the nine months ended September 30, 2020 and 2019, adjusted EBITDA was \$1,915 and \$1,841, respectively, an increase of 4%, or \$74. The increases were driven by higher subscriber revenue and lower travel and entertainment, partially offset by lower advertising revenue and higher revenue share and royalties. The nine month period was also impacted by lower subscriber acquisitions 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 60 through 63 for a reconciliation to GAAP and for more details.)

For the three months ended September 30, 2020 and 2019, free cash flow was \$361 and \$465, respectively, a decrease of \$104, or 22%. For the nine months ended September 30, 2020 and 2019, free cash flow was \$1,212 and \$1,239, respectively, a decrease of \$27, or 2%. The decreases were driven by higher interest payments primarily due to timing, lower ad revenue receipts and paid promotional trial receipts. We paid a one-time amount of \$25 for a legal settlement during the nine months ended September 30, 2019

Liquidity and Capital Resources

Cash Flows for the nine months ended September 30, 2020 compared with the nine months ended September 30, 2019.

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

		2020	2019	2020 vs 2019
Net cash provided by operating activities	\$	1,450	\$ 1,485	\$ (35)
Net cash (used in) provided by investing activities		(344)	126	(470)
Net cash used in financing activities		(1,182)	(1,586)	404
Net (decrease) increase in cash, cash equivalents and restricted cash		(76)	25	(101)
Cash, cash equivalents and restricted cash at beginning of period		120	65	55
Cash, cash equivalents and restricted cash at end of period	\$	44	\$ 90	\$ (46)

Cash Flows Provided by Operating Activities

Cash flows provided by operating activities decreased by \$35 to \$1,450 for the nine months ended September 30, 2020 from \$1,485 for the nine months ended September 30, 2019.

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

Cash Flows (Used in) Provided by Investing Activities

Cash flows used in investing activities in the nine months ended September 30, 2020 were primarily due to our \$75 investment in SoundCloud, the acquisition of Simplecast of \$28, spending primarily for capitalized software and hardware, and to construct replacement satellites. Cash flows provided by investing activities in the nine months ended September 30, 2019 were primarily due to cash received of \$313 from the Pandora Acquisition and from the sale of short-term investments of \$73, partially offset by additional spending primarily for capitalized software and hardware, and to construct replacement satellites. We spent \$167 and \$146 on capitalized software and hardware as well as \$36 and \$46 to construct replacement satellites during the nine months ended September 30, 2020 and 2019, respectively.

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, the payment of cash dividends and taxes paid in lieu of shares issued for stock-based compensation. Proceeds from long term debt have been used to fund our operations, construct and launch new satellites, invest in other infrastructure improvements and purchase shares of our common stock.

Cash flows used in financing activities in the nine months ended September 30, 2020 were primarily due to the redemption of Sirius XM's 4.625% Senior Notes due 2023 in the aggregate amount of \$507 and Sirius XM's 5.375% Senior Notes due 2025 in the aggregate amount of \$1,039, the purchase and retirement of shares of our common stock under our repurchase program for \$870, the payment of cash dividends of \$175, and payment of \$81 for taxes paid in lieu of shares issued for share-based compensation; partially offset by the issuance of \$1,481 in aggregate principal amount of Sirius XM's 4.125% Senior Notes due 2030, net of costs. Cash flows used in financing activities in the nine months ended September 30, 2019 were primarily due to the purchase and retirement for \$1,959 of shares of our common stock under our repurchase program, the redemption of Sirius XM's 6.00% Senior Notes due 2024 in the aggregate amount of \$1,546, repayment under the Credit Facility of \$374, the repurchase for \$152 of Pandora's 1.75% Convertible Senior Notes due 2020, the payment of cash dividends of \$167 and payment of \$104 for taxes paid in lieu of shares issued for share-based compensation, partially offset by the issuance of \$1,481 in aggregate principal amount of Sirius XM's 4.625% Senior Notes due 2024 and the issuance of \$1,234 in aggregate principal amount of Sirius XM's 5.500% Senior Notes due 2029, net of costs.

Future Liquidity and Capital Resource Requirements

Based upon our current business plans, we expect to fund operating expenses, capital expenditures, including the construction of replacement satellites, working capital requirements, interest payments, taxes and scheduled maturities of our debt with existing cash, cash flow from operations and borrowings under our Credit Facility. As of September 30, 2020, \$0 was outstanding under our Credit Facility. As the amount available for future borrowing is reduced by \$1 related to letters of credit issued for the benefit of Pandora, \$1,749 was available for future borrowing under our Credit Facility. We believe that we have sufficient cash and cash equivalents, as well as debt capacity, to cover our estimated short-term and long-term funding needs, including amounts to construct, launch and insure replacement satellites, as well as fund future stock repurchases, future dividend payments and pursue strategic opportunities.

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

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

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

Capital Return Program

As of September 30, 2020, our board of directors had authorized for repurchase an aggregate of \$16,000 of our common stock. As of September 30, 2020, our cumulative repurchases since December 2012 under our stock repurchase program totaled 3,203 shares for \$13,728, and \$2,272 remained available for additional repurchases under our existing stock repurchase program authorization.

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

On October 6, 2020, our board of directors declared a quarterly dividend in the amount of \$0.014641 per share of common stock payable on November 30, 2020 to stockholders of record as of the close of business on November 6, 2020. Our board of directors expects to declare regular quarterly dividends, in an aggregate annual amount of \$0.058564 per share of common stock.

Debt Covenants

The indentures governing Sirius XM's senior notes and Pandora's convertible notes and the agreement governing the Sirius XM Credit Facility include restrictive covenants. As of September 30, 2020, we were in compliance with such covenants. For a discussion of our "Debt Covenants," refer to Note 13 to our unaudited consolidated financial statements in Part I, Item I, of this Quarterly Report on Form 10-Q.

Off-Balance Sheet Arrangements

We do not have any significant off-balance sheet arrangements other than those disclosed in Note 16 to our unaudited consolidated financial statements in Part I, Item I, of this Quarterly Report on Form 10-Q that are reasonably likely to have a material effect on our financial condition, results of operations, liquidity, capital expenditures or capital resources.

Contractual Cash Commitments

For a discussion of our "Contractual Cash Commitments," refer to Note 16 to our unaudited consolidated financial statements in Part I, Item I, of this Quarterly Report on Form 10-O.

Related Party Transactions

For a discussion of "Related Party Transactions," refer to Note 12 to our unaudited consolidated financial statements in Part I, Item I, of this Quarterly Report on Form 10-Q.

Critical Accounting Policies and Estimates

For a discussion of our "Critical Accounting Policies and Estimates," refer to "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Annual Report on Form 10-K for the year ended December 31, 2019. There have been no material changes to our critical accounting policies and estimates since December 31, 2019.

Glossary

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

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

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

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

	For t	the Three Months	Ended Sep	For the Nine Months	inded September 30,	
		2020		2019	2020	2019
Net income:	\$	272	\$	246	\$ 808	\$ 671
Add back items excluded from Adjusted EBITDA:						
Legal settlements and reserves		_		_	(16)	25
Acquisition and restructuring costs (1)		_		_	24	83
Share-based payment expense (3)		58		65	165	171
Depreciation and amortization		125		118	381	344
Interest expense		96		104	297	291
Loss on extinguishment of debt		40		56	40	57
Other expense (income)		(2)		_	(10)	2
Income tax expense		72		70	226	227
Purchase price accounting adjustments:						
Revenues		2		2	6	6
Operating expenses		(2)		(4)	(6)	(11)
Pro forma adjustments (2)		_		_	_	(25)
Adjusted EBITDA	\$	661	\$	657	\$ 1,915	\$ 1,841

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

	For th	For	the Nine Months	s Ended September 30,			
(in millions)	20	020	2019		2020	2019	
Programming and content	\$	9	\$ 8	\$	24	\$	22
Customer service and billing		1	1		4		3
Transmission		1	2		4		5
Sales and marketing		17	23		50		57
Engineering, design and development		11	15		31		37
General and administrative		19	16		52		47
Total share-based payment expense	\$	58	\$ 65	\$	165	\$	171

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

	F	Ended	For the Nine Months	ed September 30,			
		2020		2019	2020		2019
Cash Flow information							
Net cash provided by operating activities	\$	443	\$	544	\$ 1,450	\$	1,485
Net cash (used in) provided by investing activities	\$	(79)	\$	(83)	\$ (344)	\$	126
Net cash used in financing activities	\$	(2,101)	\$	(597)	\$ (1,182)	\$	(1,586)
Free Cash Flow							
Net cash provided by operating activities	\$	443	\$	544	\$ 1,450	\$	1,485
Additions to property and equipment		(81)		(79)	(230)		(239)
Purchases of other investments		(1)		_	(8)		(7)
Free cash flow	\$	361	\$	465	\$ 1,212	\$	1,239

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

<u>Subscriber acquisition cost, per installation</u> - 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	d September 30,	For the Nine Months Ended September 30,				
	2020		2019		2020		2019	
Subscriber acquisition costs, excluding connected vehicle services	\$ 110	\$	101	\$	257	\$	313	
Less: margin from sales of radios and accessories, excluding connected vehicle services	(43)		(38)		(101)		(106)	
	\$ 67	\$	63	\$	156	\$	207	
Installations	3,212		2,998		7,615		9,153	
SAC, per installation (a)	\$ 20.98	\$	21.01	\$	20.49	\$	22.62	

(a) Amounts may not recalculate due to rounding.

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

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

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

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

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISKS

As of September 30, 2020, we did not hold or issue any free-standing derivatives. We hold investments in money market funds and certificates of deposit. These securities are consistent with the objectives contained within our investment policy. The basic objectives of our investment policy are the preservation of capital, maintaining sufficient liquidity to meet operating requirements and maximizing yield. As of September 30, 2020, we also held the following material investment:

• In connection with the recapitalization of Sirius XM Canada, on May 25, 2017, we loaned Sirius XM Canada \$131 million. The loan is denominated in Canadian dollars and is subject to changes in foreign currency. It 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. The carrying value of the loan as of September 30, 2020 was \$117.0 million and approximates its fair value as of such date. Had the Canadian to U.S. dollar exchange rate been 10% lower as of September 30, 2020, the value of this loan would have been approximately \$12 million lower.

Our debt includes fixed rate instruments and the fair market value of our debt is sensitive to changes in interest rates. Sirius XM's borrowings under the Credit Facility carry a variable interest rate based on London Inter-bank Offered Rate ("LIBOR") plus an applicable rate based on its debt to operating cash flow ratio. LIBOR is the subject of national, international and other regulatory guidance and proposals for reform. On July 27, 2017, the United Kingdom's Financial Conduct Authority, which regulates LIBOR, announced that it intends to phase out LIBOR by the end of 2021. It is unclear if at that time LIBOR will cease to exist or if new methods of calculating LIBOR will be established such that it will continue to exist after 2021. The consequences of these developments cannot be entirely predicted, but could include an increase in the cost of our borrowings under the Credit Facility.

ITEM 4. CONTROLS AND PROCEDURES

Controls and Procedures

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

As of September 30, 2020, an evaluation was performed under the supervision and with the participation of our management, including our Chief Executive Officer and Principal Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures (as that term is defined in Rule 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934). Based on that evaluation, our management, including our Chief Executive Officer and our Principal Financial Officer, concluded that our disclosure controls and procedures were effective as of September 30, 2020.

Changes in Internal Control Over Financial Reporting

There has been no change in our internal control over financial reporting (as that term is defined in Rule 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934) during the quarter ended September 30, 2020 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II — OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

For a discussion of our "Legal Proceedings," refer to Note 16 to our unaudited consolidated financial statements in Part I, Item I, of this Quarterly Report on Form 10-Q.

ITEM 1A. RISK FACTORS

In connection with the COVID-19 pandemic we supplemented the risk factors previously disclosed in response to Part I, "Item 1A. Risk Factors," of our Annual Report on Form 10-K for the year ended December 31, 2019 to reflect the uncertainties that we believe the COVID-19 pandemic and its related economic impact has created for our business. The additional risk factor appears in Part II, "Item 1A Risk Factors," in our Quarterly Report on Form 10-Q for the three months ended March 31, 2020.

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

As of September 30, 2020, our board of directors had approved for repurchase an aggregate of \$16 billion of our common stock. Our board of directors did not establish an end date for this stock repurchase program. Shares of common stock may be purchased from time to time on the open market, pursuant to pre-set trading plans meeting the requirements of Rule 10b5-1 under the Exchange Act, in privately negotiated transactions, including transactions with Liberty Media and its affiliates, or otherwise. As of September 30, 2020, our cumulative repurchases since December 2012 under our stock repurchase program totaled 3.2 billion shares for \$13.7 billion, and \$2.3 billion remained available under our existing \$16.0 billion stock repurchase program. The size and timing of these purchases will be based on a number of factors, including price and business and market conditions.

The following table provides information about our purchases of equity securities registered pursuant to Section 12 of the Exchange Act, as amended, during the quarter ended September 30, 2020:

Period	Total Number of Shares Purchased	Average Price Pai Share (a)	d Per	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	M:	Approximate Dollar Value of Shares that ay Yet Be Purchased Under the Plans or Programs (a)
July 1, 2020 - July 31, 2020	15,046,929	\$	5.85	15,046,929	\$	2,670,623,507
August 1, 2020 - August 30, 2020	30,750,000	\$	5.93	30,750,000	\$	2,488,189,232
September 1, 2020 - September 30, 2020	40,000,000	\$	5.40	40,000,000	\$	2,272,352,207
Total	85,796,929	\$	5.67	85,796,929		

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

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

Not applicable.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

None.

ITEM 6. EXHIBITS

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

EXHIBIT INDEX

Exhibit	Description
10.1	Employment Agreement, dated as of September 14, 2020, between Sirius XM Radio Inc. and Jennifer C. Witz (incorporated by reference to Exhibit 10.1 to Sirius XM Holdings Inc.'s Current Report on Form 8-K filed September 15, 2020 (File No. 001-34295)).
10.2	Letter Agreement, dated September 14, 2020, regarding private use of aircraft between Sirius XM Radio Inc. and Jennifer C. Witz (incorporated by reference to Exhibit 10.2 to Sirius XM Holdings Inc.'s Current Report on Form 8-K filed September 15, 2020 (File No. 001-34295)).
10.3	Employment Agreement, dated as of September 14, 2020, between Sirius XM Radio Inc. and Sean S. Sullivan (incorporated by reference to Exhibit 10.3 to Sirius XM Holdings Inc.'s Current Report on Form 8-K filed September 15, 2020 (File No. 001-34295)).
31	Certificate of James E. Meyer, Chief Executive Officer and Principal Financial Officer, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith).
32	Certificate of James E. Meyer, Chief Executive Officer and Principal Financial Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (furnished herewith).
101.1	The following financial information from our Quarterly Report on Form 10-Q for the quarter ended September 30, 2020 formatted in Inline eXtensible Business Reporting Language (Inline XBRL): (i) Consolidated Statements of Comprehensive Income (Unaudited) for the three and nine months ended September 30, 2020 and 2019; (ii) Consolidated Balance Sheets as of September 30, 2020 (Unaudited) and December 31, 2019; (iii) Consolidated Statements of Stockholders' Equity (Deficit) for the three and nine months ended September 30, 2020 and 2019 (Unaudited); (iv) Consolidated Statements of Cash Flows (Unaudited) for the nine months ended September 30, 2020 and 2019; and (v) Notes to Consolidated Financial Statements (Unaudited).
104	The cover page from the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2020, formatted in Inline XBRL.

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

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized on this 22nd day of October 2020.

SIRIUS XM HOLDINGS INC.

By: /s/ Thomas D. Barry

Thomas D. Barry
Senior Vice President and Corporate Controller
(Chief Accounting Officer and Authorized Officer)

CERTIFICATION

I, James E. Meyer, certify that:

- 1. I have reviewed this Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2020 of Sirius XM Holdings Inc.;
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4. I am responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under my supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to me by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under my supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report my conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5. I have disclosed, based on my most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

By: /s/ James E. Meyer

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

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

In connection with the Quarterly Report of Sirius XM Holdings Inc. (the "Company") on Form 10-Q for the quarterly period ended September 30, 2020 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, James E. Meyer, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

By: /s/ James E. Meyer

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

October 22, 2020

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