

## SIRI: Post Mixed 4Q/Guidance Lowering Target to \$5; Prefer LSXMA

February 8, 2023

**BOTTOM LINE:** Following the mixed 4Q and lower than forecast '23 guidance we materially reduced our subscriber, revenue, free cash flow expectations for '23 and beyond, while also reducing our terminal EBITDA multiple from 11X to 10X. This was offset partially by a move to a YE'23 target from YE'22 previously. The combo drove a substantial decline in our YE'23 target price from \$6.75 to \$5.00. Our view is that the shares are fairly valued at current levels and that SIRI will be a much more interesting investment story closer to '24 as free cash flow begins to reaccelerate and auto production (hopefully) starts to normalize. Reiterate HOLD and our view that LSXMA (BUY) remains a more attractive way to play SIRI as we believe it is inevitable that Liberty moves to crush the current 36% gap to NAV.

We remind investors while 4Q self pay additions were better than expected (+163K vs. our +105K), revenue was worse than expected (SIRI-XM grew revenue +0.9% vs. our +3.9%) while EBITDA and free cash flow were materially higher than expected (mainly driven by a massive (-30% vs. our +9% forecast) cut in marketing spend). Looking out to '23 management cited still weak auto production, the aforementioned reduced marketing spend (as they wait for a significantly upgraded digital streaming platform in 2H) for an expectation for self-pay subscriber losses (vs. our admittedly aggressive previous +960K forecast which assumed a much more robust auto production return). Management's '23 guide for: 1) revenue of "approximately \$9B (flat y/y growth)" was below our \$9.253B forecast (+2%), 2) EBITDA of "approximately \$2.7B" vs. our \$2.86B (+3%) and 3) free cash flow of \$1.05B was well below our \$1.45B forecast. The variance between our original subscriber estimates and their forecasts are reflective of automakers not ramping production materially as they (for now) appear focused on maintaining relatively high margins that emerged on lower production during the pandemic/chip shortage (which we assume could be an overhang for several years partly offset by likely increasing used car sales post '23) + management has cut marketing materially for digital only SIRI customers as they wait for their 2H digital platform upgrade (so they will experience all the churn with a likely material drop in gross digital subscriber additions in 1H'23). In regards to lower than forecast EBITDA/free cash flow in '23 SIRI's is seeing: 1) a \$100M hit on pre-1970 music royalties and a material CPI increase on certain music, 2) likely negative subscriber growth in '23, 3) tens of millions of investment in their new digital streaming interface, 4) a \$225M capex increase (as the company is in process of building 4 satellites to completely replace their satellite fleet (to be completed by the end of '26)) and 5) the company becomes a full tax payer in '23 (a \$170M variance).

Post the results/guidance changes to our model included: 1) we reduced our '23 and beyond subscriber forecasts (including moving from +960K in '23 net new self pay subs to (-230K) weighted to 1H'23), 2) reduced our revenue forecast from +2% to -2% (mainly negative subscriber growth but also weak ad environment) to \$6.9B vs. "approx. \$7B" guidance, 3) reduced our '23 and beyond EBITDA growth forecasts (including '23 from \$2.86B +3% to \$2.6B -8% vs. \$2.7B guidance, 4) reduced our '23 free cash flow forecast from \$1.46B to \$969M vs. approx. \$1.05B guidance. We highlight that '23 realistically should be the floor in free cash flow over the next 5 years and we forecast substantial growth driven by: 1) a likely return to more normalized levels of auto production and/or higher used car sales (although we are only assuming modest growth in self pay subscribers post '23), 2) in '23 SIRI should be a full tax payer, 3) declining annual levels of investment in new satellites (which should be completed in late '26), 4) likely continued improvement in negative working capital, 5) the end of '23 growth in one off music royalty expenses and 6) we assume at least one price increase over the next 5 years. By '27 we assume free cash flow returns to '19 levels of \$1.75B. These changes + a decision to reduce our target '27 EBITDA multiple in our DCF (9% discount rate) from 11X to 10X (15-14X on an unlevered free cash flow basis) led to a substantial reduction in our '23 target price from \$6.75 to \$5.00. Given a lack of upside we are leaving our HOLD rating unchanged and we remind investors the better way to play SIRI remains BUY rated LSXMA which we estimate is trading at a 36% discount to NAV (which should soon narrow somewhat as Liberty simplifies LSXMA via a carve out of LYV into a new tracker "Liberty Live.") We also remind investors about the near inevitability that LSXMA will be hard spun and/or eventually "RMT'ed" into SIRI which all else being equal should equate to a 50+% return at current SIRI share prices.

**RISKS:** 1) recession risk, 2) long term, we view autonomous autos as a threat as it could drive changes in consumer in-car behavior, 3) the further development of music streaming services are creating unique highly compelling music/podcast alternatives, 4) potential for content cost inflation, 5) in a potential RMT with LSXMA, SIRI shareholders could get modestly diluted and 6) M&A risk.

**Jeffrey Wlodarczak**  
212-514-4680  
jeff@pvtl.com

## SiriusXM (SIRI)

**RATING: HOLD**  
(Previous: HOLD)

**Target Price: \$5.00**  
(Previous: \$6.75)

Price (2/8/23): \$5.04

### MARKET DATA

52 Wk Hi - Low	\$5.69 - \$6.88
Market Cap. (MM)	\$19,608
Avg. Daily Vol (000)	14,850

EPS	2022	Prior	2023E	Prior
1Q	\$0.08		\$0.06	
2Q	\$0.07		\$0.07	
3Q	\$0.07		\$0.07	
4Q	\$0.09	\$0.08	\$0.07	
FY	\$0.30		\$0.27	
P/E	NM		NM	

Sales	2022	Prior	2023E	Prior
1Q	\$2,186		\$2,142	
2Q	\$2,253		\$2,191	
3Q	\$2,280		\$2,224	
4Q	\$2,283		\$2,248	
FY	\$9,002		\$8,804	

### BALANCE SHEET DATA (12/31/22)

Cash (\$)	\$65
LTD (\$)	\$9,256
Debt/Capital	NM
Book Value/Share	NM

Source: Pivotal Research Group and Company Documents

## VALUATION

We arrive at a YE'23 \$5.00 target price by utilizing a discounted cash flow methodology (13x '25 Un-levered free cash flow multiple (10x EBITDA), 9% discount rate). We also ascribe a ~\$1.5B net present value for SIRI's 12.5MHz spectrum holdings that we assume can be monetized at a material discount to today's equivalent spectrum prices in 2030. Even if SIRI does not sell this spectrum, we would not otherwise capture the incremental value that could be created by SIRI with this spectrum (which could allow with today's technology for an additional 400 music/talk channels, video channels or other services using current technology).

## SIRI RISKS

Specific company and industry risks that could impact our estimates, target price, and rating include:

1) The rollout of connected car technologies in automobiles + significant wireless network enhancements could potentially lead to more robust in-car alternatives to satellite radio (or could drive dollars away from sat radio toward wireless). These alternatives could come from far larger players (Microsoft, Apple, Google for example) not necessarily focused on economic returns (offset by the fact that most of these potential alternatives are likely to be ad-based, to date none of these players have shown an interest in talk programming, and SIRI will still have exclusive programming not available elsewhere). We also highlight that the revenue opportunity for these type of players is likely not worth the effort and to date data shows little effect on usage in cars enable for such services as Amazon, Apple Music and Spotify.

2) Sirius may elect to spend more than anticipated on original content or exclusive Internet/podcast rights (which we would frankly view as a positive as it further cements their already strong positioning)

3) The company may not be able to consistently raise price offset partially by the fact that they have been able to successfully take price without seeing a significant jump in subscriber churn

4) The company could elect to deploy excess capital into M&A rather than share repurchases/dividends, offset by the fact that Liberty Media has to approve all M&A (and their track record speaks for itself).

5) Streaming companies, such as Spotify, are arguably revolutionizing the way consumers digest music (access to basically every song in existence for a low flat fee) which could shrink the market for SIRI (at least those focused primarily on music).

6) Ownership of Pandora exposes Sirius the streaming business which is populated by materially larger competitors that are not necessarily focused on generating a return in music (Apple, Google, Amazon and Spotify).

7) A potential RMT with Liberty Media would likely result in some dilution to SIRI shareholders if SIRI needs to offer a control premium. On the other hand, Liberty Media could wait until the SIRI buyback gets them to 90% control and then bid for the balance of SIRI.

8) US auto production may never return to pre-pandemic levels if auto makers stay focused on lower levels of production and maintain high margins

9) Autonomous cars may be the biggest threat to SIRI given the potential for the tech to transform how consumers behave in the car

10) If Liberty elects to participate in the SIRI share repurchase then SIRI the buyback as a percent of effective float will rise materially providing less of wind at the back of SIRI shares.

Sirius XM Radio											
Quarterly Subscriber Model (Figures in thousands)											
	2021A	Q1 2022A	Q2 2022A	Q3 2022A	Q4 2022A	2022A	Q1 2023E	Q2 2023E	Q3 2023E	Q4 2023E	2023E
<b>Sirius XM Radio Subscribers</b>	34,305	34,226	34,303	34,442	34,582	34,582	34,432	34,282	34,307	34,432	34,432
Average SIRI Subscribers	34,522	34,265	34,264	34,372	34,512	34,353	34,507	34,357	34,294	34,389	34,382
<b>Net additions</b>	(409)	(79)	77	139	140	277	(150)	(150)	25	125	(150)
% Annual Change	19.7%	NM	NM	NM	NM	(67.7%)					(54.2%)
% Sequential Change		(292.7%)	(87.5%)	80.5%	0.7%		0.0%		(16.7%)	400.0%	
<b>Installations</b>	11,175	3,125	2,974	3,162	3,010	12,271	3,200	3,050	3,200	3,200	12,650
% Annual Change	0.8%	19%	9.2%	29.3%	2.5%	9.8%	2.4%	2.6%	12%	6.3%	3.1%
% Sequential Change		6.4%	-4.8%	6.3%	-4.8%		6.3%	-4.7%	4.9%	0.0%	
<b>Self-Pay Subscribers</b>	32,039	32,014	32,037	32,224	32,387	32,387	32,090	31,951	32,008	32,159	32,159
% Annual Change	3.7%	3.2%	2.1%	0.7%	1%	1%	0.2%	(0.3%)	(0.7%)	(0.7%)	(0.7%)
% Of Total Subscribers		93.5%	93.4%	93.6%	93.7%	93.7%	93.2%	93.2%	93.3%	93.4%	93.4%
<b>Self-Pay Net Additions</b>	1,152	(25)	23	187	163	348	(296)	(140)	58	151	(227)
% Annual Change	26.7%	NM	(93.5%)	(69.7%)	200.9%	(69.8%)	104.7%	(70.8%)	(69.2%)	(7.0%)	(65.4%)
% Sequential Change		(16.3%)	(82.0%)	73.0%	(3.1%)		(85.2%)	(52.8%)	(11.12%)	62.2%	
% of net subscriber additions	(28.17%)	3.16%	29.9%	14.5%	16.1%	25.5%	97.4%	93.2%	230.4%	20.8%	15.1%
<b>Paid Promotional Subscribers</b>	(1,561)	(54)	54	(48)	(23)	(71)	146	(10)	(33)	(26)	77
<b>Reported New Auto Conversion Rate</b>											
<b>Self-Pay % Churn Rate</b>	1.6%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.7%	1.6%
% Annual Change		(6.3%)	0.0%	0.0%	(118%)		0.0%	2.0%	2.0%	10.0%	
<b>Pandora MAUs</b>	52,275	50,554	50,478	48,769	47,638	47,638	46,088	45,528	44,398	43,668	43,668
% Annual Change	(12%)	(9.5%)	(8.4%)	(7.3%)	(8.9%)	(8.9%)	(8.8%)	(9.8%)	(9.0%)	(8.3%)	(8.3%)
Average Total Subscribers	54,801	51,415	50,516	49,624	48,204	49,939	46,863	45,808	44,963	44,033	45,417
<b>Pandora Total Subscriber Net Additions (Losses)</b>	(6,807)	(1,721)	(76)	(1,709)	(1,131)	(4,637)	(1,550)	(560)	(1,130)	(730)	(3,970)
% Annual Change	42.8%	(42.9%)	(89.6%)	(32.2%)	229.7%	(29.8%)					(14.4%)
% Sequential Change		NM	(95.6%)	218.7%	(33.8%)		37.0%	(63.9%)	118%	(35.4%)	
<b>Pandora Ad-Supported Subscribers</b>	45,951	44,226	44,159	42,502	41,423	41,423	39,923	39,423	38,323	37,623	37,623
% Annual Change	(2.6%)	(10.6%)	(9.2%)	(7.9%)	(9.9%)	(9.9%)	(9.7%)	(10.7%)	(9.8%)	(9.2%)	(9.2%)
% Of Total Subscribers	87.9%	87.5%	87.5%	87.1%	87.0%	87.0%	86.6%	86.6%	86.3%	86.2%	86.2%
Average Self-Pay Subscribers	47,556	45,089	44,193	43,331	41,963	43,078	40,673	39,673	38,873	37,973	38,823
<b>Pandora Ad-Supported Net Additions (Losses)</b>	(6,633)	(1,725)	(67)	(1,657)	(1,079)	(4,528)	(1,500)	(500)	(1,100)	(700)	(3,800)
% Annual Change	39.4%	(44.5%)	(82.1%)	(32.7%)	40.19%	(31.7%)	(19.0%)	646.3%	(33.6%)	(35.1%)	(16.1%)
% Sequential Change		702.3%	(96.1%)	2373.1%	(34.9%)		(66.9%)	(66.7%)	20.0%	(36.4%)	
<b>Pandora Pay Subscribers</b>	6,324	6,328	6,319	6,267	6,215	6,215	6,165	6,105	6,075	6,045	6,045
% Annual Change	0.4%	(10%)	(2.9%)	(2.9%)	(1.7%)	(1.7%)	(2.6%)	(3.4%)	(3.1%)	(2.7%)	(2.7%)
% Of Total Subscribers	12.1%	12.5%	12.5%	12.9%	13.0%	13.0%	13.4%	13.4%	13.7%	13.8%	13.8%
Average Self-Pay Subscribers	6,420	6,326	6,324	6,293	6,241	6,282	6,190	6,135	6,090	6,060	6,098
<b>Pandora-Pay Net Additions (Losses)</b>	26	4	(9)	(52)	(52)	(109)	(50)	(60)	(30)	(30)	(170)
% Annual Change	(80.5%)	(95.7%)	(107.6%)	(10.3%)	(59.4%)	(59.2%)	(150.0%)	566.7%	(42.3%)	(42.3%)	56.0%
% Sequential Change		NM	(325.0%)	477.8%	0.0%		(54.1%)	20.0%	(50.0%)	0.0%	

\*\* SIRI stopped reporting gross subscriber additions (and total churn) beginning in 1Q14 and began reporting installations

Source: Company data and Pivotal Research Group, LLC estimates

Sirius XM Radio											
Quarterly Income Statement (Dollars in millions, except for per subscriber and per share amounts)											
	2021A	Q1 2022A	Q2 2022A	Q3 2022A	Q4 2022A	2022A	Q1 2023E	Q2 2023E	Q3 2023E	Q4 2023E	2023E
<b>Sirius XM Subscriber Revenue</b>	\$6,084	\$1,582	\$1,588	\$1,603	\$1,596	\$6,369	\$1,584	\$1,587	\$1,605	\$1,614	\$6,390
<b>Annual growth</b>											
Average Monthly Revenue Per Subscriber - calculated	\$14.69	\$15.39	\$15.45	\$15.55	\$15.42	\$15.45	\$15.30	\$15.40	\$15.60	\$15.65	\$15.49
% annual growth	4.0%	8.4%	6.5%	4.6%	1.4%	5.2%	-0.6%	-0.3%	0.4%	1.5%	0.2%
% sequential growth		1.3%	0.4%	0.6%	-0.8%		-0.7%	0.7%	1.3%	0.3%	
<b>Advertising revenue</b>	188	47	49	50	50	196	42	44	47	49	184
Average Monthly Revenue Per Subscriber	\$0.45	\$0.46	\$0.48	\$0.48	\$0.48	\$0.48	\$0.41	\$0.43	\$0.46	\$0.48	\$0.44
% annual growth	19.9%	13.6%	7.7%	6.4%	-6.3%	4.8%	-10.3%	-8.8%	-5.1%	-0.6%	-6.4%
<b>Equipment Revenue</b>	202	53	45	50	41	199	41	45	53	45	184
Average Monthly Revenue Per Subscriber	\$0.37	\$0.36	\$0.36	\$0.38	\$0.35	\$0.36	\$0.34	\$0.35	\$0.37	\$0.37	\$0.36
<b>Total Revenue</b>	6,626	1,719	1,719	1,742	1,723	6,903	1,702	1,713	1,743	1,746	6,905
% Annual Change	4.4%	6.4%	4.8%	4.9%	0.9%	4.2%	-1.0%	-0.4%	0.1%	1.4%	0.0%
Total Average Monthly Revenue Per Subscriber (ex-Equipment) - calculated	\$15.51	\$16.21	\$16.29	\$16.41	\$16.25	\$16.29	\$16.05	\$16.18	\$16.43	\$16.50	\$16.20
% Annual Change	4.2%	8.5%	6.4%	4.5%	1.0%	5.0%	-1.0%	-0.6%	0.1%	1.6%	0.0%
% Sequential Change		0.8%	0.5%	0.8%	-1.0%		-1.2%	0.8%	1.5%	0.4%	
<b>Pandora Subscriber Revenue</b>	\$530	\$131	\$131	\$131	\$130	\$523	\$128	\$127	\$127	\$126	\$508
<b>Annual growth</b>	2.9%	0.8%	-1.5%	-2.2%	-2.3%	-1.3%	-2.2%	-3.1%	-3.2%	-2.9%	-2.9%
Average Monthly Revenue Per Subscriber - calculated	\$8.28	\$8.20	\$8.91	\$8.94	\$8.94	\$8.94	\$8.90	\$8.90	\$8.94	\$8.94	\$8.94
% Pro Forma Growth Rate	0.7%	1.1%	0.5%	0.7%	0.0%	0.8%	0.0%	-0.1%	0.0%	0.0%	0.1%
% Sequential Growth Rate		-0.5%	0.0%	0.5%	0.1%		-0.6%	0.0%	0.6%	0.0%	
<b>Pandora Advertising Revenue</b>	1,541	335	403	407	430	1,576	311	351	353	376	1,392
Annual growth	30.3%	7.7%	5.2%	0.7%	(2.7)%	2.3%	(7.4)%	(12.9)%	(13.2)%	(12.6)%	(11.7)%
Average Monthly Revenue Per Subscriber - calculated	\$2.70	\$2.48	\$3.04	\$3.13	\$3.42	\$3.05	\$2.55	\$2.95	\$3.03	\$3.30	\$2.99
% Pro Forma Growth Rate	45.8%	21.9%	16.8%	10.2%	6.8%	12.9%	2.7%	-3.0%	-3.2%	-3.4%	-2.0%
% Sequential Growth Rate		-22.3%	22.4%	3.0%	9.1%		-25.3%	15.7%	2.7%	8.9%	
<b>Pandora Revenue</b>	2,071	467	534	538	560	2,099	439	478	480	502	1,900
Annual growth	22.0%	5.7%	3.5%	0.0%	-2.6%	1.4%	-5.9%	-10.5%	-10.8%	-10.3%	-9.5%
Total Pro-Forma SIRI Revenue related to Pandora	23.8%	21.4%	23.7%	23.6%	24.5%	23.3%	20.5%	21.8%	21.6%	22.3%	21.6%
<b>Total Pro-Forma SIRI Revenue</b>	8,697	2,186	2,253	2,280	2,283	9,002	2,142	2,191	2,224	2,248	8,804
% Pro Forma Growth Rate	8.1%	6.2%	4.4%	3.7%	0.0%	3.5%	-2.0%	-2.8%	-2.5%	-1.5%	-2.2%
<b>SIRI-XM Operating Expenses:</b>											
<b>Contribution</b>											
<b>Revenue share and royalties</b>	(1,531)	(382)	(397)	(391)	(382)	(1,552)	(388)	(397)	(385)	(384)	(1,554)
% annual growth	3%	1%	3%	3%	-2%	1%	2%	0%	-1%	1%	0%
% of subscriber revenue	25.2%	24.1%	25.0%	24.4%	23.9%	24.4%	24.5%	25.0%	24.0%	23.8%	24.3%
% sequential growth		-1.5%	3.9%	-1.5%	-2.3%		1.6%	2.3%	-2.9%	-0.3%	
<b>Customer service and billing</b>	(403)	(100)	(101)	(101)	(101)	(403)	(100)	(100)	(100)	(98)	(398)
Annual growth	4%	6%	-2%	-1%	-3%	0%	0%	-1%	-1%	-3%	-1%
% of subscriber revenue	6.6%	6.3%	6.4%	6.3%	6.3%	6.3%	6.3%	6.3%	6.2%	6.1%	6.2%
% sequential growth		-4%	1%	0%	0%		-1%	0%	0%	-2%	
Monthly customer service and billing cost per subscriber	(\$0.97)	(\$0.97)	(\$0.98)	(\$0.98)	(\$0.98)	(\$0.98)	(\$0.97)	(\$0.97)	(\$0.97)	(\$0.97)	(\$0.96)
% Annual Growth	5%	8.0%	-0.8%	-1.0%	-3.5%	0%	-0.7%	-1.3%	-0.8%	-2.6%	-1%
<b>Contribution</b>	4,692	1,237	1,221	1,250	1,240	4,948	1,214	1,216	1,258	1,264	4,953
Annual growth	5%	8%	6%	6%	2%	5%	-2%	0%	1%	2%	0%
% Contribution Margin	70.8%	72.0%	71.0%	71.8%	72.0%	71.7%	71.3%	71.0%	72.2%	72.4%	71.7%
<b>Programming and content</b>	(450)	(115)	(123)	(123)	(123)	(484)	(144)	(145)	(145)	(145)	(579)
Annual growth	9%	8%	13%	9%	1%	8%	25%	18%	18%	18%	20%
% of subscriber revenue	7.4%	7.3%	7.7%	7.7%	7.7%	7.6%	9.1%	9.1%	9.0%	9.0%	9.1%
<b>Satellite and transmission</b>	(151)	(39)	(34)	(36)	(40)	(149)	(40)	(36)	(37)	(41)	(154)
Annual growth	29%	20%	0%	-3%	-18%	-1%	3%	6%	3%	2%	3%
Average monthly cost per sub	\$0.97	\$0.98	\$0.98	\$0.98	\$0.98	\$0.97	\$0.97	\$0.97	\$0.97	\$0.95	\$0.95
<b>Cost of equipment</b>	(17)	(3)	(3)	(4)	(4)	(14)	(3)	(3)	(4)	(5)	(15)
% of equipment sales	8%	6%	7%	8%	10%	7%	7%	7%	8%	10%	8%
<b>Total Sirius-XM Related Cost of Services</b>	(2,552)	(639)	(658)	(655)	(650)	(2,602)	(675)	(681)	(672)	(673)	(2,700)
% annual growth	6%	4%	3%	3%	-3%	2%	6%	4%	3%	3%	4%
% Sirius-XM Revenue	38.5%	37.2%	38.3%	37.6%	37.7%	37.7%	39.6%	39.8%	38.5%	38.5%	39.1%
<b>Pandora Operating Expenses</b>	(1,140)	(288)	(314)	(318)	(330)	(1,280)	(307)	(320)	(324)	(337)	(1,288)
<b>Pandora Revenue Share &amp; Royalties</b>	(18)	(9)	(12)	(14)	(17)	(52)	(12)	(14)	(15)	(17)	(58)
Annual growth	55.0%	61.7%	58.8%	59.1%	58.9%	59.6%	69.8%	67.0%	67.6%	67.0%	67.8%
<b>Programming and content</b>	(45)	(9)	(12)	(14)	(17)	(52)	(12)	(14)	(15)	(17)	(58)
Annual growth	55.2%	12.5%	9.1%	16.7%	21.4%	15.6%	33.3%	16.7%	7.1%	0.0%	11.5%
% of subscriber revenue	8.5%	6.9%	9.2%	10.7%	13.1%	9.9%	9.4%	11.0%	11.8%	13.9%	11.4%
<b>Customer service and billing</b>	(83)	(22)	(22)	(19)	(19)	(82)	(19)	(19)	(19)	(18)	(75)
Annual growth	-3.5%	15.8%	4.8%	-9.5%	-13.6%	-1.2%	-13.6%	-13.6%	0.0%	-5.3%	-8.5%
% of subscriber revenue	15.7%	16.8%	16.8%	14.5%	14.6%	15.7%	14.8%	15.0%	15.0%	14.3%	14.8%
<b>Transmission</b>	(55)	(10)	(18)	(13)	(14)	(55)	(13)	(14)	(14)	(14)	(55)
Annual growth	5.8%	-33.3%	28.6%	-13.3%	27.3%	0.0%	30.0%	-22.2%	7.7%	0.0%	0.0%
% of subscriber revenue	10.4%	7.6%	13.7%	9.9%	10.8%	10.9%	10.1%	11.0%	11.0%	11.1%	10.8%
<b>Total Pandora Cost of Services</b>	(1,323)	(320)	(366)	(364)	(380)	(1,430)	(351)	(367)	(372)	(386)	(1,476)
Annual growth	17%	8%	14%	7%	6%	9%	7%	0%	2%	1%	3%
% of subscriber revenue	64%	70%	69%	68%	68%	69%	80%	77%	78%	77%	78%
<b>Total Consolidated Cost of Service</b>	(3,875)	(968)	(1,024)	(1,019)	(1,030)	(4,041)	(1,025)	(1,048)	(1,044)	(1,058)	(4,176)
<b>General and administrative</b>	(387)	(95)	(99)	(102)	(110)	(406)	(100)	(101)	(101)	(107)	(409)
Annual growth	-1.3%	4%	1%	10%	5%	5%	5%	2%	-1%	-3%	1%
% sequential growth		-10%	4%	2%	8%		-9%	1%	0%	6%	
Monthly G&A per subscriber	(\$0.94)	(\$0.93)	(\$0.96)	(\$0.99)	(\$1.08)	(\$0.98)	(\$0.97)	(\$0.98)	(\$0.98)	(\$1.04)	(\$0.99)
% Annual Growth	-2%	6.3%	15%	9.1%	3.9%	4%	4.6%	2.1%	-0.6%	2.3%	1%
<b>Engineering, design and development</b>	(193)	(51)	(54)	(48)	(52)	(205)	(52)	(50)	(49)	(46)	(197)
Annual growth	-12%	16%	2%	-4%	13%	6%	2%	-7%	2%	-12%	-4%
<b>Total Pre-Marketing Expense</b>	(4,450)	(1,144)	(1,177)	(1,169)	(1,192)	(4,652)	(1,177)	(1,199)	(1,194)	(1,211)	(4,782)
<b>Sales and marketing</b>	(940)	(246)	(259)	(259)	(210)	(970)	(200)	(210)	(220)	(220)	(850)
% of subscriber revenue	15%	16%	16%	16%	13%	15%	13%	13%	14%	14%	13%
Annual growth	6%	32%	21%	7%	-30%	3%	-19%	-19%	-14%	5%	-12%
% sequential growth		-17.9%	5.1%	-1.5%	-17.6%		-4.8%	5.0%	4.8%	0.0%	
<b>Subscriber acquisition costs</b>	(326)	(90)	(91)	(86)	(85)	(352)	(82)	(80)	(83)	(83)	(365)
Annual growth	-10%	5%	2%	21%	6%	8%	2%	-1%	2%	12%	4%
<b>Total Cost Of Revenue</b>	(5,721)	(1,451)	(1,527)	(1,510)	(1,487)	(5,975)	(1,469)	(1,499)	(1,502)	(1,526)	(5,997)
<b>Reported SAC (Including Net Equipment Cost/Benefit)</b>	(141)	(40)	(49)	(40)	(48)	(177)	(54)	(48)	(39)	(55)	(196)
Annual growth	-32%	22%	17%	18%	50%	26%	33%	-2%	-2%	14%	10%
<b>Estimated SAC Per Installation (Incl. Net Equipment Costs)**</b>	(\$13)	(\$13)	(\$16)	(\$13)	(\$16)	(\$14)	(\$17)	(\$16)	(\$12)	(\$17)	(\$15)
Annual Change	-33%	20%	7%	-9%	45%	15%	30%	-4%	-3%	7%	7%
<b>Total Cost Per Gross Subscriber Addition (including fixed marketing)</b>	(1,081)	(287)	(308)	(295)	(258)	(1,148)	(254)	(258)	(259)	(275)	(1,046)
<b>Total Marketing Cost Per Installation **</b>	(597)	(592)	(\$104)	(593)	(586)	(594)	(579)	(585)	(581)	(586)	(583)
% Annual Change	-2%	28%	0%	-16%	-24%	-3%	-14%	-16%	-13%	-13%	-12%
% Sequential Change		-5%	13%	-10%	-8%		-15%	7%	-4%	6%	
<b>Adjusted Operating Cash Flow</b>	2,773	690	679	720	742	2,831	622	641	672	672	2,607
Annual growth	7%	1%	-3%	0%	10%	2%	-10%	-5%	-7%	-9%	-8%
% EBITDA Margin	41.9%	40.2%	39.5%	41.3%	43.1%	41.0%	36.6%	37.4%	38.5%	38.5%	37.8%
<b>Depreciation &amp; Amortization expense</b>	(533)	(135)	(135)	(134)	(132)	(536)	(135)	(135)	(135)	(135)	(540)
Equity Granted to 3rd Parties and Employees	(203)	(45)	(48)	(50)	(54)	(197)	(50)	(50)	(50)	(50)	(200)
Restructuring, impairments and related costs (pre-72 settlement)	(21)	-	-	(69)	6	(63)	-	-	-	-	-
<b>Total operating expenses</b>	(6,478)	(1,631)	(1,710)	(1,763)	(1,667)	(6,770)	(1,654)	(1,684)	(1,687)	(1,711)	(6,737)
<b>Adjusted Operating Income</b>	2,016	510	496	467	562	2,035	437	456	487	487	1,867
Annual change	135.0%	100.9%	-24.6%	-25.6%	18.1%	1.0%	-14.3%	-8.0%	4.2%	-13.3%	-8.2%
Margin on Total Revenue	30.4%	29.7%	28.9%	26.8%	32.6%	29.5%	25.7%				

# PIVOTAL

Pivotal Research Group

## Sirius XM Radio

Quarterly Income Statement (continued) (Dollars in millions, except for per subscriber and per share amounts)

	2021A	Q1 2022A	Q2 2022A	Q3 2022A	Q4 2022A	2022A	Q1 2023E	Q2 2023E	Q3 2023E	Q4 2023E	2023E
<b>Adjusted Income from Operations</b>	<b>2,016</b>	<b>510</b>	<b>496</b>	<b>467</b>	<b>562</b>	<b>2,035</b>	<b>437</b>	<b>456</b>	<b>487</b>	<b>487</b>	<b>1,867</b>
<b>Other Income (Expense) :</b>											
Debt Restructuring / Loss on extinguishment of debt/credit facility	(83)	-	-	-	-	-	-	-	-	-	-
Interest Income and investment loss	-	-	-	-	-	-	-	-	-	-	-
Interest Expense	(376)	(103)	(104)	(107)	(108)	(422)	(110)	(112)	(115)	(121)	(458)
Proforma/purchase price acct. adjustment	-	-	-	-	-	-	-	-	-	-	-
Other	7	2	(4)	(3)	(4)	(9)	-	-	-	-	-
<b>Total Other Expense</b>	<b>(491)</b>	<b>(101)</b>	<b>(108)</b>	<b>(110)</b>	<b>(112)</b>	<b>(431)</b>	<b>(110)</b>	<b>(112)</b>	<b>(115)</b>	<b>(121)</b>	<b>(458)</b>
<b>Net Income (Loss) before income taxes</b>	<b>1,564</b>	<b>409</b>	<b>388</b>	<b>357</b>	<b>450</b>	<b>1,604</b>	<b>327</b>	<b>344</b>	<b>372</b>	<b>366</b>	<b>1,410</b>
Income tax expense	(212)	(100)	(96)	(110)	(85)	(391)	(82)	(86)	(93)	(92)	(352)
% tax rate	13.6%	24.4%	24.7%	30.8%	18.9%	24.4%	25.0%	25.0%	25.0%	25.0%	25.0%
<b>Net Income (Loss)</b>	<b>1,313</b>	<b>309</b>	<b>292</b>	<b>247</b>	<b>365</b>	<b>1,213</b>	<b>246</b>	<b>258</b>	<b>279</b>	<b>275</b>	<b>1,057</b>
Preferred Stock Dividends	-	-	-	-	-	-	-	-	-	-	-
Preferred Stock Deemed Dividends / foreign currency adjustment	-	-	(10)	-	4	(6)	-	-	-	-	-
<b>Net Income (Loss) attributable to common shareholders</b>	<b>1,352</b>	<b>309</b>	<b>282</b>	<b>247</b>	<b>369</b>	<b>1,207</b>	<b>246</b>	<b>258</b>	<b>279</b>	<b>275</b>	<b>1,057</b>
<b>Average Diluted Common Shares Outstanding</b>	<b>4,141</b>	<b>4,024</b>	<b>4,005</b>	<b>3,968</b>	<b>3,951</b>	<b>3,987</b>	<b>3,946</b>	<b>3,931</b>	<b>3,916</b>	<b>3,878</b>	<b>3,918</b>
<b>Earnings Per Share - Diluted</b>	<b>\$0.32</b>	<b>\$0.08</b>	<b>\$0.07</b>	<b>\$0.06</b>	<b>\$0.09</b>	<b>\$0.30</b>	<b>\$0.06</b>	<b>\$0.07</b>	<b>\$0.07</b>	<b>\$0.07</b>	<b>\$0.27</b>

Source: Company data and Pivotal Research Group, LLC estimates

# PIVOTAL

Pivotal Research Group

## Sirius XM Radio

Cash Flow Statement (Dollars in millions, except for per subscriber and per share amounts)

	2021A	Q1 2022A	Q2 2022A	Q3 2022A	Q4 2022A	2022A	Q1 2023E	Q2 2023E	Q3 2023E	Q4 2023E	2023E
<b>Cash Flow From Operating Activities</b>											
Net Income/ (Loss)	1,310	309	292	247	365	1,213	246	258	279	275	1,057
Adjustments to reconcile net loss to cash flow from operating activities											
Depreciation and amortization	533	135	135	134	132	536	135	135	135	135	540
Impairment Loss	24	-	-	68	(7)	61	-	-	-	-	-
Non-cash interest	21	5	4	3	3	15	5	5	3	3	16
Non-cash stock compensation expense	-	-	-	-	-	-	-	-	-	-	-
Non-cash equity in net loss of affiliate	-	-	-	-	-	-	-	-	-	-	-
Provision for Doubtful Accounts	53	15	14	14	16	59	17	17	17	17	68
Loss from the Redemption of Debt	83	-	-	11	(11)	-	-	-	-	-	-
Amortization of Deferred Income related to equity method investment	-	-	(3)	3	-	-	-	-	-	-	-
Dividend received from unconsolidated equity investment	-	-	-	-	-	-	-	-	-	-	-
Equity granted to third party and employees	203	45	47	51	54	197	50	47	51	50	198
Deferred income taxes	131	29	31	72	70	202	-	-	-	-	-
Gain on fair value instrument	-	-	-	-	-	-	-	-	-	-	-
Gain on Unconsolidated Subsidiaries	(4)	-	-	-	-	-	-	-	-	-	-
Other non-cash purchase price adjustments / Goodwill impairment	48	12	18	7	35	72	15	15	20	20	70
Movements in working capital and other assets	(404)	(195)	(5)	(198)	19	(379)	(165)	(10)	(195)	40	(330)
<b>Net cash flow from operating activities</b>	<b>1,998</b>	<b>355</b>	<b>533</b>	<b>412</b>	<b>676</b>	<b>1,976</b>	<b>303</b>	<b>467</b>	<b>310</b>	<b>540</b>	<b>1,619</b>
<b>Cash Flow from investing activities</b>											
PPE	(388)	(97)	(99)	(83)	(147)	(426)	(150)	(150)	(150)	(200)	(650)
Proceeds from sale of assets	-	-	-	-	-	-	-	-	-	-	-
Purchase of restricted investments	(4)	-	-	-	-	-	-	-	-	-	-
Acquisition of Acquired Entity Cash / insurance recoveries	211	(44)	(93)	1	-	(136)	-	-	-	-	-
Release of restricted investments	-	-	-	-	-	-	-	-	-	-	-
Return of Capital from investment in unconsolidated entity	-	-	-	-	-	-	-	-	-	-	-
Investment in Convertible Paid Stock/related parties	(21)	(1)	1	-	(2)	(2)	-	-	-	-	-
Loans to related parties	-	-	-	-	-	-	-	-	-	-	-
Payments to Acquire additional ownership	2	-	-	-	15	15	-	-	-	-	-
<b>Net cash flow from investing activities</b>	<b>(200)</b>	<b>(142)</b>	<b>(191)</b>	<b>(82)</b>	<b>(133)</b>	<b>(548)</b>	<b>(150)</b>	<b>(150)</b>	<b>(150)</b>	<b>(200)</b>	<b>(650)</b>
<b>Cash Flow From Financing Activities</b>											
Proceeds from issuance of long-term debt	4,442	981	28	(89)	(341)	579	-	-	-	-	-
Repayment of Long-Term Debt / Credit Facilities	(3,503)	(1)	(1)	(1)	(3)	(6)	-	-	-	-	-
Payment on Premiums on Redemption of Debt	-	-	-	-	-	-	-	-	-	-	-
Taxes Paid in Lieu of shares issued for stock comp	(88)	(29)	(10)	(63)	(12)	(114)	-	-	-	-	-
Costs associated with debt restructuring	(62)	-	-	-	-	-	-	-	-	-	-
Proceeds from exercise of stock options	10	-	-	4	-	4	-	-	-	-	-
Proceeds from short term financing	-	-	-	-	-	-	-	-	-	-	-
Share Repurchases	(1,523)	(206)	(209)	(184)	(48)	(647)	(25)	(75)	(75)	(200)	(375)
Dividends	(268)	(1,073)	(86)	(86)	(94)	(1,339)	(99)	(98)	(98)	(97)	(392)
Other	(690)	-	(14)	3	(28)	(39)	-	-	-	-	-
<b>Cash Flow From Financing Activities</b>	<b>(1,682)</b>	<b>(328)</b>	<b>(292)</b>	<b>(416)</b>	<b>(526)</b>	<b>(1,562)</b>	<b>(124)</b>	<b>(173)</b>	<b>(173)</b>	<b>(297)</b>	<b>(767)</b>
<b>Cash generated/ utilized</b>	<b>116</b>	<b>(115)</b>	<b>50</b>	<b>(86)</b>	<b>17</b>	<b>(134)</b>	<b>29</b>	<b>144</b>	<b>(13)</b>	<b>43</b>	<b>203</b>
<b>Cash &amp; Equivalents</b>											
Beginning of period	83	199	84	134	48	199	65	94	238	224	65
End of period	199	84	134	48	65	65	94	238	224	267	267

Source: Company data and Pivotal Research Group, LLC estimates

# PIVOTAL

Pivotal Research Group

Sirius XM Radio	2021A	Q1 2022A	Q2 2022A	Q3 2022E	Q4 2022E	2022E	Q1 2023E	Q2 2023E	Q3 2022E	Q4 2022E	2022E
<b>Free Cash Flow Analysis (Dollars in millions, except for per share and per subscriber amounts)</b>											
<b>Sources and Uses</b>											
Operating Cash Flow	2,773	690	679	720	742	2,831	622	641	672	672	2,607
Net Cash Interest Expense	(394)	(98)	(100)	(104)	(105)	(407)	(105)	(107)	(112)	(118)	(442)
Change in Working Capital	(404)	(195)	(5)	(198)	19	(379)	(165)	(10)	(195)	40	(330)
Other expenditures	23	(42)	(41)	(6)	20	(69)	(50)	(57)	(55)	(55)	(216)
<b>Cash flow from operations</b>	<b>1,998</b>	<b>355</b>	<b>533</b>	<b>412</b>	<b>676</b>	<b>1,976</b>	<b>303</b>	<b>467</b>	<b>310</b>	<b>540</b>	<b>1,619</b>
PPE	(388)	(97)	(99)	(83)	(147)	(426)	(150)	(150)	(150)	(200)	(650)
Other investing activities/insurance proceeds	225	-	-	1	-	1	-	-	-	-	-
Capex and investing activities	(163)	(97)	(99)	(82)	(147)	(425)	(150)	(150)	(150)	(200)	(650)
<b>Free Cash Flow</b>	<b>1,835</b>	<b>258</b>	<b>434</b>	<b>330</b>	<b>529</b>	<b>1,551</b>	<b>153</b>	<b>317</b>	<b>160</b>	<b>340</b>	<b>969</b>
<b>Free Cash Flow (including non-cash interest)</b>	<b>1,835</b>	<b>258</b>	<b>434</b>	<b>330</b>	<b>529</b>	<b>1,551</b>	<b>153</b>	<b>317</b>	<b>160</b>	<b>340</b>	<b>969</b>
<b>Free Cash Flow Per Share</b>	<b>\$0.44</b>	<b>\$0.06</b>	<b>\$0.11</b>	<b>\$0.08</b>	<b>\$0.13</b>	<b>\$0.39</b>	<b>\$0.04</b>	<b>\$0.08</b>	<b>\$0.04</b>	<b>\$0.09</b>	<b>\$0.25</b>
% Annual Growth	17.3%	26.6%	-18.0%	-41.7%	12.6%	-12.4%	-39.8%	-25.5%	-51.0%	-34.5%	-36.4%

Source: Company data and Pivotal Research Group, LLC estimates

Sirius XM Radio	For Fiscal Years Ended December 31												
Discounted Cash Flow Valuation (Dollars in millions)	2015A	2016A	2017A	2018A	2019A	2020A	2021A	2022E	2023E	2024E	2025E	2026E	2027E
Free cash flow		1,513	1,568	1,525	1,730	1,668	1,835	1,550	969	1,141	1,383	1,575	1,753
AT Interest expense		199	213	246	249	103	325	325	343	266	268	281	270
<b>Unlevered Free Cash Flow</b>		<b>1,712</b>	<b>1,780</b>	<b>1,772</b>	<b>1,979</b>	<b>1,771</b>	<b>2,160</b>	<b>1,876</b>	<b>1,313</b>	<b>1,407</b>	<b>1,671</b>	<b>1,856</b>	<b>2,022</b>
YE 2022PV of U-FCF discounted at	9%								1,210	1,195	1,308	1,339	1,345
YE 2023PV of U-FCF discounted at	9%									1,297	1,420	1,453	1,459
Terminal Value @ __x unlevered fully taxed free cash flow ****	14x												28,749
Terminal Value @ __x operating cash flow	10x												Value per SIFI Sub
													\$812
Sum of Free Cash Flow at PV									5,628				
Add: Terminal Value (9% discount rate)									20,745				
<b>Total Value</b>									<b>26,373</b>				
Less: Estimated Year End Debt									(9,256)				
Plus: Estimated Year End Cash & Securities									267				
Plus: After Tax NPV of 2030 12.5MHz spectrum value (\$1.00MHz/pop)									1,553				
Plus: Dividend									294				
Plus: Other (XM Canada Equity/Loan/Podcast acquisitions/Soundcloud s									350				
<b>Net Asset Value</b>									<b>\$19,581</b>				
YE '23 Diluted Shares outstanding									3,918				
<b>YE '23 Target</b>									<b>\$5.00</b>				
Recent Price									\$5.00				
Upside									0%				

\*\*\* Enterprise Value backing out the NPV of the NOL

Source: Company data and Pivotal Research Group, LLC estimates \*\*\*\* assume full taxes in 2023

## Appendix: Important Disclosures

### Analyst Certification

I, Jeffrey D. Wlodarczak, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject company and their securities. I further certify that I have not received and will not receive direct or indirect compensation related to specific recommendations or views contained in this research report.

### Legal Disclaimers

Pivotal Research Group LLC is an independent equity research company and is neither a broker dealer nor offers investment banking services. Pivotal Research Group LLC is not a market maker for any securities, does not hold any securities positions, and does not seek compensation for investment banking services. The analyst preparing this report does not own any securities of the subject company and does not receive any compensation directly or indirectly from investment banking services.

### Stock Ratings

Pivotal Research Group LLC assigns one of three ratings based on an expectation of absolute total return (price change plus dividends) over a twelve-month time frame. The ratings are based on the following criteria:

**BUY:** The security is expected to have an absolute return in excess of 15%.

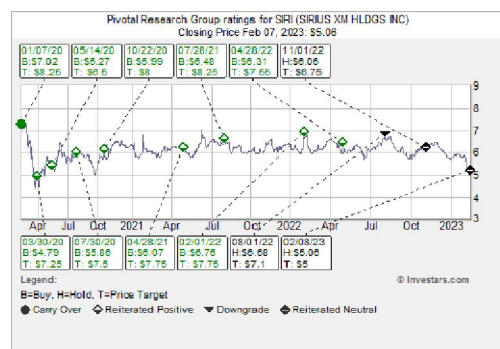
**HOLD:** The security is expected to have an absolute return of between plus and minus 15%.

**SELL:** The security is expected to have an absolute return less than minus 15%.

### Ratings Distribution

Pivotal Research LLC currently provides research coverage of 13 companies, of which 69% are rated BUY, 23% are rated HOLD, and 8% are rated SELL. Our company does not offer investment banking services. This data is accurate as-of 2/7/23.

### Price Chart and Target Price History



### Other Disclaimers

Information contained in this report has been prepared from sources that are believed to be reliable and accurate but are not guaranteed by us and do not represent a complete summary or statement of all available data. Additional information is available upon request. Furthermore, information and opinions expressed are subject to change without notice and we are under no obligation to inform you of such change.



This report has been prepared solely for our institutional clients. Ratings and target prices do not take into account the particular investment objectives, financial and/or tax situation, or needs of individual investors. Investment decisions should take into account all available information, not just that which is contained in this report. Furthermore, nothing contained in this report should be considered an offer or solicitation by Pivotal Research Group LLC to buy or sell any securities or other financial instruments. Past performance is not indicative of future performance and estimates of future performance contained in this report are based on assumptions that may not be realized.

Material in this report, except that which is supplied by third parties, is Copyright ©2023, by Pivotal Research LLC. All rights reserved. No portion may be reproduced, sold, or redistributed in any form without express written consent of Pivotal Research Group LLC.

### **Commission Sharing Arrangements**

Pivotal Research Group LLC has commission sharing arrangements (CSA) with numerous broker-dealers. Please contact Jeff Shelton at 212-514-4681 for further information.

### **Additional Information Available Upon Request**