

## Media &amp; Entertainment

## Life in the main stream, vol. 47 – Strong music streaming data to end the year

Industry Overview

**Weaker video download and MAU growth in December**

We analyzed December data for 29 streaming video entertainment services which show weaker Y/Y download and MAU growth. Key takeaways include:

- 1) In aggregate across all video streaming services, downloads declined 16% Y/Y and were flat M/M, with Y/Y growth seen only in International.
- 2) MAUs declined 7% Y/Y and were flat M/M.
- 3) Netflix had 15.4mn downloads (-14% Y/Y) and 306mn MAUs (-13% Y/Y) equating to 32% (vs. 28% last month) of all mass appeal downloads and 52% (vs. 52% last month) of all mass appeal MAUs.
- 4) Disney+ downloads (-33%) and MAUs (-4%) declined Y/Y.
- 5) Max/HBO Max grew Y/Y downloads (+20%) in December.

**Video: Download growth mostly weak across M&E**

Of the 12 M&E companies tracked in our video streaming analysis, 4 companies saw Y/Y download growth and 6 saw Y/Y MAU growth in December 2023. Key takeaways include:

- 1) DAZN, WBD, FWONK and MGM saw Y/Y download growth.
- 2) DAZN, WBD, FOX, FWONK, MANU and MGM saw Y/Y MAU growth.
- 3) Disney collected 11.4mn downloads (-29%) and 139.2mn MAUs (-5% Y/Y) across Disney+, Hulu and ESPN+.
- 4) Max/HBO Max registered 6.4mn downloads (+20% Y/Y) and 40.0mn MAUs (+12% Y/Y). On a sequential basis, HBO Max/Max downloads declined 12% M/M, but MAUs increased 2% M/M.
- 5) Paramount+ downloads (4.2mn) declined Y/Y but grew sequentially (-22% Y/Y; +2% M/M). Paramount+ MAUs (12.2mn) grew both Y/Y and sequentially (+7% Y/Y; +2% M/M).
- 6) Peacock downloads declined 31% Y/Y and 19% M/M. Peacock MAUs declined 10% Y/Y, but were up 1% M/M.

**Music: Strong growth in downloads and MAUs**

Outside of video, our comparable analysis for 7 streaming music services showed increases in Y/Y and M/M downloads, while MAUs were up Y/Y and flat M/M. Key takeaways include:

- 1) Download activity growth in aggregate was +3% Y/Y and +13% M/M.
- 2) MAU growth in aggregate was +6% Y/Y and flat M/M.
- 3) Specifically, downloads grew Y/Y for Spotify (+7%) and YouTube Music (+10%).
- 4) Spotify (+6%) and YouTube Music (+10%) saw healthy Y/Y MAU growth.
- 5) Spotify, at 29mn monthly downloads and ~508mn MAUs, continues to dwarf other services accounting for ~69% of downloads and ~54% of MAUs across the music apps we track.

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MAU = Monthly active user

M&amp;E = Media &amp; Entertainment

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# Download Activity

## Exhibit 1: Summary of Monthly Download Trends By Company

Sensor Tower downloads by company show mixed Y/Y download activity

	Streaming Service Profile				App Downloads By Month <sup>2</sup>			Y/Y Chg. In App Downloads By Month <sup>3</sup>			
	Ticker	Cume Downloads <sup>1</sup>	Key Services Measured		Oct. 2023	Nov. 2023	Dec. 2023	Oct. 2023	Nov. 2023	Dec. 2023	QTD
<b>Media &amp; Entertainment</b>											
AMC Networks	AMCX	9,509,349	Acorn TV, Shudder, Sundance Now, UMC		87,700	50,702	61,455	-43%	-30%	-10%	-32%
DAZN Group	NM	72,001,363	DAZN		1,449,237	650,013	785,463	48%	2%	90%	42%
Warner Bros. Discovery	WBD	403,989,034	HBO Max/Max, Eurosport Player, discovery+, Dplay, FNK		8,019,426	7,794,936	7,050,792	24%	44%	20%	29%
Dish Network	DISH	27,251,531	Sling TV		433,959	504,207	447,480	20%	23%	49%	29%
Disney	DIS	889,141,158	Disney+, Hulu, ESPN+/ESPN		13,121,033	12,306,381	11,394,018	-15%	-13%	-29%	-19%
Fox	FOX	204,502,778	Tubi, Fox Nation		2,664,105	2,754,633	2,531,434	3%	-5%	-13%	-5%
iHeartMedia	IHRT	138,181,755	iHeartRadio		424,204	428,091	365,695	-9%	3%	-8%	-5%
Liberty Formula One Group	FWONK	11,566,447	F1TV		270,213	279,629	73,561	1%	98%	77%	39%
Lionsgate	LGF	65,133,512	STARZ		315,980	336,807	406,097	-15%	16%	-4%	-2%
Manchester United	MANU	15,425,878	MANU App		134,443	105,414	124,666	-49%	-42%	-30%	-42%
Metro-Goldwyn-Mayer	MGM	4,946,532	MGM+		114,141	88,813	90,956	304%	138%	174%	198%
Sirius XM	SIRI	382,269,488	Pandora, Sirius XM App		1,072,682	1,075,345	1,193,842	-15%	-8%	-9%	-11%
Spotify	SPOT	2,031,780,257	Spotify		29,371,597	25,669,034	29,232,137	16%	0%	7%	8%
Paramount	PARA	434,470,112	Paramount+, Showtime, BET+, Pluto, Noggin		8,654,936	9,679,745	9,570,632	1%	-5%	-25%	-12%
Comcast	CMCSA	77,543,714	Peacock		2,565,195	2,666,818	2,173,235	-11%	-35%	-31%	-27%
<b>FAANG</b>											
	Ticker	Cume Downloads <sup>1</sup>	Key Services Measured		Oct. 2023	Nov. 2023	Dec. 2023	Oct. 2023	Nov. 2023	Dec. 2023	QTD
Amazon	AMZN	1,070,611,953	Amazon Prime, Amazon Music		13,314,735	12,789,067	13,652,269	-10%	-25%	-16%	-18%
Apple	AAPL	114,963,304	Apple Music		1,664,703	1,402,595	1,479,029	3%	-7%	-6%	-3%
Google	GOOGL	749,620,049	YouTube TV, YouTube Music		7,765,790	7,003,962	7,706,693	19%	9%	6%	11%
Netflix	NFLX	1,695,772,809	Netflix		14,162,844	13,326,741	15,358,845	-2%	-4%	-14%	-7%

### Notes:

1. Cume Downloads represents total cumulative app downloads as measured on Apple iOS and Android-enabled mobile and tablet devices, 2012-present; does not include connected TV or PC app downloads; figures do not represent active or paying subscribers
2. App Downloads By Month represents total monthly app downloads as measured on Apple iOS and Android-enabled mobile and tablet devices, does not include connected TV or PC app downloads; figures do not represent active or paying subscribers
3. Y/Y Chg. In App Downloads By Month represents the year-over-year change in monthly downloads vs. the prior year period; QTD represents the calendar quarter-to-date year-over-year change in downloads vs. the prior year period
4. Although this data represents a small window into the underlying commercial strength of a streaming service (as it reflects iOS/Android mobile/tablet app downloads only—excluding PCs and connected TVs and not factoring for multiple downloads per account), we believe it offers helpful signaling in terms of relative strength and directional gross subscriber addition trends for M&E's next leg of content monetization.

**Source:** BofA Global Research, Sensor Tower

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## Exhibit 2: Summary of Monthly App Download Trends By Stream Media Service Type

Sensor Tower downloads by company show mixed Y/Y download activity

	Streaming Service Profile					App Downloads By Month <sup>4</sup>			Y/Y Chg. In App Downloads By Month <sup>5</sup>				BoFA Comment
	Ticker	Cume Downloads <sup>1</sup>	Subs <sup>2</sup>	Cost	Category <sup>3</sup>	Oct. 2023	Nov. 2023	Dec. 2023	Oct. 2023	Nov. 2023	Dec. 2023	QTD	
<b>Mass Appeal</b>													
Amazon Prime	AMZN	795,168,405	>200	\$15/mo.	SVOD	10,248,489	9,814,104	10,246,231	-9%	-24%	-12%	-15%	
Disney+	DIS	523,129,932	150	\$7-14/mo.	AVOD/SVOD	9,845,551	9,058,195	8,602,209	-15%	-13%	-33%	-21%	DIS began p/w sharing in Canada on 11/1
HBO Max/Max	WBD	310,678,744	nm	\$10-20/mo.	AVOD/SVOD	6,889,794	7,290,752	6,421,588	21%	53%	20%	30%	Max added B/R Sports add-on option in Oct
Hulu	DIS	238,770,436	48	\$10-18/mo.	AVOD/SVOD/VMVPD	1,550,390	1,798,379	1,617,075	-19%	1%	-7%	-9%	
Netflix	NFLX	1,695,772,809	247	\$7-23/mo.	AVOD/SVOD	14,162,844	13,326,741	15,358,845	-2%	-4%	-14%	-7%	NFLX raised price on Basic and Premium plans in Oct
Paramount+	PARA	147,790,886	63	\$6-12/mo.	AVOD/SVOD	3,800,751	4,147,226	4,222,790	22%	10%	-22%	-1%	
Peacock	CMCSA	77,543,714	24	\$6-12/mo.	AVOD/SVOD	2,565,195	2,666,818	2,173,235	-11%	-35%	-31%	-27%	
TOTAL	--	3,788,854,926	-809	--	--	49,063,014	48,102,215	48,641,973	-4%	-7%	-16%	-9%	
<b>Premium</b>													
MGM+	MGM	4,946,532	nm	\$6/mo.	SVOD	114,141	88,813	90,956	304%	138%	174%	198%	
Showtime	PARA	22,308,953	9	\$11/mo.	SVOD	173,256	73,437	66,811	-5%	-57%	-73%	-47%	Showtime app shut down as of 12/14
STARZ	LGF	65,133,512	27	\$9/mo.	SVOD	315,980	336,807	406,097	-15%	16%	-4%	-2%	
TOTAL	--	92,388,997	-36	--	--	603,377	499,057	563,864	4%	1%	-20%	-6%	
<b>Mid-tier</b>													
BET+	PARA	12,648,973	2	\$6-10/mo.	AVOD/SVOD	208,113	186,880	168,761	-52%	-13%	-9%	-33%	
Noggin	PARA	20,215,459	3	\$8/mo.	AVOD/SVOD	62,858	68,937	80,932	-49%	-8%	-45%	-38%	
Pluto TV	PARA	222,412,031	79	Free	AVOD	4,366,522	5,164,112	4,996,650	-5%	-12%	-26%	-16%	
Sling TV	DISH	27,251,531	2	\$35-50/mo.	VMVPD	433,959	504,207	447,480	20%	23%	49%	29%	
YouTube TV	GOOGL	57,606,579	4	\$65/mo.	VMVPD	1,396,913	1,153,906	1,034,650	11%	-7%	-13%	-3%	
Tubi	FOX	199,216,564	nm	Free	AVOD	2,586,570	2,658,275	2,444,325	3%	-3%	-13%	-5%	
TOTAL	--	539,351,137	91	--	--	9,054,935	9,736,317	9,172,798	-3%	-8%	-20%	-11%	
<b>Niche</b>													
Acorn TV	AMCX	1,440,284	>1	\$5/mo.	SVOD	4,066	4,435	15,799	-73%	-46%	92%	-24%	
Food Network Kitchen	WBD	16,589,734	nm	\$7/mo.	AVOD/SVOD	16,663	17,951	18,761	-21%	-27%	-17%	-22%	
Shudder	AMCX	4,973,565	>1	\$5/mo.	SVOD	62,992	42,862	34,675	-46%	-16%	-9%	-32%	
Sundance Now	AMCX	700,612	nm	\$7/mo.	SVOD	24	-	40	-94%	-100%	-92%	-95%	
UMC	AMCX	2,394,888	nm	\$5/mo.	SVOD	20,618	3,405	10,941	0%	-73%	-49%	-36%	
TOTAL	--	26,099,083	nm	--	--	104,363	68,653	80,216	-40%	-29%	-12%	-30%	
<b>U.S. Sports/News</b>													
CBSN	PARA	9,093,810	nm	Free	AVOD	43,436	39,153	34,688	-46%	-60%	-61%	-56%	
ESPN+	DIS	127,240,790	25	\$10/mo.	SVOD/LME	1,725,092	1,449,807	1,174,734	-12%	-27%	-13%	-17%	
Fox Nation	FOX	5,286,214	nm	\$6/mo.	SVOD/LME	77,535	96,358	87,109	4%	-40%	-10%	-21%	
TOTAL	--	141,620,814	25	--	--	1,846,063	1,585,318	1,296,531	-12%	-29%	-15%	-19%	
<b>International</b>													
DAZN	NM	72,001,363	nm	\$20/mo.	AVOD/SVOD	1,449,237	650,013	785,463	48%	2%	90%	42%	
discovery+/Dplay	WBD	65,825,437	nm	\$5-7/mo.	AVOD/SVOD	1,108,074	481,719	603,701	53%	-21%	19%	19%	
Eurosport Player	WBD	10,895,119	nm	E7/mo.	SVOD/LME	4,895	4,514	6,742	-82%	-85%	-76%	-81%	
F1 TV	FWONK	11,566,447	nm	\$3-10/mo.	SVOD/LME	270,213	279,629	73,561	1%	98%	77%	39%	
MANU App	MANU	15,425,878	nm	Free	Ad-Supported/Pay	134,443	105,414	124,666	-49%	-42%	-30%	-42%	
TOTAL	--	175,714,244	-24	--	--	2,966,862	1,521,289	1,594,133	31%	-5%	36%	21%	
<b>Music</b>													
Amazon Music	AMZN	275,443,548	55	\$8-10/mo.	Ad-Supported/Pay	3,066,246	2,974,963	3,406,038	-13%	-31%	-26%	-24%	
Apple Music	AAPL	114,963,304	>78	\$10/mo.	Pay	1,664,703	1,402,595	1,479,029	3%	-7%	-6%	-3%	
iHeart Radio	IHRT	138,181,755	nm	\$5-10/mo.	Ad-Supported/Pay	424,204	428,091	365,695	-9%	3%	-8%	-5%	
Pandora	SIRI	331,665,962	55	\$5-10/mo.	Ad-Supported/Pay	621,223	601,760	720,262	-8%	-6%	-6%	-7%	
Sirius XM App	SIRI	50,603,526	nm	\$13/mo.	Pay	451,459	473,585	473,580	-22%	-11%	-14%	-16%	
Spotify	SPOT	2,031,780,257	520	\$11/mo.	Ad-Supported/Pay	29,371,597	25,669,034	29,232,137	16%	0%	7%	8%	
YouTube Music	GOOGL	692,013,470	50	\$10/mo.	Pay	6,368,877	5,890,056	6,672,043	21%	13%	10%	14%	
TOTAL	--	3,634,651,822	680	--	--	41,968,309	37,400,084	42,348,784	12%	-2%	3%	4%	

### Notes:

1. Cume Downloads represents total cumulative app downloads as measured on Apple iOS and Android-enabled mobile and tablet devices, 2012-present; does not include connected TV or PC app downloads; figures do not represent active or paying subscribers
2. Subs represents either publicly disclosed or estimated subscribers to SVOD, AVOD or VMVPD services, where available; Pluto TV, Pandora and Spotify figures expressed in terms of monthly active users (MAUs); Paramount+ & Showtime represent U.S. subs;
3. AVOD = advertising-supported video-on-demand, SVOD = subscription video-on-demand, VMVPD = virtual multichannel video programming distributor
4. App Downloads By Month represents total monthly app downloads as measured on Apple iOS and Android-enabled mobile and tablet devices, does not include connected TV or PC app downloads; figures do not represent active or paying subscribers
5. Y/Y Chg. In App Downloads By Month represents the year-over-year change in monthly downloads vs. the prior year period; QTD represents the calendar quarter-to-date year-over-year change in downloads vs. the prior year period

Source: BoFA Global Research, Sensor Tower, Company Reports, Press Reports

BoFA GLOBAL RESEARCH

## Exhibit 3: Summary of Monthly App Download Trends By Stream Media Service Type

Sensor Tower downloads by company show mixed Y/Y download activity

	Streaming Service Profile					Y/Y Change In App Downloads By Month <sup>4,5</sup>												
Mass Appeal	Ticker	Cume Downloads <sup>1</sup>	Subs <sup>2</sup>	Cost	iOS Rating <sup>3</sup>	Andr. Rating <sup>3</sup>	Jan. 2023	Feb. 2023	Mar. 2023	Apr. 2023	May. 2023	Jun. 2023	Jul. 2023	Aug. 2023	Sep. 2023	Oct. 2023	Nov. 2023	Dec. 2023

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	Streaming Service Profile						Y/Y Change In App Downloads By Month <sup>4,5</sup>															
Amazon Prime	AMZN	795,168,405	>200	\$15/mo.	4.8	4.2	-27%	-6%	3%	2%	26%	13%	26%	4%	-19%	-9%	-24%	-12%				
Disney+	DIS	523,129,932	150	\$7-14/mo.	4.6	4.4	-6%	13%	-9%	-15%	-9%	-31%	-33%	-23%	-13%	-15%	-13%	-33%				
HBO Max/Max	WBD	310,678,744	nm	\$10-20/mo.	4.9	4.7	-39%	-32%	-38%	-42%	186%	96%	50%	9%	-4%	21%	53%	20%				
Hulu	DIS	238,770,436	48	\$10-18/mo.	4.6	4.5	-30%	-26%	-16%	-24%	-15%	-11%	-17%	-26%	-15%	-19%	1%	-7%				
Netflix	NFLX	1,695,772,809	247	\$7-23/mo.	3.7	4.3	-5%	-9%	-6%	-9%	-3%	4%	1%	-2%	0%	-2%	-4%	-14%				
Paramount+	PARA	147,790,886	63	\$6-12/mo.	4.6	3.8	126%	125%	35%	23%	25%	11%	18%	23%	10%	22%	10%	-22%				
Peacock	CMCSA	77,543,714	24	\$6-12/mo.	4.6	4.5	16%	-61%	-13%	4%	7%	0%	-18%	1%	-16%	-11%	-35%	-31%				
TOTAL	--	3,788,854,926	-809	--	--	--	-11%	-8%	-9%	-12%	30%	7%	3%	-3%	-9%	-4%	-7%	-16%				
Premium	Ticker	Cume Downloads <sup>1</sup>	Subs <sup>2</sup>	Cost	iOS Rating <sup>3</sup>	Andr. Rating <sup>3</sup>	Jan. 2023	Feb. 2023	Mar. 2023	Apr. 2023	May. 2023	Jun. 2023	Jul. 2023	Aug. 2023	Sep. 2023	Oct. 2023	Nov. 2023	Dec. 2023				
MGM+	MGM	4,946,532	nm	\$6/mo.	4.8	4.1	215%	146%	70%	44%	67%	199%	101%	103%	216%	304%	138%	174%				
Showtime	PARA	22,308,953	9	\$11/mo.	4.8	3.7	-4%	24%	105%	147%	-56%	-54%	-22%	-50%	22%	-5%	-57%	-73%				
STARZ	LGF	65,133,512	27	\$9/mo.	4.8	4.0	-45%	-35%	-16%	-4%	-8%	-54%	-49%	-52%	-24%	-15%	16%	-4%				
TOTAL	--	92,388,997	-36	--	--	--	-30%	-17%	6%	43%	-19%	-43%	-37%	-46%	-5%	4%	1%	-20%				
Mid-tier	Ticker	Cume Downloads <sup>1</sup>	Subs <sup>2</sup>	Cost	iOS Rating <sup>3</sup>	Andr. Rating <sup>3</sup>	Jan. 2023	Feb. 2023	Mar. 2023	Apr. 2023	May. 2023	Jun. 2023	Jul. 2023	Aug. 2023	Sep. 2023	Oct. 2023	Nov. 2023	Dec. 2023				
BET+	PARA	12,648,973	2	\$6-10/mo.	3.8	3.6	40%	143%	62%	13%	-3%	-29%	-14%	28%	1%	-52%	-13%	-9%				
Noggin	PARA	20,215,459	3	\$8/mo.	3.6	3.5	9%	3%	21%	-5%	-25%	-28%	-27%	-40%	-48%	-49%	-8%	-45%				
Pluto TV	PARA	222,412,031	79	Free	4.8	3.9	14%	23%	83%	17%	13%	-4%	-6%	8%	-2%	-5%	-12%	-26%				
Sling TV	DISH	27,251,531	2	\$35-50/mo.	4.6	3.8	6%	38%	35%	80%	131%	162%	293%	52%	13%	20%	23%	49%				
YouTube TV	GOOGL	57,606,579	4	\$65/mo.	4.0	3.8	46%	104%	60%	16%	18%	-12%	-6%	23%	102%	11%	-7%	-13%				
Tubi	FOX	199,216,564	nm	Free	4.7	4.8	19%	26%	25%	17%	24%	43%	39%	9%	5%	3%	-3%	-13%				
TOTAL	--	539,351,137	91	--	--	--	19%	34%	61%	18%	19%	9%	10%	10%	15%	-3%	-8%	-20%				
Niche	Ticker	Cume Downloads <sup>1</sup>	Subs <sup>2</sup>	Cost	iOS Rating <sup>3</sup>	Andr. Rating <sup>3</sup>	Jan. 2023	Feb. 2023	Mar. 2023	Apr. 2023	May. 2023	Jun. 2023	Jul. 2023	Aug. 2023	Sep. 2023	Oct. 2023	Nov. 2023	Dec. 2023				
Acorn TV	AMCX	1,440,284	>1	\$5/mo.	4.6	4.3	-47%	-44%	-23%	-36%	-41%	-24%	-20%	-45%	-37%	-73%	-46%	92%				
FoodNetwork Kitchen	WBD	16,589,734	nm	\$7/mo.	4.8	4.3	-47%	-45%	-14%	25%	2%	-21%	-15%	-21%	-14%	-21%	-27%	-17%				
Shudder	AMCX	4,973,565	>1	\$5/mo.	4.6	4.4	-23%	2%	-13%	-29%	-51%	-45%	-25%	-48%	-24%	-46%	-16%	-9%				
Sundance Now	AMCX	700,612	nm	\$7/mo.	4.4	4.0	-93%	-92%	-83%	-89%	-90%	-91%	-86%	-90%	-96%	-94%	-100%	-92%				
UMC	AMCX	2,394,888	nm	\$5/mo.	2.3	3.2	16%	-5%	-19%	-58%	-69%	-66%	-66%	-4%	287%	0%	-73%	-49%				
TOTAL	--	26,099,083	nm	--	--	--	-32%	-21%	-17%	-33%	-50%	-47%	-37%	-32%	4%	-40%	-29%	-12%				
U.S. Sports/News	Ticker	Cume Downloads <sup>1</sup>	Subs <sup>2</sup>	Cost	iOS Rating <sup>3</sup>	Andr. Rating <sup>3</sup>	Jan. 2023	Feb. 2023	Mar. 2023	Apr. 2023	May. 2023	Jun. 2023	Jul. 2023	Aug. 2023	Sep. 2023	Oct. 2023	Nov. 2023	Dec. 2023				
CBSN	PARA	9,093,810	nm	Free	4.0	4.3	58%	-35%	-56%	-47%	-52%	-52%	-51%	-39%	-61%	-46%	-60%	-61%				
ESPN+	DIS	127,240,790	25	\$10/mo.	4.4	3.8	42%	24%	10%	19%	19%	-23%	12%	23%	1%	-12%	-27%	-13%				
Fox Nation	FOX	5,286,214	nm	\$6/mo.	4.6	3.5	-20%	-16%	-23%	-26%	-36%	-37%	-26%	-21%	37%	4%	-40%	-10%				
TOTAL	--	141,620,814	25	--	--	--	39%	15%	3%	12%	11%	-26%	4%	15%	0%	-12%	-29%	-15%				
International	Ticker	Cume Downloads <sup>1</sup>	Subs <sup>2</sup>	Cost	iOS Rating <sup>3</sup>	Andr. Rating <sup>3</sup>	Jan. 2023	Feb. 2023	Mar. 2023	Apr. 2023	May. 2023	Jun. 2023	Jul. 2023	Aug. 2023	Sep. 2023	Oct. 2023	Nov. 2023	Dec. 2023				
DAZN	NM	72,001,363	nm	\$20/mo.	4.6	4.0	77%	39%	-22%	39%	-5%	-2%	0%	-20%	-35%	48%	2%	90%				
discovery+/Dplay	WBD	65,825,437	nm	\$5-7/mo.	4.9	4.7	-69%	-71%	-63%	-62%	-58%	-66%	-63%	-40%	-9%	53%	-21%	19%				
Eurosport Player	WBD	10,895,119	nm	E7/mo.	4.5	3.6	-72%	-93%	-82%	-86%	-89%	-69%	-71%	-77%	-90%	-82%	-85%	-76%				
F1 TV	FWONK	11,566,447	nm	\$3-10/mo.	2.4	3.1	14%	312%	37%	147%	8%	9%	-6%	24%	84%	1%	98%	77%				
MANU App	MANU	15,425,878	nm	Free	3.9	4.7	21%	48%	14%	20%	45%	-14%	-45%	-2%	-13%	-49%	-42%	-30%				
TOTAL	--	175,714,244	nm	--	--	--	-36%	-25%	-24%	-5%	-23%	-38%	-40%	-22%	-20%	31%	-5%	36%				
Music	Ticker	Cume Downloads <sup>1</sup>	Subs <sup>2</sup>	Cost	iOS Rating <sup>3</sup>	Andr. Rating <sup>3</sup>	Jan. 2023	Feb. 2023	Mar. 2023	Apr. 2023	May. 2023	Jun. 2023	Jul. 2023	Aug. 2023	Sep. 2023	Oct. 2023	Nov. 2023	Dec. 2023				
Amazon Music	AMZN	275,443,548	55	\$8-10/mo.	4.7	4.3	33%	23%	8%	13%	8%	-2%	-9%	-10%	-13%	-13%	-31%	-26%				
Apple Music	AAPL	114,963,304	>78	\$10/mo.	nm	3.9	-13%	-12%	-10%	-14%	-2%	9%	15%	9%	20%	3%	-7%	-6%				
iHeartRadio	IHRT	138,181,755	nm	\$5-10/mo.	4.6	4.6	6%	4%	12%	-8%	-1%	67%	-24%	-13%	-7%	-9%	3%	-8%				
Pandora	SIRI	331,665,962	55	\$5-10/mo.	4.8	4.3	-30%	-29%	-37%	-18%	-8%	-5%	-4%	-4%	-3%	-8%	-6%	-6%				
Sirius XM	SIRI	50,603,526	nm	\$13/mo.	4.8	4.8	29%	20%	12%	6%	-6%	-7%	-11%	-8%	-12%	-22%	-11%	-14%				
Spotify	SPOT	2,031,780,257	520	\$11/mo.	4.8	4.4	-3%	2%	-9%	-9%	25%	5%	8%	2%	30%	16%	0%	7%				
YouTube Music	GOOGL	692,013,470	50	\$10/mo.	4.8	4.5	2%	1%	-7%	4%	12%	15%	8%	3%	0%	21%	13%	10%				
TOTAL	--	3,634,651,822	680	--	--	--	1%	2%	-8%	-6%	19%	6%	6%	1%	20%	12%	-2%	3%				

**Notes:** 1. Cume Downloads represents total cumulative app downloads as measured on Apple iOS and Android-enabled mobile and tablet devices, 2012-present; does not include connected TV or PC app downloads; figures do not represent active or paying subscribers

2. Subs represents either publicly disclosed or estimated subscribers to SVOD, AVOD or VMVPD services, where available; Pluto TV, Pandora and Spotify figures expressed in terms of monthly active users (MAUs); CBS ALL Access & Showtime represent U.S. subs; discovery+/Dplay represent all next-gen subscribers

3. Represents average customer review score as of current month in the Apple iOS and Android app stores, with a best possible score of 5

4. App Downloads By Month represents total monthly app downloads as measured on Apple iOS and Android-enabled mobile and tablet devices, does not include connected TV or PC app downloads; figures do not represent active or paying subscribers

5. Y/Y Chg. In App Downloads By Month represents the year-over-year change in monthly downloads vs. the prior year period; QTD represents the calendar quarter-to-date year-over-year change in downloads vs. the prior year period

**Source:** BoFA Global Research, Sensor Tower, Company Reports, Press Reports

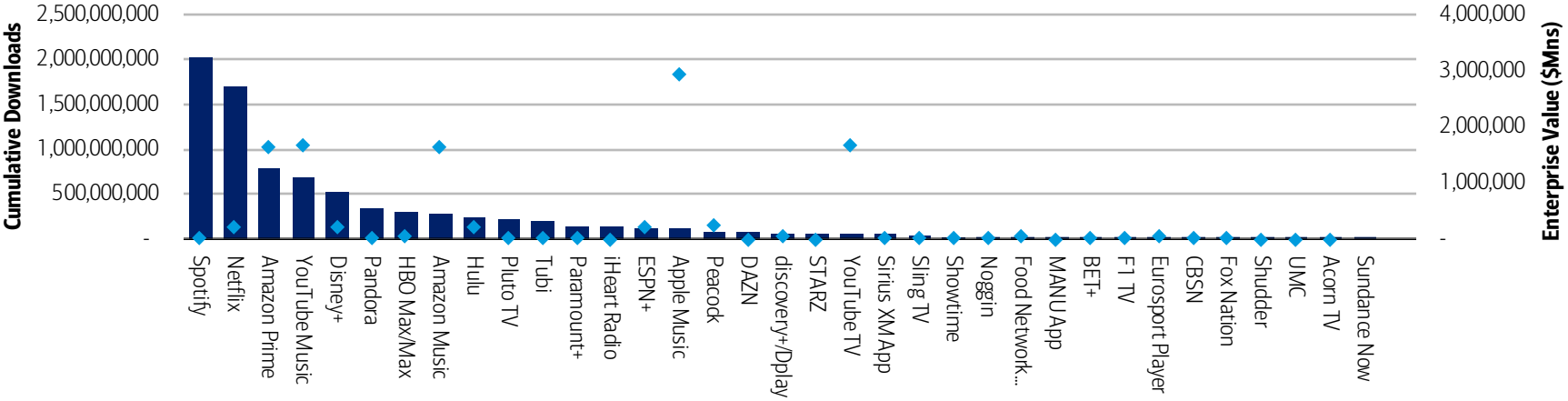
BoFA GLOBAL RESEARCH





**Exhibit 4: Top streaming media services, as ranked by cumulative worldwide app downloads, 2012-present**

Sensor Tower downloads monthly by service - Netflix remains the leading video service and Spotify the leading music service by cumulative worldwide app downloads

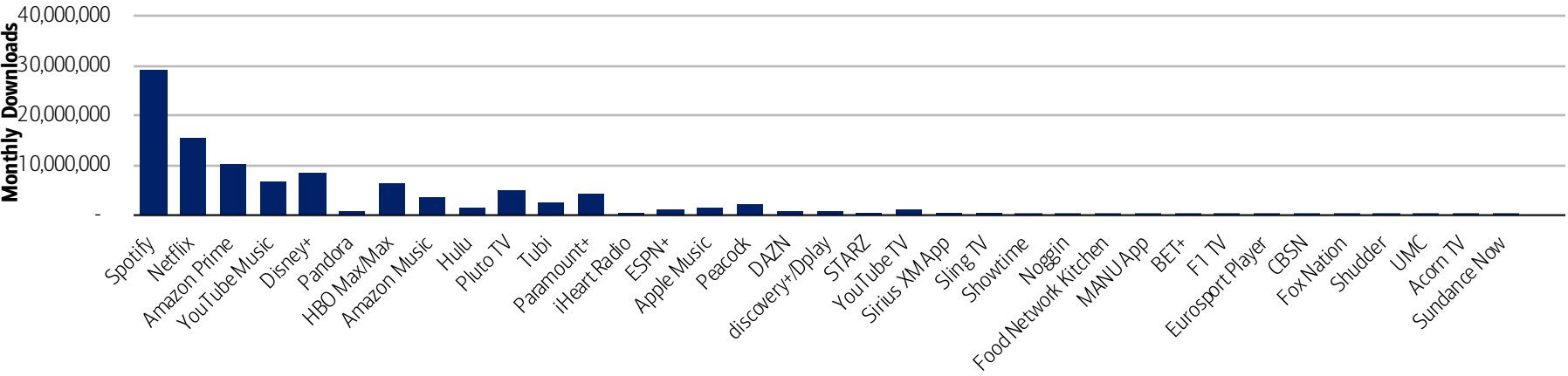


Source: BofA Global Research, Sensor Tower

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**Exhibit 5: Streaming media services worldwide app downloads, current month activity**

Sensor Tower downloads by service

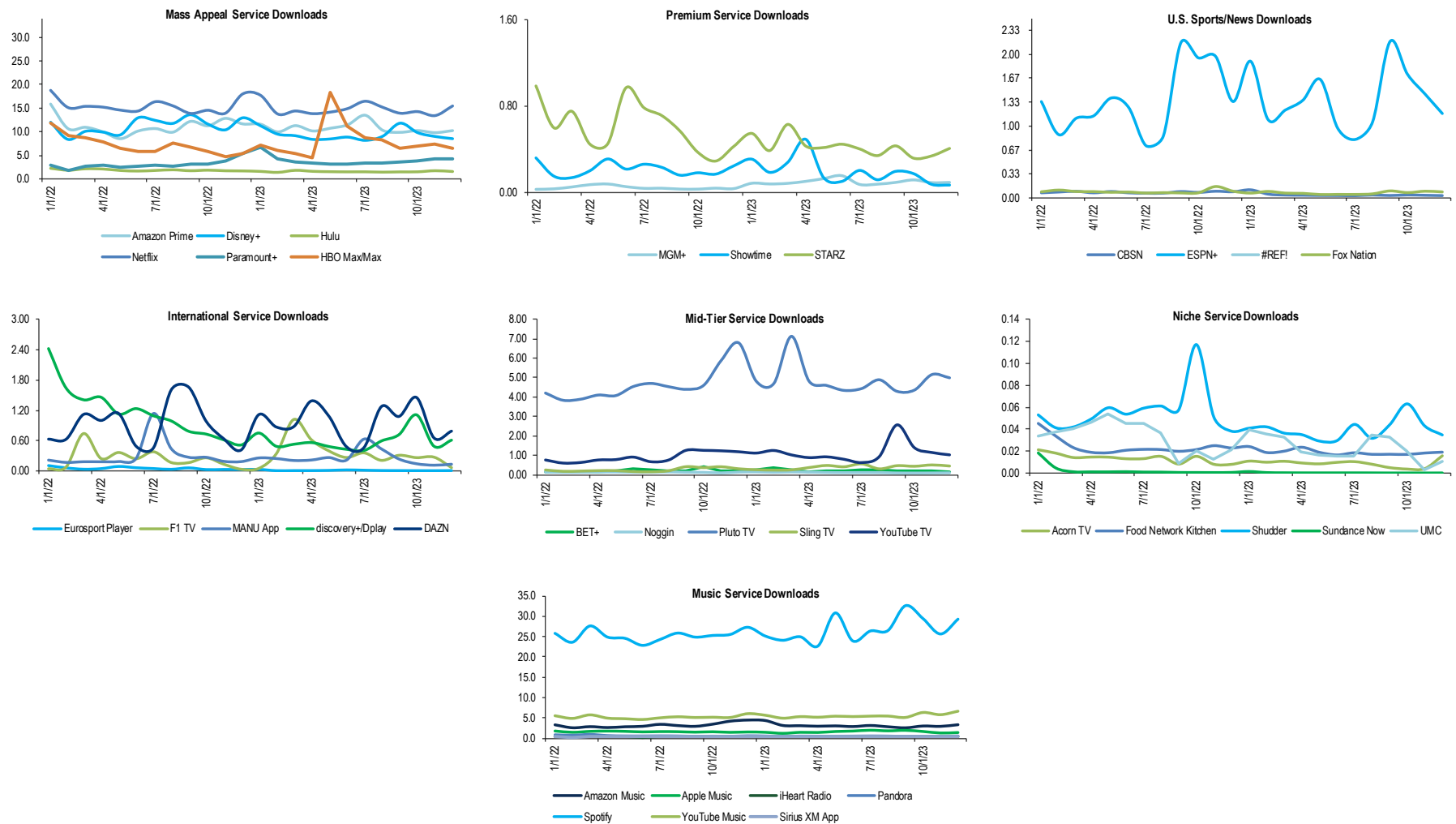


Source: BofA Global Research, Sensor Tower

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## Exhibit 6: Total worldwide downloads per month (millions)

Sensor Tower monthly downloads by service



Source: BofA Global Research, Sensor Tower

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# Monthly Active Users (MAUs)

## Exhibit 7: Summary of Monthly Active User (MAU) Trends By Company

Sensor Tower MAUs by company show mixed Y/Y results

	Streaming Service Profile			App MAUs By Month <sup>2</sup>			Y/Y Chg. In App MAUs By Month <sup>3</sup>			
	Ticker	Cume Downloads <sup>1</sup>	Key Services Measured	Oct. 2023	Nov. 2023	Dec. 2023	Oct. 2023	Nov. 2023	Dec. 2023	QTD
<b>Media &amp; Entertainment</b>										
AMC Networks	AMCX	9,509,349	Acorn TV, Shudder, Sundance Now, UMC	161,647	139,750	123,976	-34.1%	-29.6%	-34.0%	-32.7%
DAZN Group	NM	72,001,363	DAZN	5,979,884	5,415,511	5,580,025	8.1%	6.4%	43.1%	16.9%
Warner Bros. Discovery	WBD	403,989,034	HBO Max/Max, Eurosport Player, discovery+, Dplay, FNK	42,210,568	42,847,041	43,527,079	-1.5%	7.2%	8.1%	4.5%
Dish Network	DISH	27,251,531	Sling TV	1,295,248	1,380,234	1,382,504	36.1%	38.9%	44.6%	39.8%
Disney	DIS	889,141,158	Disney+, Hulu, ESPN+/ESPN	143,481,820	139,454,936	139,214,911	-3.6%	-3.7%	-4.8%	-4.0%
Fox	FOX	204,502,778	Tubi, Fox Nation	12,616,266	12,595,448	12,366,328	4.2%	1.5%	0.8%	2.2%
iHeartMedia	IHRT	138,181,755	iHeartRadio	2,720,516	2,814,101	2,822,119	-19.4%	-15.8%	-5.2%	-13.8%
Liberty Formula One Group	FWONK	11,566,447	F1TV	833,839	839,591	693,053	19.8%	35.8%	32.9%	28.9%
Lionsgate	LGF	65,133,512	STARZ	1,571,938	1,550,130	1,589,524	-29.6%	-23.2%	-26.9%	-26.7%
Manchester United	MANU	15,425,878	MANU App	3,256,345	3,203,359	3,364,577	0.0%	6.4%	10.4%	5.5%
Metro-Goldwyn-Mayer	MGM	494,6532	MGM+	112,876	95,684	95,764	221.0%	130.3%	161.3%	168.4%
Sirius XM	SIRI	382,269,488	Pandora, Sirius XM App	29,123,018	29,070,512	28,862,341	-15.4%	-14.6%	-14.8%	-14.9%
Spotify	SPOT	2,031,780,257	Spotify	502,784,262	508,721,833	508,852,067	10.3%	8.7%	6.0%	8.3%
Paramount	PARA	434,470,112	Paramount+, Showtime, BET+, Pluto, Noggin	29,860,615	30,400,394	30,113,418	3.3%	-2.3%	-8.5%	-2.8%
Comcast	CMCSA	77,543,714	Peacock	9,107,047	9,563,471	9,613,072	4.2%	-10.9%	-9.9%	-6.2%
<b>FAANG</b>										
	Ticker	Cume Downloads <sup>1</sup>	Key Services Measured							
Amazon	AMZN	1,070,611,953	Amazon Prime, Amazon Music	118,251,822	118,772,956	119,246,110	-1.2%	-3.3%	-1.2%	-1.9%
Apple	AAPL	114,963,304	Apple Music	8,488,305	8,577,278	8,579,760	-4.9%	-1.4%	-3.7%	-3.4%
Google	GOOGL	749,620,049	YouTube TV, YouTube Music	370,269,569	375,441,863	375,682,724	13.7%	13.8%	10.2%	12.5%
Netflix	NFLX	1,695,772,809	Netflix	306,726,357	304,755,382	305,767,937	-9.6%	-10.0%	-13.2%	-10.9%

### Note:

1. Cume Downloads represents total cumulative app downloads as measured on Apple iOS and Android-enabled mobile and tablet devices, 2012-present; does not include connected TV or PC app downloads; figures do not represent active or paying subscribers
2. Subs represents either publicly disclosed or estimated subscribers to SVOD, AVOD or VMVPD services, where available; Pluto TV, Pandora and Spotify figures expressed in terms of monthly active users (MAUs); Paramount+ & Showtime represent U.S. subs; discovery+/Dplay represent all next-gen subscribers
3. AVOD = advertising-supported video-on-demand, SVOD = subscription video-on-demand, VMVPD = virtual multichannel video programming distributor
4. Active user analysis is done over a panel of >10mn users using a diverse set of multiple apps. An MAU is defined as user with at least one session in a month. A session refers to any event where a user opens an app in the foreground of their device longer than 2 seconds.
5. Y/Y Chg. In MAUs represents the year-over-year change in MAUs vs. the prior year period; QTD represents the calendar quarter-to-date year-over-year change in downloads vs. the prior year period

Source: BofA Global Research, Sensor Tower

BofA GLOBAL RESEARCH

**Exhibit 8: Summary of Monthly Active User (MAU) Trends By Stream Media Service Type**

Sensor Tower MAUs by company show mixed Y/Y results

	Streaming Service Profile				App MAUs By Month <sup>4</sup>			Y/Y Chg. In App MAUs By Month <sup>5</sup>				BofAS Comment	
Mass Appeal	Ticker	Cume Downloads <sup>1</sup>	Subs <sup>2</sup>	Cost	Category <sup>3</sup>	Oct. 2023	Nov. 2023	Dec. 2023	Oct. 2023	Nov. 2023	Dec. 2023	QTD	
Amazon Prime	AMZN	795,168,405	>200	\$15/mo.	SVOD	96,463,908	97,197,378	97,590,063	0.8%	-0.1%	0.9%	0.5%	
Disney+	DIS	523,129,932	150	\$7-14/mo.	AVOD/SVOD	100,413,942	96,193,907	96,114,406	0.7%	-0.3%	-4.0%	-1.2%	DIS began p/w sharing in Canada on 11/1
HBO Max/Max	WBD	310,678,744	nm	\$10-20/mo.	AVOD/SVOD	38,258,652	39,174,520	39,992,239	1.7%	11.5%	11.5%	8.1%	Max added B/R Sports add-on option in Oct
Hulu	DIS	238,770,436	48	\$10-18/mo.	AVOD/SVOD/VMVPD	27,872,042	28,126,198	28,075,675	-18.6%	-15.7%	-13.7%	-16.0%	
Netflix	NFLX	1,695,772,809	247	\$7-23/mo.	AVOD/SVOD	306,726,357	304,755,382	305,767,937	-9.6%	-10.0%	-13.2%	-10.9%	NFLX raised price on Basic and Premium plans in Oct
Paramount+	PARA	147,790,886	63	\$6-12/mo.	AVOD/SVOD	11,471,517	11,989,605	12,228,758	27.5%	23.2%	7.4%	18.5%	
Peacock	CMCSA	77,543,714	24	\$6-12/mo.	AVOD/SVOD	9,107,047	9,563,471	9,613,072	4.2%	-10.9%	-9.9%	-6.2%	
TOTAL	--	3,788,854,926	-809	--	--	590,313,465	587,000,461	589,382,150	-5.4%	-5.5%	-7.8%	-6.3%	
Premium	Ticker	Cume Downloads <sup>1</sup>	Subs <sup>2</sup>	Cost	Category <sup>3</sup>	Oct. 2023	Nov. 2023	Dec. 2023	Oct. 2023	Nov. 2023	Dec. 2023	QTD	
MGM+	MGM	4,946,532	nm	\$6/mo.	SVOD	112,876	95,684	95,764	221.0%	130.3%	161.3%	168.4%	
Showtime	PARA	22,308,953	9	\$11/mo.	SVOD	493,235	424,380	367,498	-17.2%	-23.0%	-42.0%	-27.8%	Showtime app shut down as of 12/14
STARZ	LGF	65,133,512	27	\$9/mo.	SVOD	1,571,938	1,550,130	1,589,524	-29.6%	-23.2%	-26.9%	-26.7%	
TOTAL	--	92,388,997	-36	--	--	2,178,049	2,070,194	2,052,786	-24.0%	-20.7%	-27.8%	-24.3%	
Mid-tier	Ticker	Cume Downloads <sup>1</sup>	Subs <sup>2</sup>	Cost	Category <sup>3</sup>	Oct. 2023	Nov. 2023	Dec. 2023	Oct. 2023	Nov. 2023	Dec. 2023	QTD	
BET+	PARA	12,648,973	2	\$6-10/mo.	AVOD/SVOD	185,630	169,310	151,409	-42.8%	-15.5%	-10.6%	-27.1%	
Noggin	PARA	20,215,459	3	\$8/mo.	AVOD/SVOD	461,443	466,272	449,870	-30.2%	-18.4%	-32.4%	-27.4%	
Pluto TV	PARA	222,412,031	79	Free	AVOD	17,020,035	17,137,465	16,714,827	-5.3%	-13.0%	-15.2%	-11.3%	
Sling TV	DISH	27,251,531	2	\$35-50/mo.	VMVPD	1,295,248	1,380,234	1,382,504	36.1%	38.9%	44.6%	39.8%	
YouTube TV	GOOGL	57,606,579	4	\$65/mo.	VMVPD	4,877,224	4,766,104	4,726,409	7.4%	-1.0%	-1.3%	1.6%	
Tubi	FOX	199,216,564	nm	Free	AVOD	12,522,174	12,488,530	12,267,739	4.3%	1.8%	1.0%	2.4%	
TOTAL	--	539,351,137	91	--	--	36,361,754	36,407,915	35,692,758	-0.2%	-5.5%	-7.1%	-4.4%	
Niche	Ticker	Cume Downloads <sup>1</sup>	Subs <sup>2</sup>	Cost	Category <sup>3</sup>	Oct. 2023	Nov. 2023	Dec. 2023	Oct. 2023	Nov. 2023	Dec. 2023	QTD	
Acorn TV	AMCX	1,440,284	>1	\$5/mo.	SVOD	25,896	25,242	21,510	-37.4%	-35.3%	-42.4%	-38.3%	
Food Network Kitchen	WBD	16,589,734	nm	\$7/mo.	AVOD/SVOD	24,864	25,020	25,156	-27.9%	-31.2%	-25.2%	-28.2%	
Shudder	AMCX	4,973,565	>1	\$5/mo.	SVOD	83,619	74,668	64,084	-39.2%	-27.6%	-28.5%	-32.7%	
Sundance Now	AMCX	700,612	nm	\$7/mo.	SVOD	0	0	0	-100.0%	-100.0%	-100.0%	-100.0%	
UMC	AMCX	2,394,888	nm	\$5/mo.	SVOD	52,132	39,840	38,382	-20.7%	-28.4%	-36.0%	-28.1%	
TOTAL	--	26,099,083	nm	--	--	186,511	164,770	149,132	-33.4%	-29.8%	-32.6%	-32.0%	
U.S. Sports/News	Ticker	Cume Downloads <sup>1</sup>	Subs <sup>2</sup>	Cost	Category <sup>3</sup>	Oct. 2023	Nov. 2023	Dec. 2023	Oct. 2023	Nov. 2023	Dec. 2023	QTD	
CBSN	PARA	9,093,810	nm	Free	AVOD	228,755	213,362	201,056	-38.6%	-43.1%	-44.7%	-42.1%	
ESPN+	DIS	127,240,790	25	\$10/mo.	SVOD/LIVE	15,195,836	15,134,831	15,024,830	1.4%	1.1%	10.6%	4.2%	
Fox Nation	FOX	5,286,214	nm	\$6/mo.	SVOD/LIVE	94,092	106,918	98,589	-7.0%	-27.2%	-16.5%	-18.1%	
TOTAL	--	141,620,814	25	--	--	15,518,683	15,455,111	15,324,475	0.4%	-0.2%	9.0%	2.9%	
International	Ticker	Cume Downloads <sup>1</sup>	Subs <sup>2</sup>	Cost	Category <sup>3</sup>	Oct. 2023	Nov. 2023	Dec. 2023	Oct. 2023	Nov. 2023	Dec. 2023	QTD	
Eurosport Player	WBD	10,895,119	nm	E7/mo.	SVOD/LIVE	23,779	22,322	21,269	-72.3%	-72.5%	-72.0%	-72.3%	
DAZN	nm	72,001,363	nm	\$20/mo.	AVOD/SVOD	5,979,884	5,415,511	5,580,025	8.1%	6.4%	43.1%	16.9%	
F1 TV	FWONK	11,566,447	nm	\$3-10/mo.	SVOD/LIVE	833,839	839,591	693,053	19.8%	35.8%	32.9%	28.9%	
MANU App	MANU	15,425,878	nm	Free	Ad-Supported/Pay	3,256,345	3,203,359	3,364,577	0.0%	6.4%	10.4%	5.5%	
Discovery+/Dplay	WBD	65,825,437	nm	\$5-7/mo.	AVOD/SVOD	3,903,273	3,625,179	3,488,415	-23.9%	-22.9%	-18.5%	-21.9%	
TOTAL	--	175,714,244	-24	--	--	13,997,120	13,105,962	13,147,339	-4.8%	-2.9%	11.2%	0.6%	
Music	Ticker	Cume Downloads <sup>1</sup>	Subs <sup>2</sup>	Cost	Category <sup>3</sup>	Oct. 2023	Nov. 2023	Dec. 2023	Oct. 2023	Nov. 2023	Dec. 2023	QTD	
Amazon Music	AMZN	275,443,548	55	\$8-10/mo.	Ad-Supported/Pay	21,787,914	21,575,578	21,656,047	-9.4%	-15.5%	-9.4%	-11.5%	
Apple Music	AAPL	114,963,304	>78	\$10/mo.	Pay	8,488,305	8,577,278	8,579,760	-4.9%	-1.4%	-3.7%	-3.4%	
iHeart Radio	IHRT	138,181,755	nm	\$5-10/mo.	Ad-Supported/Pay	2,720,516	2,814,101	2,822,119	-19.4%	-15.8%	-5.2%	-13.8%	
Pandora	SIRI	331,665,962	55	\$5-10/mo.	Ad-Supported/Pay	25,122,003	24,983,854	24,865,753	-17.0%	-16.4%	-16.3%	-16.6%	
Sirius XM App	SIRI	50,603,526	nm	\$13/mo.	Pay	4,001,015	4,086,658	3,996,588	-3.3%	-1.1%	-3.3%	-2.5%	
Spotify	SPOT	2,031,780,257	520	\$11/mo.	Ad-Supported/Pay	502,784,262	508,721,833	508,852,067	10.3%	8.7%	6.0%	8.3%	
YouTube Music	GOOGL	692,013,470	50	\$10/mo.	Pay	365,392,345	370,675,759	370,956,315	13.8%	14.0%	10.4%	12.7%	
TOTAL	--	3,634,651,822	680	--	--	930,296,360	941,435,061	941,728,649	9.8%	8.9%	6.3%	8.3%	

**Notes:** 1. Cume Downloads represents total cumulative app downloads as measured on Apple iOS and Android-enabled mobile and tablet devices, 2012-present; does not include connected TV or PC app downloads; figures do not represent active or paying subscribers

2. Subs represents either publicly disclosed or estimated subscribers to SVOD, AVOD or VMVPD services, where available; Pluto TV, Pandora and Spotify figures expressed in terms of monthly active users (MAUs); Paramount+ &amp; Showtime represent U.S. subs; discovery+/Dplay represent all next-gen subscribers

3. AVOD = advertising-supported video-on-demand, SVOD = subscription video-on-demand, VMVPD = virtual multichannel video programming distributor

4. Active user analysis is done over a panel of &gt;10m users using a diverse set of apps. An MAU is defined as user with at least one session in a month. A session refers to any event where a user opens an app in the foreground of their device longer than 2 seconds.

5. Y/Y Chg. In MAUs represents the year-over-year change in MAUs vs. the prior year period; QTD represents the calendar quarter-to-date year-over-year change in downloads vs. the prior year period

**Source:** BofAS Global Research, Sensor Tower, Company Reports, Press Reports

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**Exhibit 9: Summary of Monthly Active User (MAU) Trends By Stream Media Service Type**

Sensor Tower MAUs by company show mixed Y/Y growth

	Streaming Service Profile				Y/Y Change In App MAUs By Month <sup>4,5</sup>											
	Ticker	Cume Downloads <sup>1</sup>	Subs <sup>2</sup>	Cost	iOS Rating <sup>3</sup>	Andr. Rating <sup>3</sup>	Jan. 2023	Feb. 2023	Mar. 2023	Apr. 2023	May 2023	Jun. 2023	Jul. 2023	Aug. 2023	Sep. 2023	Oct. 2023
<b>Mass Appeal</b>																



**Exhibit 9: Summary of Monthly Active User (MAU) Trends By Stream Media Service Type**

Sensor Tower MAUs by company show mixed Y/Y growth

	Streaming Service Profile						Y/Y Change In App MAUs By Month <sup>4,5</sup>											
Amazon Prime	AMZN	795,168,405	>200	\$15/mo.	4.8	4.2	-9.1%	-4.4%	4.6%	2.1%	0.9%	0.1%	2.1%	4.0%	-1.4%	0.8%	-0.1%	0.9%
Disney+	DIS	523,129,932	150	\$7-14/mo.	4.6	4.4	2.6%	9.5%	5.7%	6.7%	4.0%	-2.2%	-0.2%	-2.0%	-3.3%	0.7%	-0.3%	-4.0%
HBO Max/Max	WBD	310,678,744	nm	\$10-20/mo.	4.9	4.7	12.8%	18.7%	14.5%	4.4%	44.3%	33.0%	18.2%	4.3%	-4.6%	1.7%	11.5%	11.5%
Hulu	DIS	238,770,436	48	\$10-18/mo.	4.6	4.5	-12.3%	-13.6%	-11.7%	-16.0%	-13.7%	-11.7%	-12.6%	-15.9%	-21.2%	-18.6%	-15.7%	-13.7%
Netflix	NFLX	1,695,772,809	247	\$7-23/mo.	3.7	4.3	-6.8%	-7.1%	-6.7%	-7.2%	-6.3%	-6.8%	-9.4%	-9.7%	-9.9%	-9.6%	-10.0%	-13.2%
Paramount+	PARA	147,790,886	63	\$6-12/mo.	4.6	3.8	89.0%	96.7%	69.1%	57.5%	50.7%	40.8%	38.2%	35.1%	28.4%	27.5%	23.2%	7.4%
Peacock	CMCSA	77,543,714	24	\$6-12/mo.	4.6	4.5	20.4%	-18.2%	6.6%	23.9%	15.0%	18.5%	9.9%	6.6%	-4.2%	4.2%	-10.9%	-9.9%
TOTAL	--	3,788,854,926	-809	--	--	--	-3.8%	-2.5%	-1.3%	-2.4%	-0.3%	-2.3%	-4.1%	-5.2%	-7.2%	-5.4%	-5.5%	-7.8%
Premium	Ticker	Cume Downloads <sup>1</sup>	Subs <sup>2</sup>	Cost	iOS Rating <sup>3</sup>	Andr. Rating <sup>3</sup>	Jan. 2023	Feb. 2023	Mar. 2023	Apr. 2023	May. 2023	Jun. 2023	Jul. 2023	Aug. 2023	Sep. 2023	Oct. 2023	Nov. 2023	Dec. 2023
MGM+	MGM	4,946,532	nm	\$6/mo.	4.8	4.1	85.9%	75.3%	44.3%	35.8%	49.1%	132.6%	88.1%	90.6%	160.8%	221.0%	130.3%	161.3%
Showtime	PARA	22,308,953	9	\$11/mo.	4.8	3.7	-18.8%	-8.8%	12.5%	38.3%	-24.0%	-17.0%	-19.8%	-33.2%	-7.0%	-17.2%	-23.0%	-42.0%
STARZ	LGF	65,133,512	27	\$9/mo.	4.8	4.0	-37.7%	-31.1%	-27.2%	-21.0%	-22.5%	-40.2%	-37.9%	-40.9%	-32.7%	-29.6%	-23.2%	-26.9%
TOTAL	--	92,388,997	-36	--	--	--	-32.9%	-25.8%	-19.9%	-7.8%	-21.1%	-33.8%	-32.8%	-37.8%	-25.9%	-24.0%	-20.7%	-27.8%
Mid-tier	Ticker	Cume Downloads <sup>1</sup>	Subs <sup>2</sup>	Cost	iOS Rating <sup>3</sup>	Andr. Rating <sup>3</sup>	Jan. 2023	Feb. 2023	Mar. 2023	Apr. 2023	May. 2023	Jun. 2023	Jul. 2023	Aug. 2023	Sep. 2023	Oct. 2023	Nov. 2023	Dec. 2023
BET+	PARA	12,648,973	2	\$6-10/mo.	3.8	3.6	29.2%	101.1%	57.5%	22.4%	1.2%	-24.0%	-15.5%	9.8%	8.6%	-42.8%	-15.5%	-10.6%
Noggin	PARA	20,215,459	3	\$8/mo.	3.6	3.5	-26.4%	-25.3%	-19.8%	-22.7%	-27.5%	-22.5%	-24.5%	-27.9%	-30.1%	-30.2%	-18.4%	-32.4%
Pluto TV	PARA	222,412,031	79	Free	4.8	3.9	14.7%	8.0%	26.2%	18.3%	19.9%	7.4%	3.7%	1.5%	1.6%	-5.3%	-13.0%	-15.2%
Sling TV	DISH	27,251,531	2	\$35-50/mo.	4.6	3.8	8.8%	16.7%	16.3%	28.0%	35.7%	49.2%	71.5%	48.6%	41.6%	36.1%	38.9%	44.6%
YouTube TV	GOOGL	57,606,579	4	\$65/mo.	4.0	3.8	7.0%	17.1%	19.6%	10.8%	6.6%	6.3%	8.6%	9.1%	11.5%	7.4%	-1.0%	-1.3%
Tubi	FOX	199,216,564	nm	Free	4.7	4.8	0.6%	2.8%	2.7%	4.7%	6.4%	11.8%	11.4%	7.3%	6.2%	4.3%	1.8%	1.0%
TOTAL	--	539,351,137	91	--	--	--	7.4%	6.9%	15.7%	11.7%	12.7%	8.9%	7.5%	4.7%	4.8%	-0.2%	-5.5%	-7.1%
Niche	Ticker	Cume Downloads <sup>1</sup>	Subs <sup>2</sup>	Cost	iOS Rating <sup>3</sup>	Andr. Rating <sup>3</sup>	Jan. 2023	Feb. 2023	Mar. 2023	Apr. 2023	May. 2023	Jun. 2023	Jul. 2023	Aug. 2023	Sep. 2023	Oct. 2023	Nov. 2023	Dec. 2023
Acorn TV	AMCX	1,440,284	>1	\$5/mo.	4.6	4.3	-25.9%	-27.9%	-29.0%	-33.5%	-35.6%	-34.2%	-33.9%	-38.8%	-35.7%	-37.4%	-35.3%	-42.4%
FoodNetwork Kitchen	WBD	16,589,734	nm	\$7/mo.	4.8	4.3	-47.8%	-46.2%	-35.4%	-19.9%	-39.2%	-49.3%	-42.5%	-52.1%	-27.3%	-27.9%	-31.2%	-25.2%
Shudder	AMCX	4,973,565	>1	\$5/mo.	4.6	4.4	-24.3%	-16.0%	-20.5%	-25.9%	-37.0%	-34.6%	-28.6%	-38.0%	-26.5%	-39.2%	-27.6%	-28.5%
Sundance Now	AMCX	700,612	nm	\$7/mo.	4.4	4.0	-86.0%	-88.2%	-90.9%	-93.8%	-96.5%	-94.6%	-87.7%	-88.1%	-87.5%	-100.0%	-100.0%	-100.0%
UMC	AMCX	2,394,888	nm	\$5/mo.	2.3	3.2	-11.2%	-18.2%	-21.9%	-37.0%	-45.4%	-44.9%	-48.6%	-34.6%	-0.8%	-20.7%	-28.4%	-36.0%
TOTAL	--	26,099,083	nm	--	--	--	-28.4%	-26.5%	-26.7%	-31.7%	-41.0%	-40.8%	-38.2%	-39.2%	-21.9%	-33.4%	-29.8%	-32.6%
U.S. Sports/News	Ticker	Cume Downloads <sup>1</sup>	Subs <sup>2</sup>	Cost	iOS Rating <sup>3</sup>	Andr. Rating <sup>3</sup>	Jan. 2023	Feb. 2023	Mar. 2023	Apr. 2023	May. 2023	Jun. 2023	Jul. 2023	Aug. 2023	Sep. 2023	Oct. 2023	Nov. 2023	Dec. 2023
CBSN	PARA	9,093,810	nm	Free	4.0	4.3	-18.6%	-26.9%	-27.1%	-26.8%	-34.6%	-33.6%	-35.7%	-35.0%	-42.0%	-38.6%	-43.1%	-44.7%
ESPN+	DIS	127,240,790	25	\$10/mo.	4.4	3.8	0.4%	2.0%	-1.2%	1.1%	-2.3%	-1.9%	0.8%	-1.6%	-0.7%	1.4%	1.1%	10.6%
Fox Nation	FOX	5,286,214	nm	\$6/mo.	4.6	3.5	-24.7%	-20.0%	-23.8%	-13.9%	-20.9%	-28.3%	-25.7%	-23.0%	8.0%	-7.0%	-27.2%	-16.5%
TOTAL	--	141,620,814	25	--	--	--	-0.3%	0.8%	-2.3%	0.2%	-3.5%	-3.1%	-0.7%	-2.9%	-1.7%	0.4%	-0.2%	9.0%
International	Ticker	Cume Downloads <sup>1</sup>	Subs <sup>2</sup>	Cost	iOS Rating <sup>3</sup>	Andr. Rating <sup>3</sup>	Jan. 2023	Feb. 2023	Mar. 2023	Apr. 2023	May. 2023	Jun. 2023	Jul. 2023	Aug. 2023	Sep. 2023	Oct. 2023	Nov. 2023	Dec. 2023
Eurosport Player	WBD	10,895,119	nm	£7/mo.	4.5	3.6	-40.4%	-60.7%	-55.2%	-59.5%	-70.0%	-68.3%	-63.4%	-65.3%	-73.2%	-72.3%	-72.5%	-72.0%
DAZN	nm	72,001,363	nm	\$20/mo.	4.6	4.0	-9.9%	-15.0%	-13.0%	-9.9%	-11.8%	5.5%	-6.4%	-11.2%	-2.6%	8.1%	6.4%	43.1%
F1 TV	FWONK	11,566,447	nm	\$3-10/mo.	2.4	3.1	32.5%	65.0%	48.1%	59.5%	31.1%	28.2%	15.6%	21.2%	36.4%	19.8%	35.8%	32.9%
MANU App	MANU	15,425,878	nm	Free	3.9	4.7	40.7%	34.1%	29.6%	36.5%	36.3%	28.3%	9.7%	14.4%	12.7%	0.0%	6.4%	10.4%
Discovery+/Dplay	WBD	65,825,437	nm	\$5-7/mo.	4.9	4.7	-21.7%	-30.2%	-24.4%	-32.5%	-31.6%	-38.8%	-34.5%	-33.2%	-26.1%	-23.9%	-22.9%	-18.5%
TOTAL	--	175,714,244	nm	--	--	--	-5.9%	-11.6%	-7.7%	-9.1%	-10.3%	-9.7%	-12.8%	-12.7%	-6.3%	-4.8%	-2.9%	11.2%
Music	Ticker	Cume Downloads <sup>1</sup>	Subs <sup>2</sup>	Cost	iOS Rating <sup>3</sup>	Andr. Rating <sup>3</sup>	Jan. 2023	Feb. 2023	Mar. 2023	Apr. 2023	May. 2023	Jun. 2023	Jul. 2023	Aug. 2023	Sep. 2023	Oct. 2023	Nov. 2023	Dec. 2023
Amazon Music	AMZN	275,443,548	55	\$8-10/mo.	4.7	4.3	-7.6%	-7.7%	-7.4%	-7.4%	-8.5%	-8.9%	-10.1%	-10.9%	-10.5%	-9.4%	-15.5%	-9.4%
Apple Music	AAPL	114,963,304	>78	\$10/mo.	nm	3.9	7.6%	7.9%	8.1%	4.7%	3.8%	4.3%	1.0%	-2.0%	-0.8%	-4.9%	-1.4%	-3.7%
iHeartRadio	IHRT	138,181,755	nm	\$5-10/mo.	4.6	4.6	-22.7%	-23.9%	-16.4%	-18.1%	-15.5%	-7.5%	-23.1%	-18.5%	-20.4%	-19.4%	-15.8%	-5.2%
Pandora	SIRI	331,665,962	55	\$5-10/mo.	4.8	4.3	-19.0%	-20.1%	-22.2%	-21.7%	-21.6%	-20.4%	-20.9%	-18.0%	-18.6%	-17.0%	-16.4%	-16.3%
Sirius XM App	SIRI	50,603,526	nm	\$13/mo.	4.8	4.8	8.0%	3.3%	6.0%	4.1%	2.3%	4.1%	0.2%	2.4%	-0.5%	-3.3%	-1.1%	-3.3%
Spotify	SPOT	2,031,780,257	520	\$11/mo.	4.8	4.4	13.8%	14.9%	14.7%	13.9%	15.2%	14.5%	12.7%	11.6%	10.9%	10.3%	8.7%	6.0%
YouTube Music	GOOGL	692,013,470	50	\$10/mo.	4.8	4.5	15.0%	15.1%	13.0%	13.7%	13.5%	14.5%	11.7%	11.7%	13.1%	13.8%	14.0%	10.4%
TOTAL	--	3,634,651,822	680	--	--	--	11.8%	12.3%	11.5%	11.3%	12.0%	12.1%	9.9%	9.5%	9.7%	9.8%	8.9%	6.3%

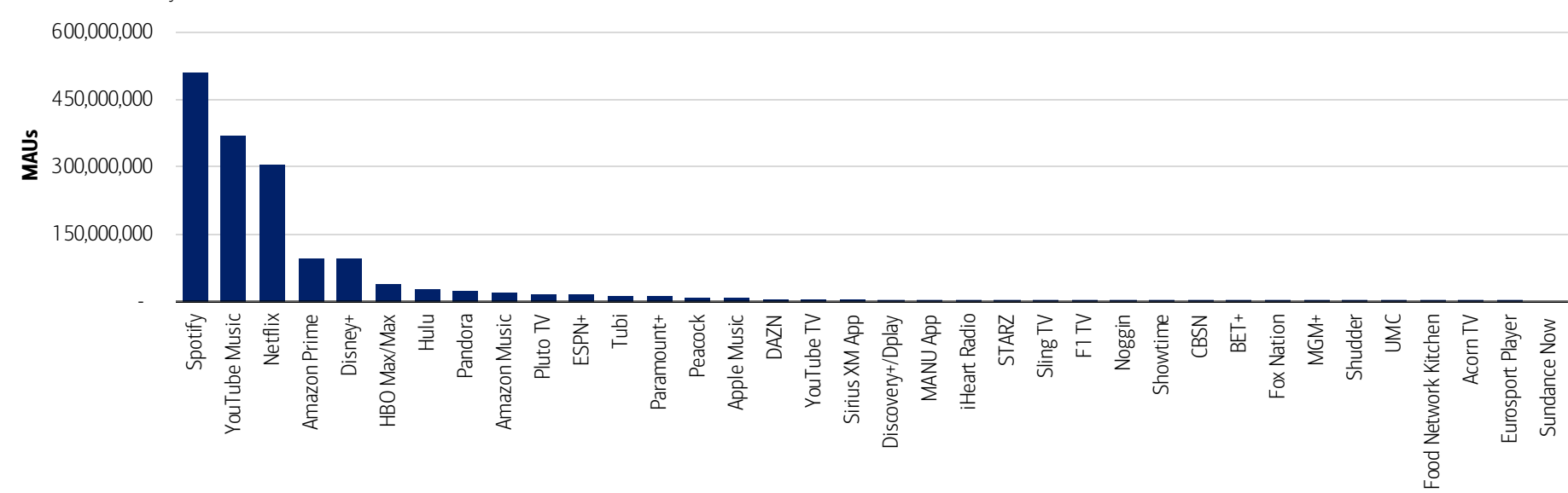
**Notes:** 1. Cume Downloads represents total cumulative app downloads as measured on Apple iOS and Android-enabled mobile and tablet devices, 2012-present; does not include connected TV or PC app downloads; figures do not represent active or paying subscribers; 2. Subs represents either publicly disclosed or estimated subscribers to SVOD, AVOD or VMVPD services, where available; Pluto TV, Pandora and Spotify figures expressed in terms of monthly active users (MAUs); Paramount+ & Showtime represent U.S. subs; discovery+/Dplay represent all next-gen subscribers; 3. AVOD = advertising-supported video-on-demand, SVOD = subscription video-on-demand, VMVPD = virtual multichannel video programming distributor; 4. App Downloads By Month represents total monthly app downloads as measured on Apple iOS and Android-enabled mobile and tablet devices, does not include connected TV or PC app downloads; figures do not represent active or paying subscribers; 5. Y/Y Chg. In App Downloads By Month represents the year-over-year change in monthly downloads vs. the prior year period; QTD represents the calendar quarter-to-date year-over-year change in downloads vs. the prior year period

**Source:** BofA Global Research, Sensor Tower, Company Reports, Press Reports

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**Exhibit 10: Streaming media services worldwide MAUs, current month**

Sensor Tower MAUs by service



Source: BofA Global Research, Sensor Tower

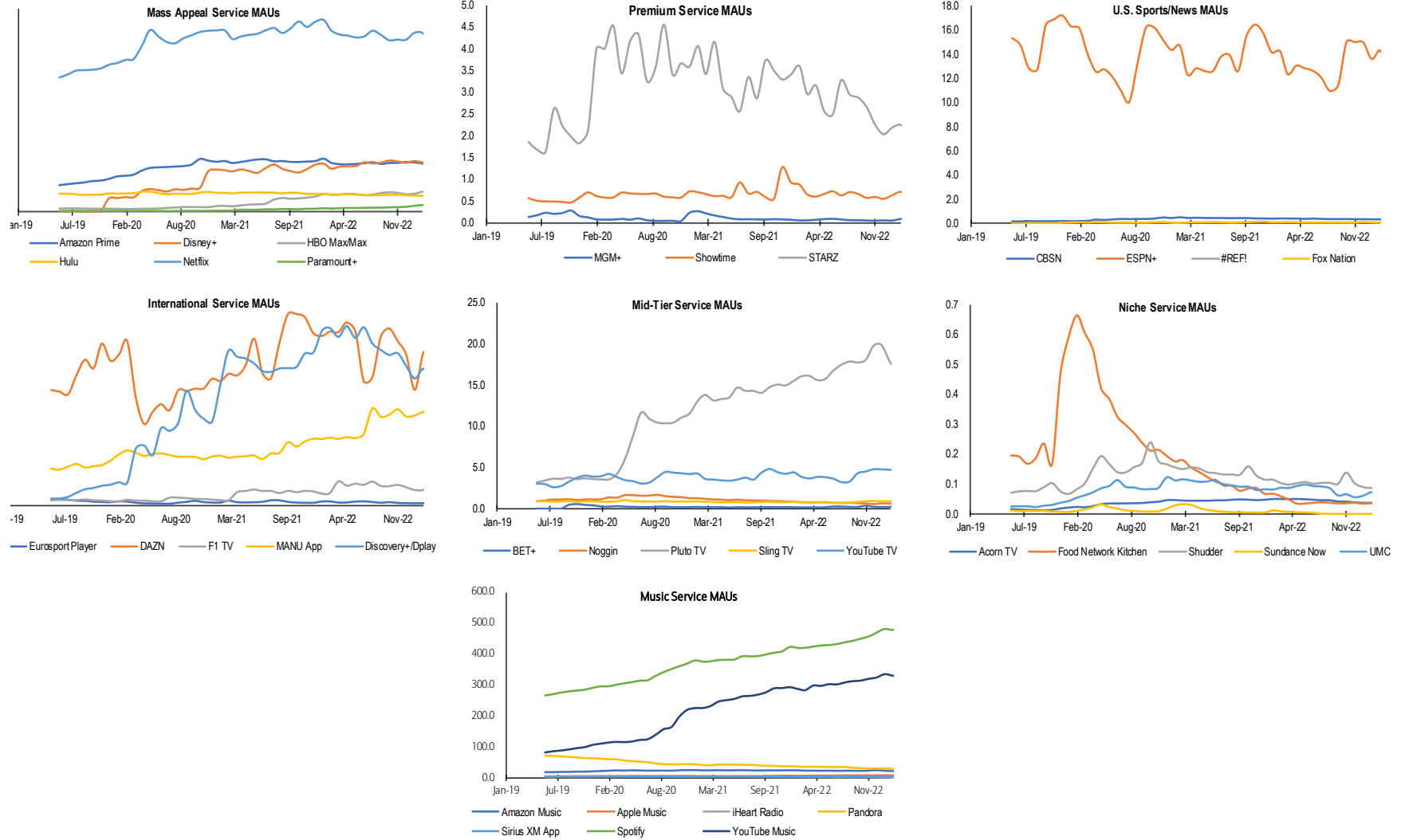
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## Exhibit 11: Total worldwide MAUs (millions)

Sensor Tower MAUs by service



Source: BoFA Global Research, Sensor Tower

BoFA GLOBAL RESEARCH



# Key Content Releases

## Exhibit 12: Select current month programming critical reception scores

Critical reception scores by program show strong results

Original Content Description		Streaming Service Profile		Critical Reception <sup>1</sup>	
Premiere Date	Title	Service Name	Ticker/Company	User Rating	Metascore
12/31/23	The Abandoned	Netflix	NFLX	tbd	tbd
12/31/23	Run the Burbs: Season 1-Season 2	Hulu	DIS	tbd	tbd
12/31/23	Dave Chappelle: The Dreamer	Netflix	NFLX	tbd	tbd
12/30/23	The Affair: Season 1-Season 5	Prime Video	AMZN	7.3	81
12/30/23	Time Bomb Y2K	Max	WBD	tbd	tbd
12/30/23	Captains of the World	Netflix	NFLX	tbd	tbd
12/29/23	The Holdovers	Peacock	CMCSA	7.9	82
12/29/23	Berlin: Season 1	Netflix	NFLX	tbd	tbd
12/28/23	Miss Shampoo	Netflix	NFLX	tbd	tbd
12/28/23	Oprah and the Color Purple Journey	Max	WBD	tbd	tbd
12/28/23	Pokémon Concierge: Season 1	Netflix	NFLX	tbd	tbd
12/26/23	Letterkenny: Season 12	Hulu	DIS	tbd	tbd
12/26/23	2023 Back That Year Up With Kevin Hart and Kenan Thompson	Peacock	CMCSA	tbd	tbd
12/26/23	Thank You, I'm Sorry	Netflix	NFLX	tbd	tbd
12/25/23	Doctor Who: The Church on Ruby Road	Disney+	DIS	tbd	tbd
12/25/23	Ricky Gervais: Armageddon	Netflix	NFLX	tbd	tbd
12/25/23	Star Trek: Prodigy: Season 1	Netflix	NFLX	6.6	68
12/24/23	The Manny: Season 1	Netflix	NFLX	tbd	tbd
12/24/23	A Vampire in the Family	Netflix	NFLX	tbd	tbd
12/22/23	Curry & Cyanide: The Jolly Joseph Case	Netflix	NFLX	tbd	tbd
12/22/23	Marvel's What If...?: Season 2	Disney+	DIS	6.1	78
12/22/23	Gyeongseong Creature: Season 1A	Netflix	NFLX	tbd	tbd
12/21/23	Beau Is Afraid	Paramount+	PARA	6.5	63
12/21/23	Dr. Death: Season 2	Peacock	CMCSA	tbd	65
12/21/23	Willie Nelson & Family	Paramount+	PARA	tbd	tbd
12/21/23	Like Flowers in Sand: Season 1	Netflix	NFLX	tbd	tbd
12/20/23	BTS Monuments: Beyond the Star	Disney+	DIS	tbd	tbd
12/20/23	The Creator	Hulu	DIS	6.4	63
12/20/23	Daniel	Max	WBD	tbd	tbd
12/20/23	Cindy La Regia: The High School Years: Season 1	Netflix	NFLX	tbd	tbd
12/20/23	Maestro	Netflix	NFLX	5.7	77
12/19/23	Every Body	Prime Video	AMZN	4.4	77
12/19/23	Percy Jackson and the Olympians: Season 1	Disney+	DIS	6.4	73
12/19/23	Trevor Noah: Where Was I	Netflix	NFLX	tbd	tbd
12/18/23	Archer: Into the Cold	Hulu	DIS	tbd	tbd
12/18/23	Hello Ghost	Netflix	NFLX	tbd	tbd
12/18/23	The Rope Curse 3	Netflix	NFLX	tbd	tbd
12/16/23	Leo Reich: Literally Who Cares?!	Max	WBD	tbd	tbd
12/15/23	Reacher: Season 2	Prime Video	AMZN	7.5	80
12/15/23	Barbie	Max	WBD	5.1	80
12/15/23	The Retirement Plan	Hulu	DIS	4.9	tbd
12/15/23	Such Brave Girls: Season 1	Hulu	DIS	4.6	72
12/15/23	Carol & The End of the World: Season 1	Netflix	NFLX	6.5	79
12/15/23	Chicken Run: Dawn of the Nugget	Netflix	NFLX	6.4	63
12/15/23	Yoh! Christmas: Season 1	Netflix	NFLX	tbd	tbd
12/14/23	The Crown: Season 6B	Netflix	NFLX	tbd	tbd
12/14/23	Yu Yu Hakusho: Season 1	Netflix	NFLX	6.4	70
12/14/23	Blue Jean	Hulu	DIS	6.1	87
12/13/23	Undead Unluck: Season 1	Hulu	DIS	tbd	tbd
12/12/23	The Influencer: Season 1	Netflix	NFLX	tbd	tbd
12/12/23	Asteroid City	Prime Video	AMZN	6.7	75
12/12/23	Born in Synanon	Paramount+	PARA	tbd	tbd
12/12/23	Kevin Hart & Chris Rock: Headliners Only	Netflix	NFLX	tbd	tbd
12/11/23	Science Fair: The Series: Season 1	Hulu	DIS	tbd	tbd
12/9/23	Maestro: Strings of Truth: Season 1	Hulu	DIS	tbd	tbd
12/8/23	Christmas at the Opry	Peacock	CMCSA	tbd	tbd
12/8/23	Merry Little Batman	Prime Video	AMZN	5.6	74



Exhibit 12: Select current month programming critical reception scores

Critical reception scores by program show strong results

Original Content Description		Streaming Service Profile		Critical Reception <sup>1</sup>	
12/8/23	Mr. Monk's Last Case: A Monk Movie	Peacock	CMCSA	5.7	65
12/8/23	Leave the World Behind	Netflix	NFLX	4.6	68
12/8/23	Diary of a Wimpy Kid: Christmas Cabin Fever	Disney+	DIS	tbd	tbd
12/8/23	The Great British Baking Show: Holidays: Season 6	Netflix	NFLX	tbd	tbd
12/7/23	Showing Up	Paramount+	PARA	6.9	85
12/7/23	The Envoys: Season 2	Paramount+	PARA	tbd	tbd
12/7/23	Coach Prime: Season 2	Prime Video	AMZN	tbd	tbd
12/7/23	The Archies	Netflix	NFLX	1.7	66
12/6/23	John Lennon: Murder Without a Trial	Apple TV+	AAPL	tbd	70
12/6/23	A Historia Delas: Season 1	Hulu	DIS	tbd	tbd
12/6/23	Blood Coast: Season 1	Netflix	NFLX	tbd	tbd
12/5/23	Geddy Lee Asks: Are Bass Players Human Too?	Paramount+	PARA	tbd	tbd
12/5/23	Great Photo, Lovely Life	Max	WBD	tbd	tbd
12/4/23	Murder in Boston: Roots, Rampage, and Reckoning	Max	WBD	tbd	80
12/2/23	Thriller 40	Paramount+	PARA	tbd	tbd
12/1/23	Holey Moley: Season 1-Season 2	Netflix	NFLX	tbd	tbd
12/1/23	The Eric Andre Show: Season 6	Hulu	DIS	tbd	tbd
12/1/23	The World According to Football	Paramount+	PARA	tbd	tbd
12/1/23	The Snoopy Show: Happiness & Holiday Traditions	Apple TV+	AAPL	tbd	tbd

Note: User ratings represent audience scores from Metacritic's website; Metascore is a weighted average of reviews from top critics and publications for a given program.

Source: BofA Global Research, Metacritic

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## Special Disclosures

BofA Securities is currently acting as financial advisor to Sirius XM Holdings Inc in connection with its proposed merger of Sirius XM Radio Inc with Liberty Media Corp-Liberty SiriusXM in order to create a new public company, New Sirius XM, which was announced on December 12, 2023. The proposed transaction is subject to approval by shareholders of Liberty Media Corp-Liberty SiriusXM. This research report is not intended to provide voting advice, serve as an endorsement of the proposed transaction, or result in the procurement, withholding or revocation of a proxy.

# Disclosures

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Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster <sup>R1</sup>
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

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