

Internet/e-Commerce

January Social Media Time Spent, User, Download and ARPU benchmarking

Industry Overview

January time spent, user, downloads & ARPU update

Following release of Sensor Tower time spent data & 4Q'23 earnings, we review usage, user, download & monetization trends across social media sector. Our key takeaways:

Time Spent: Daily usage slightly down on most platforms

In January, US average daily usage declined on all major platforms. FB had the largest decline (42mn, down 9% y/y), followed by Pinterest (12min, down 5% y/y), Instagram (58mins, down 3% y/y), YouTube (75miins, down 3% y/y), Snapchat (19mins, down 2% y/y and TikTok 90mins, down 2% y/y). Internationally, IG had the highest y/y growth (59mins, up 4% y/y), while FB (43mins, down 8% y/y), Pinterest (12mins, down 5% y/y), YouTube (75mins, down 3% y/y), TikTok (74mins, down 2% y/y), and Snap (19mins, down 1% y/y) declined. Our Take: January was a down month for usage across the board. Instagram continues to outperform the group aided by growing traction of Reels and Al/ML integrations driving more relevant suggestions and deeper engagement.

Users: PINS highest in US & Snap highest in Int'l

In January, Pinterest had the highest y/y growth in US mobile DAUs (up 3% y/y), and YouTube was flat. TikTok US users were down 7% y/y, followed by Instagram (down 3% y/y), and FB & Snap (down 1% y/y). Internationally, Snap had the highest y/y growth in mobile DAUs (up 14% y/y), followed by Instagram (up 7% y/y), PINS (up 7% y/y), YouTube (up 7% y/y), Facebook (up 2% y/y) and TikTok (up 1% y/y). Our Take: Pinterest user growth benefiting from growing traction with Gen Z users and video, with AI driving more relevant content suggestions. Internationally, Snap continues to lead the group, but management highlighted importance of users in US/Europe. In the US, TikTok may be seeing impact of better short form video content across the industry.

Downloads: Mixed in US and most apps saw growth in Int'l

In January, YouTube had highest US DL growth (up 18% y/y), followed by IG (up 10% y/y), PINS (up 4% y/y), Snap (up 2% y/y), while TikTok (down 9% y/y) and FB (down 6% y/y) declined. Internationally, FB had the highest y/y growth (up 7% y/y), followed by IG (up 6%), PINS (up 3%), and TikTok (up 2%), while Snap (down 15%), and YT (down 3%) declined. Our Take: With high mobile penetration levels, downloads are less of a relevant indicator for user growth. Instagram remains strong globally for downloads.

Monetization: Meta leading in ARPU, Pinterest in RPH

In 4Q'23, YouTube had the highest est. growth in US ARPU (up 16% y/y) followed Meta (up 15% y/y), PINS (up 6% y/y), and Snap (up 2% y/y). Internationally, Meta had the highest growth (up 22% y/y), followed by PINS (up 15% y/y), and YT (up 12% y/y est.), while Snap (down 4% y/y) declined. On a revenue per hour basis, in 4Q, Meta had the highest growth in US (up 23% y/y) and Pinterest was highest internationally (up 36% y/y). On an absolute basis, Pinterest is at a premium to group on a RPH basis. Our Take: Meta and YouTube are seeing positive benefit from SFV monetization vs group, which should continue in 2024. In 1Q'24, we expect Meta to lead US & int'l ARPU growth driven. On Rev/hour basis, Pinterest's continues to lead the group (by a large margin) in the US, and a lot of room to grow Internationally with 3P deals ramp.

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Refer to important disclosures on page 15 to 17.

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Al: Artificial Intelligence

ML: Machine Learnings

IG: Instagram

TT: TikTok
YT: YouTube

FB: Facebook

PINS: Pinterest

TTS: Total Time Spent

DATSU: Daily Average Time Spent per user

RPH: Revenue per hour

DAU: Daily Active User

MAU: Monthly Active User

ARPU: Average Revenue per User

ST: Sensor Tower

SFV: Short Form Video

Int'l: International

RPH: Revenue per hour

CAGR: Compound Annual Growth Rate

DR: Direct Response

Total Time Spent

US/North America

Per Sensor Tower, in January, Pinterest had the highest y/y growth in US total time spent (up 1% y/y) and YouTube was flat y/y. Facebook declined for 7% y/y, followed by TikTok (down 6% y/y), Instagram (down 2% y/y), and Snap (down 1% y/y). YouTube remains the leader in the US with approx. 6.2bn hours spent on the platform in January.

Exhibit 1: Sensor Tower US Total Time Spent Estimates (million hours)

Per Sensor Tower, in January, Pinterest had the highest growth (up 1% y/y) in US total time spent.

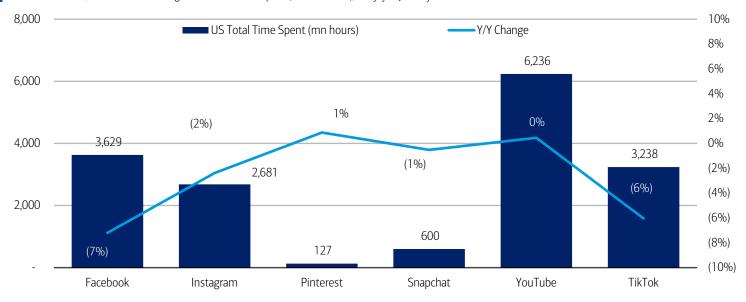
Company	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24
Facebook	3,879	3,911	3,553	3,808	3,753	3,829	3,766	3,976	3,969	3,828	3,875	3,723	3,653	3,629
y/y %	7%	4%	5%	2%	6%	0%	1%	1%	1%	1%	1%	0%	(6%)	(7%)
m/m %	5%	1%	(9%)	7%	(1%)	2%	(2%)	6%	(0%)	(4%)	1%	(4%)	(2%)	(1%)
Instagram	2,692	2,746	2,487	2,747	2,640	2,708	2,657	2,722	2,735	2,576	2,725	2,634	2,773	2,681
y/y %	5%	6%	11%	15%	12%	12%	14%	14%	14%	12%	10%	5%	3%	(2%)
m/m %	8%	2%	(9%)	10%	(4%)	3%	(2%)	2%	0%	(6%)	6%	(3%)	5%	(3%)
Pinterest	122	126	113	120	114	118	119	124	126	113	120	118	124	127
y/y %	22%	18%	24%	24%	20%	22%	21%	13%	7%	4%	2%	3%	2%	1%
m/m %	6%	4%	(11%)	7%	(5%)	3%	0%	4%	2%	(10%)	6%	(1%)	5%	2%
Snapchat	651	603	557	624	616	637	623	616	605	588	614	591	620	600
y/y %	(8%)	(12%)	(10%)	(8%)	(4%)	(6%)	(5%)	(6%)	(6%)	(5%)	(4%)	(1%)	(5%)	(1%)
m/m %	9%	(7%)	(8%)	12%	(1%)	3%	(2%)	(1%)	(2%)	(3%)	4%	(4%)	5%	(3%)
YouTube	6,078	6,208	5,542	6,105	5,862	6,016	5,926	6,132	6,132	5,796	6,020	5,828	6,214	6,236
y/y %	6%	4%	7%	6%	4%	3%	8%	4%	11%	6%	3%	2%	2%	0%
m/m %	7%	2%	(11%)	10%	(4%)	3%	(1%)	3%	(0%)	(5%)	4%	(3%)	7%	0%
TikTok	3,579	3,446	3,055	3,377	3,470	3,575	3,589	3,869	3,802	3,357	3,427	3,288	3,282	3,238
y/y %	1%	(8%)	(4%)	(2%)	2%	3%	5%	8%	5%	0%	(3%)	(3%)	(8%)	(6%)
m/m %	6%	(4%)	(11%)	11%	3%	3%	0%	8%	(2%)	(12%)	2%	(4%)	(0%)	(1%)

Source: Sensor Tower and BofA Global Research

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Exhibit 2: Sensor Tower US Total Time Spent Estimates (million hours) – January 2024

Per Sensor Tower, YouTube had the highest US total time spent (~6.2bn hours), flat y/y in January.



Source: Sensor Tower and BofA Global Research

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International

Per Sensor Tower, in January, Snap had the highest y/y growth in International total time spent (up 16% y/y), followed by IG (up 14% y/y), YouTube (up 8% y/y), Pinterest (up 5% y/y), and TikTok (up 2% y/y), while FB declined 3% y/y. YouTube remains the leader in international markets with ~77bn hours spent on the platform in January.



Exhibit 3: Sensor Tower International Total Time Spent Estimates (million hours)

Per Sensor Tower, in January, Snap had the highest growth (up 16% y/y) in international total time spent.

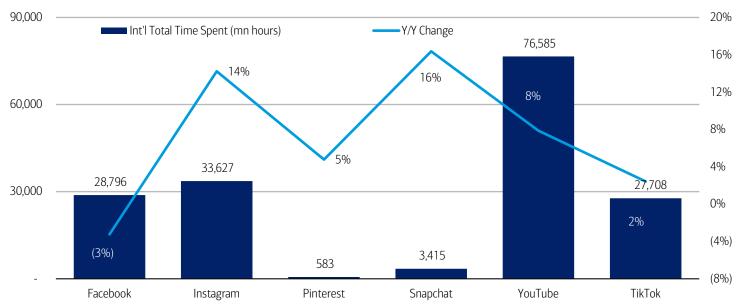
Company	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24
Facebook	29,482	29,762	27,317	29,391	29,110	29,840	29,435	31,151	31,099	30,187	30,474	29,444	28,933	28,796
y/y %	10%	7%	9%	6%	9%	5%	6%	5%	5%	6%	5%	5%	(2%)	(3%)
m/m %	5%	1%	(8%)	8%	(1%)	3%	(1%)	6%	(0%)	(3%)	1%	(3%)	(2%)	(0%)
Instagram	28,708	29,438	26,821	30,178	29,551	30,537	30,224	31,475	31,613	29,710	31,462	30,575	34,284	33,627
y/y %	18%	16%	21%	26%	26%	27%	28%	28%	29%	26%	23%	17%	19%	14%
m/m %	10%	3%	(9%)	13%	(2%)	3%	(1%)	4%	0%	(6%)	6%	(3%)	12%	(2%)
Pinterest	541	556	501	534	518	532	527	559	572	512	546	528	568	583
y/y %	26%	19%	24%	26%	23%	25%	23%	18%	14%	8%	6%	5%	5%	5%
m/m %	8%	3%	(10%)	7%	(3%)	3%	(1%)	6%	2%	(11%)	7%	(3%)	8%	3%
Snapchat	3,185	2,935	2,780	3,120	3,159	3,310	3,292	3,311	3,286	3,176	3,353	3,252	3,447	3,415
y/y %	9%	2%	5%	8%	12%	10%	14%	12%	12%	11%	11%	14%	8%	16%
m/m %	11%	(8%)	(5%)	12%	1%	5%	(1%)	1%	(1%)	(3%)	6%	(3%)	6%	(1%)
YouTube	69,124	70,999	63,841	70,716	67,952	71,158	70,393	73,254	73,579	69,834	72,864	70,548	75,694	76,585
y/y %	13%	8%	14%	12%	9%	10%	14%	10%	18%	13%	10%	8%	10%	8%
m/m %	6%	3%	(10%)	11%	(4%)	5%	(1%)	4%	0%	(5%)	4%	(3%)	7%	1%
TikTok	28,008	27,053	23,903	27,338	28,570	29,162	29,887	31,843	30,667	27,347	27,949	26,819	27,799	27,708
y/y %	8%	(1%)	0%	5%	11%	11%	16%	18%	13%	7%	4%	3%	(1%)	2%
m/m %	7%	(3%)	(12%)	14%	5%	2%	2%	7%	(4%)	(11%)	2%	(4%)	4%	(0%)

Source: Sensor Tower and BofA Global Research

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Exhibit 4: Sensor Tower International Total Time Spent Estimates (million hours) – January 2024

Per Sensor Tower, YouTube had the highest intl. total time spent (~77bn hours), up 8% y/y in January.



Source: Sensor Tower and BofA Global Research

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Per User Time Spent Trends

US/North America

In January, US average daily time spent per DAU declined on all major platforms. FB had the largest decline (42mn, down 9% y/y), followed by Pinterest (12min, down 5% y/y), Instagram (58mins, down 3% y/y), YouTube (75miins, down 3% y/y), Snapchat (19mins, down 2% y/y and TikTok 90mins, down 2% y/y).

Exhibit 5: US Average Daily Time Spent per DAU Estimates (Minutes)

In January, US average daily time spent per DAU declined on all major platforms.

Company	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24
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Exhibit 5: US Average Daily Time Spent per DAU Estimates (Minutes)

In January, US average daily time spent per DAU declined on all major platforms.

I account	TJ	TU	T ∪	TJ	TJ	TJ	±∪	7/	77	TU	T-J	T-J	TJ	T1.J
y/y %	8%	5%	6%	4%	6%	2%	2%	2%	2%	3%	2%	2%	(5%)	(9%)
m/m %	1%	1%	1%	(3%)	1%	(1%)	2%	2%	0%	(0%)	(2%)	(0%)	(6%)	(3%)
Instagram	59	59	60	60	59	59	60	59	59	59	60	60	62	57.9
y/y %	10%	9%	13%	17%	14%	13%	14%	13%	14%	14%	12%	7%	6%	(3%)
m/m %	5%	2%	0%	1%	(1%)	(1%)	1%	(1%)	0%	(1%)	2%	0%	3%	(6%)
Pinterest	12	13	13	12	12	12	12	13	13	12	12	12	12	11.9
y/y %	16%	12%	15%	15%	10%	11%	10%	6%	3%	(0%)	(2%)	(2%)	(0%)	(5%)
m/m %	2%	1%	(0%)	(3%)	(1%)	0%	2%	1%	2%	(6%)	0%	(0%)	3%	(3%)
Snapchat	20	20	20	20	20	20	20	20	20	20	20	20	20	19.2
y/y %	(8%)	(9%)	(8%)	(7%)	(4%)	(5%)	(5%)	(3%)	(4%)	(3%)	(3%)	(1%)	(2%)	(2%)
m/m %	2%	(3%)	1%	1%	2%	1%	(1%)	(3%)	(1%)	(0%)	1%	(0%)	0%	(3%)
YouTube	76	77	76	76	75	75	76	76	76	74	75	75	77	74.9
y/y %	7%	4%	7%	6%	2%	1%	5%	2%	9%	5%	2%	1%	2%	(3%)
m/m %	3%	2%	(1%)	(1%)	(1%)	(0%)	2%	0%	(0%)	(2%)	0%	(0%)	4%	(3%)
TikTok	94	92	92	92	97	97	101	104	102	95	94	94	93	90.0
y/y %	3%	(4%)	(1%)	2%	6%	8%	9%	11%	8%	3%	2%	4%	(1%)	(2%)
m/m %	3%	(2%)	(0%)	1%	6%	(0%)	4%	3%	(2%)	(7%)	(0%)	0%	(2%)	(3%)

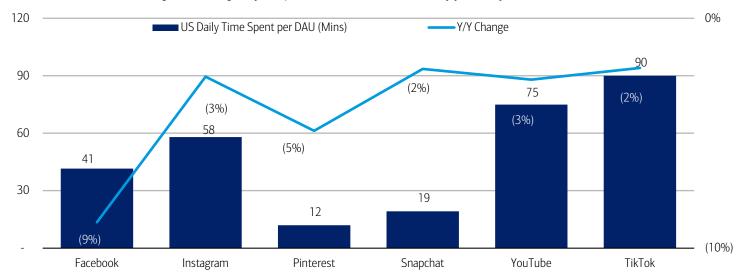
Source: Sensor Tower and BofA Global Research

Note: Daily time spent per DAU calculated using Sensor Tower total time spent in a month estimates and monthly average DAUs estimates.

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Exhibit 6: Sensor Tower US Average Daily Time per DAU Estimates (Minutes) - January 2024

Per Sensor Tower, TikTok had the highest US average daily time per active user (~90 mins), down 2% y/y in January.



Source: Sensor Tower and BofA Global Research

Note: Daily time spent per DAU calculated using Sensor Tower total time spent in a month estimates and monthly average DAUs estimates.

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International

In January, Instagram was the only platform that had positive y/y growth in International average daily time spent per DAU (59mins, up 4% y/y). FB (43mins, down 8% y/y), Pinterest (12mins, down 5% y/y), YouTube (75mins, down 3% y/y), TikTok (74mins, down 2% y/y), and Snap (19mins, down 1% y/y) declined.

Exhibit 7: International Average Daily Time Spent per DAU Estimates (Minutes)

In January, Instagram had the highest growth (up 4% y/y) in international daily average time spent per active user.

Company	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24
Facebook	46	47	47	46	47	47	47	48	48	48	47	47	44	43.0
y/y %	9%	6%	7%	5%	7%	2%	3%	3%	3%	3%	2%	2%	(4%)	(8%)
m/m %	1%	1%	1%	(3%)	2%	(1%)	1%	2%	0%	(0%)	(2%)	(0%)	(5%)	(3%)
Instagram	55	56	56	57	57	56	57	57	57	56	57	57	62	58.5



Exhibit 7: International Average Daily Time Spent per DAU Estimates (Minutes)

In January, Instagram had the highest growth (up 4% y/y) in international daily average time spent per active user.

y/ y 70	1070	U 7U	1.70	1070	1270	1770	1270	1.270	1070	17770	1270	U 70	1170	770
m/m %	5%	2%	0%	1%	0%	(1%)	1%	0%	0%	(3%)	2%	0%	9%	(5%)
Pinterest	12	12	12	12	12	12	12	12	13	12	12	12	12	11.8
y/y %	16%	12%	15%	14%	10%	10%	10%	6%	3%	(0%)	(2%)	(2%)	(1%)	(5%)
m/m %	2%	1%	(0%)	(3%)	(1%)	0%	2%	1%	2%	(6%)	0%	(0%)	3%	(3%)
Snapchat	20	19	20	20	20	21	20	20	20	19	20	20	20	19.2
y/y %	(8%)	(12%)	(9%)	(7%)	(3%)	(4%)	(4%)	(3%)	(4%)	(3%)	(2%)	(0%)	(2%)	(1%)
m/m %	2%	(5%)	2%	1%	3%	1%	(0%)	(3%)	(1%)	(1%)	2%	(0%)	1%	(4%)
YouTube	76	78	77	76	75	75	76	77	77	75	75	75	78	75.4
y/y %	8%	4%	9%	7%	2%	1%	5%	2%	9%	5%	2%	1%	2%	(3%)
m/m %	3%	2%	(1%)	(1%)	(2%)	(0%)	2%	0%	(0%)	(2%)	0%	0%	3%	(3%)
TikTok	79	76	74	77	82	81	84	86	83	77	76	76	77	74.1
y/y %	(0%)	(6%)	(5%)	(0%)	4%	6%	9%	11%	6%	3%	0%	1%	(3%)	(2%)
m/m %	4%	(4%)	(2%)	4%	6%	(1%)	4%	2%	(3%)	(7%)	(2%)	0%	0%	(3%)

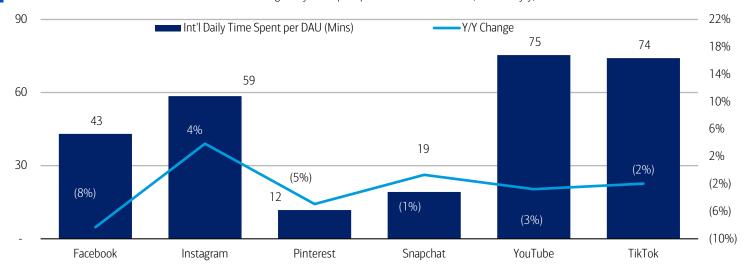
Source: Sensor Tower and BofA Global Research

Note: Daily time spent per DAU calculated using Sensor Tower total time spent in a month estimates and monthly average DAUs estimates.

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Exhibit 8: International Average Daily Time Spent per DAU Estimates (Minutes) – January 2024

YouTube remains the leader in international markets in average daily time spent per active user at 75mins (down 3% y/y).



Source: Sensor Tower and BofA Global Research

Note: Daily time spent per DAU calculated using Sensor Tower total time spent in a month estimates and monthly average DAUs estimates.

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Mobile User Trends

US/North America

Per Sensor Tower, in January, Pinterest had the highest y/y growth in US mobile DAUs (up 3% y/y) and YouTube users were flat y/y, while DAUs at other platforms declined. TikTok users were down 7% y/y, followed by IG (down 3%), Snap (down 1%) and Facebook (down 1%). FB remains the leader in US market with 164mn mobile users.

Exhibit 9: Sensor Tower US Mobile DAUs Estimates (mn)

Per Sensor Tower, in January, Pinterest had the highest growth in US mobile DAUs (up 3% y/y).

Company	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24
Facebook	166	166	166	165	166	165	165	165	165	165	165	164	165	164
y/y %	(0%)	(1%)	(1%)	(2%)	(0%)	(1%)	(1%)	(1%)	(1%)	(1%)	(1%)	(1%)	(1%)	(1%)
m/m %	0%	(0%)	(0%)	(0%)	0%	(0%)	0.1%	(0%)	(0%)	(0%)	0%	(1%)	1%	(1%)
Instagram	89	89	90	89	89	89	89	89	89	88	88	88	87	87
y/y %	(4%)	(3%)	(2%)	(2%)	(2%)	(1%)	(0%)	1%	1%	(2%)	(2%)	(2%)	(3%)	(3%)



Exhibit 9: Sensor Tower US Mobile DAUs Estimates (mn)

Per Sensor Tower, in January, Pinterest had the highest growth in US mobile DAUs (up 3% y/y).

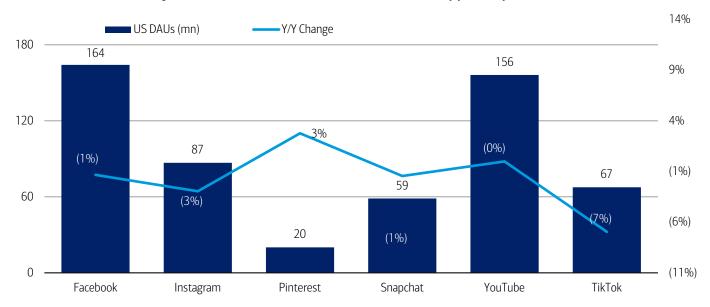
(1/0)	U /U	U /U	(1/0/	U /U	U /U	(0.0 /0)	(0/0)	U /U	(<i>L</i> / <i>U</i>)	1 /0	(0 /0)	(1/0)	(0/0)
19.0	19.5	19.3	19.2	19.0	19.0	19.2	19.2	19.2	19.0	19.4	19.8	19.5	20
5%	5%	7%	9%	9%	10%	10%	7%	4%	4%	4%	5%	2%	3%
1%	2%	(1%)	(1%)	(1%)	(0%)	1.4%	(0%)	0%	(1%)	2%	2%	(1%)	3%
62	59	61	61	61	60	61	60	60	60	60	60	61	59
(0%)	(2%)	(2%)	(1%)	(0%)	(2%)	(0%)	(3%)	(2%)	(1%)	(2%)	(1%)	(3%)	(1%)
4%	(5%)	2%	0%	(0%)	(0%)	1.5%	(2%)	(0%)	0%	0%	(1%)	1%	(3%)
156	156	156	156	157	156	156	156	156	156	156	156	156	156
(1%)	(1%)	(0%)	0%	1%	2%	2%	2%	2%	1%	1%	1%	0%	(0%)
1%	0%	(0%)	0%	1%	(1%)	0.1%	(0%)	0%	(0%)	0%	0%	(0%)	0%
74	73	72	71	71	71	71	72	72	71	70	70	68	67
(2%)	(4%)	(3%)	(4%)	(4%)	(4%)	(4%)	(3%)	(2%)	(3%)	(5%)	(6%)	(7%)	(7%)
(1%)	(2%)	(1%)	(1%)	1%	(0%)	(0.0%)	1%	0%	(1%)	(1%)	(1%)	(2%)	(1%)
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Source: Sensor Tower and BofA Global Research

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Exhibit 10: Sensor Tower US Mobile DAUs Estimates (mn) & Y/Y Growth (%) - January 2024

Per Sensor Tower, Facebook has the highest number of US mobile users (164mn) but users declined 1% y/y in January.



Source: Sensor Tower and BofA Global Research

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International

Per Sensor Tower, Snapchat had the highest y/y growth in international mobile DAUs in January (up 14% y/y), followed by Instagram (up 7%), Pinterest (up 7%), YouTube (up 7%), Facebook (up 2%), and TikTok (up 1%). YouTube remains the leader in international market with ~1.9bn mobile users.

Exhibit 11: Sensor Tower International Mobile DAUs Estimates (mn)

Per Sensor Tower, in January, Snapchat had the highest growth in international mobile DAUs (up 14% y/y).

Company	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24
Facebook	1,228	1,227	1,237	1,234	1,242	1,241	1,246	1,252	1,248	1,255	1,255	1,254	1,260	1,255
y/y %	2%	1%	2%	1%	3%	2%	2%	3%	2%	3%	3%	3%	3%	2%
m/m %	1%	(0%)	1%	(0%)	1%	(0%)	0%	0%	(0%)	1%	0%	(0%)	0%	(0%)
Instagram	1,003	1,011	1,018	1,030	1,039	1,048	1,058	1,065	1,068	1,066	1,074	1,078	1,076	1,077
y/y %	7%	7%	8%	9%	10%	11%	11%	11%	11%	10%	10%	9%	7%	7%
m/m %	1%	1%	1%	1%	1%	1%	1%	1%	0%	(0%)	1%	0%	(0%)	0%
Pinterest	86	87	87	86	87	87	87	88	88	87	90	90	91	93
y/y %	8%	7%	8%	10%	12%	13%	12%	12%	10%	8%	8%	7%	6%	7%



Exhibit 11: Sensor Tower International Mobile DAUs Estimates (mn)

Per Sensor Tower, in January, Snapchat had the highest growth in international mobile DAUs (up 14% y/y).

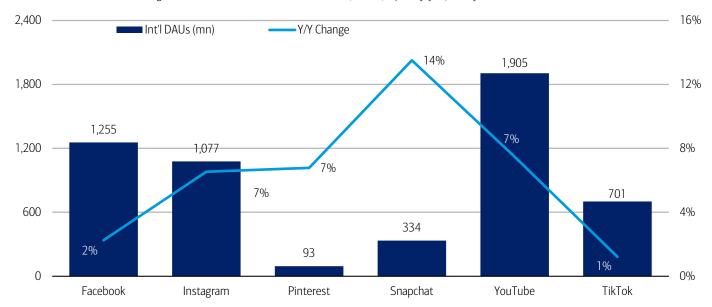
111/111-70	∠ 70	1.70	(U70)	(170)	170	(170)	(U70)	1.70	1.70	(170)	J 70	U 70	170	J⁻/U
Snapchat	304	294	303	304	309	311	321	323	325	327	328	329	335	334
y/y %	19%	16%	16%	16%	16%	14%	19%	15%	16%	15%	13%	14%	10%	14%
m/m %	5%	(3%)	3%	0%	2%	1%	3%	0%	1%	1%	0%	0%	2%	(0%)
YouTube	1,758	1,773	1,780	1,794	1,811	1,836	1,845	1,851	1,861	1,863	1,879	1,880	1,890	1,905
y/y %	5%	4%	5%	5%	6%	9%	9%	9%	8%	7%	8%	7%	8%	7%
m/m %	0%	1%	0%	1%	1%	1%	0%	0%	1%	0%	1%	0%	1%	1%
TikTok	688	692	688	685	699	697	709	717	714	708	711	702	701	701
y/y %	8%	6%	5%	5%	6%	5%	6%	7%	6%	5%	4%	2%	2%	1%
m/m %	(0%)	1%	(1%)	(1%)	2%	(0%)	2%	1%	(0%)	(1%)	0%	(1%)	(0%)	(0%)

Source: Sensor Tower and BofA Global Research

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Exhibit 12: Sensor Tower International Mobile DAUs Estimates (mn) & Y/Y Growth (%) – January 2024

Per Sensor Tower, YouTube has the highest number of international mobile users (~1.9bn), up 7% y/y in January.



Source: Sensor Tower and BofA Global Research

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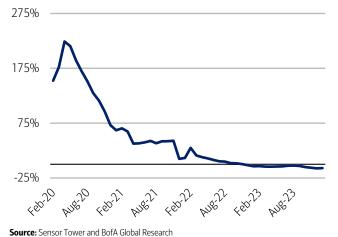
TikTok User Trends

US Users

Per Sensor Tower, TikTok US users declined 7% y/y in January. On a m/m basis, users declined 1% to 68mn.

Exhibit 13: TikTok US User trends (%)

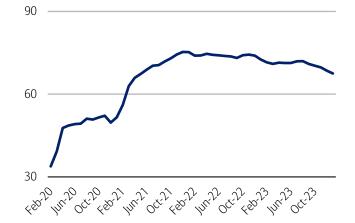
TikTok US users declined 7% y/y in January.



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Exhibit 14: TikTok US Users (mn)

In January, TikTok had 68mn DAUs in US (down 1% m/m).



Source: Sensor Tower and BofA Global Research

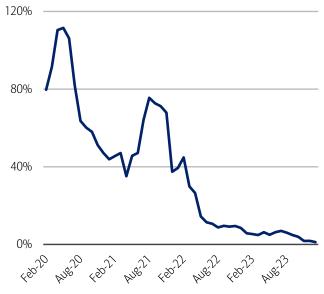
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International Users

Per Sensor Tower, TikTok's international users increased 1% y/y in January. On a m/m basis, users were flat at 701mn.

Exhibit 15: TikTok Int'l User trends (%)

TikTok international users increased 1% y/y in January.

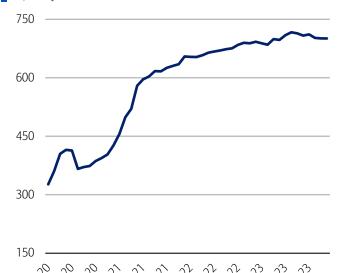


Source: Sensor Tower and BofA Global Research

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Exhibit 16: TikTok Int'l Users (mn)

In January, TikTok users were flat at 701mn.



Source: Sensor Tower and BofA Global Research

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Mobile Download Trends

US/North America

Per Sensor Tower, in January, YouTube had the highest y/y growth in US mobile downloads (2.2mn, up 18% y/y), followed by IG (2.9mn, up 10% y/y), Pinterest (1.7mn, up 4% y/y), and Snapchat (1.9mn, up 2% y/y), while TikTok & FB saw decline. TikTok had 4.0mn downloads (down 9% y/y and FB had 3.0mn (down 6% y/y).



Exhibit 17: Sensor Tower US Mobile Downloads Estimates (mn)

In January, YouTube had highest growth in US downloads (2.2mn, up 18% y/y).

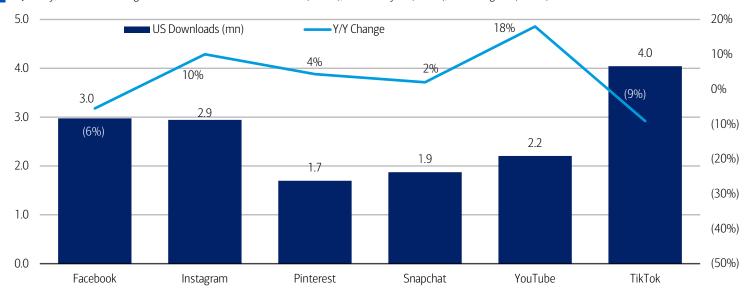
Company	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24
Facebook	2.9	3.1	2.9	3.0	2.8	2.9	3.0	3.0	3.0	2.8	3.0	2.8	3.2	3.0
y/y %	(21%)	(16%)	(13%)	(32%)	(16%)	(4%)	(7%)	(6%)	(10%)	(11%)	(9%)	(9%)	7%	(6%)
m/m %	(4%)	7%	(8%)	3%	(6%)	4%	2%	1%	(1%)	(6%)	8%	(7%)	12%	(6%)
Instagram	2.8	2.7	2.2	2.5	2.6	2.9	2.8	2.8	3.2	3.1	3.0	3.0	3.3	2.9
y/y %	(15%)	(25%)	(26%)	(26%)	(15%)	(1%)	(8%)	(15%)	(7%)	2%	(18%)	(3%)	16%	10%
m/m %	(8%)	(5%)	(16%)	14%	2%	10%	(2%)	(1%)	14%	(2%)	(4%)	1%	10%	(10%)
Pinterest	1.5	1.6	1.4	1.6	1.3	1.3	1.5	1.6	1.5	1.5	1.6	1.7	1.7	1.7
y/y %	(9%)	(8%)	(9%)	(11%)	(7%)	(4%)	0%	3%	(2%)	(10%)	2%	11%	11%	4%
m/m %	3%	6%	(14%)	12%	(14%)	0%	13%	5%	(6%)	0%	8%	3%	2%	0%
Snapchat	2.2	1.8	1.7	1.8	1.7	1.9	2.0	2.0	2.0	1.8	1.9	1.9	2.2	1.9
y/y %	(15%)	(27%)	(22%)	(29%)	(15%)	0%	5%	(4%)	(5%)	(13%)	(10%)	2%	(1%)	2%
m/m %	19%	(17%)	(9%)	7%	(3%)	9%	9%	(1%)	(2%)	(8%)	5%	(2%)	16%	(14%)
YouTube	2.6	1.9	1.7	1.7	1.5	1.6	1.7	1.7	1.8	1.8	1.9	1.8	2.4	2.2
y/y %	(39%)	(52%)	(45%)	(62%)	(42%)	(2%)	(33%)	(35%)	(22%)	(22%)	(23%)	4%	(6%)	18%
m/m %	47%	(28%)	(7%)	(4%)	(11%)	9%	5%	0%	4%	1%	6%	(2%)	32%	(10%)
TikTok	4.3	4.5	4.0	3.9	3.5	4.0	3.9	3.6	3.7	3.7	4.0	3.9	4.4	4.0
y/y %	(33%)	(38%)	(23%)	(43%)	(26%)	6%	(26%)	(35%)	(27%)	(18%)	(24%)	(13%)	3%	(9%)
m/m %	(5%)	4%	(11%)	(2%)	(10%)	15%	(5%)	(8%)	4%	(1%)	8%	(2%)	14%	(9%)

Source: Sensor Tower and BofA Global Research

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Exhibit 18: Sensor Tower US Mobile Downloads Estimates (mn) & Y/Y Growth (%) - January 2024

In January, TikTok had the highest number of US mobile downloads (4.0mn), followed by FB (3.0mn), and Instagram (2.9mn).



Source: Sensor Tower and BofA Global Research

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International

Per Sensor Tower, in January, Facebook had the highest y/y growth in international mobile downloads (52mn, up 7% y/y), followed by IG (71mn, up 6% y/y), Pinterest (15mn, up 3% y/y), and TikTok (61mn, up 2% y/y), while Snapchat (30mn, down 15% y/y) and YouTube (12mn, down 3% y/y) declined.

Exhibit 19: Sensor Tower International Mobile Downloads Estimates (mn)

In January, Facebook had highest growth in US downloads (52mn, up 7% y/y).

Company	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24
Facebook	49	48	46	51	47	48	47	52	49	49	49	43	51	52
y/y %	4%	3%	7%	(2%)	(9%)	(7%)	(5%)	(1%)	(10%)	(7%)	(3%)	(11%)	4%	7%
m/m %	(0%)	(1%)	(4%)	10%	(8%)	2%	(2%)	10%	(5%)	0%	(0%)	(12%)	17%	2%
Instagram	64	67	60	70	54	56	65	70	68	60	53	55	68	71



Exhibit 19: Sensor Tower International Mobile Downloads Estimates (mn)

In January, Facebook had highest growth in US downloads (52mn, up 7% y/y).

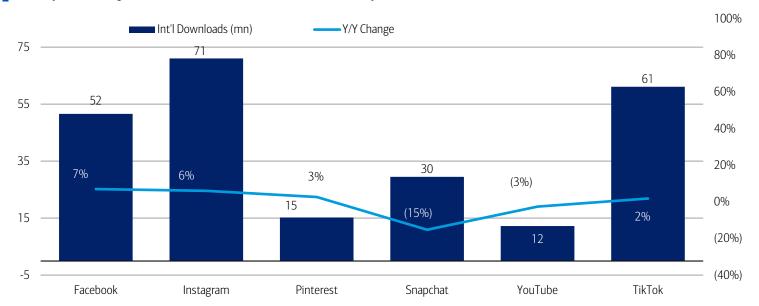
y/ y 70	1170	∠+70	∠∪7/∪	∪/⁻/∪	U 70	J-70	1070	1070	∠∪70	1270	(1070)	1770	U 70	U 7/U
m/m %	32%	4%	(11%)	17%	(23%)	4%	14%	8%	(3%)	(12%)	(11%)	4%	23%	4%
Pinterest	14	15	13	14	13	13	13	14	14	14	15	14	15	15
y/y %	14%	15%	13%	12%	6%	5%	6%	6%	4%	1%	9%	9%	7%	3%
m/m %	4%	7%	(10%)	7%	(10%)	5%	(3%)	6%	1%	(2%)	9%	(4%)	2%	3%
Snapchat	34	35	31	33	28	29	30	31	30	30	27	26	26	30
y/y %	9%	16%	12%	7%	(11%)	(23%)	1%	(3%)	(0%)	(6%)	(20%)	(16%)	(23%)	(15%)
m/m %	10%	2%	(10%)	5%	(15%)	5%	4%	1%	(4%)	1%	(11%)	(2%)	1%	12%
YouTube	12	13	12	12	13	12	13	13	12	11	12	10	12	12
y/y %	(20%)	(13%)	1%	(7%)	25%	22%	11%	(3%)	(17%)	(15%)	(9%)	(6%)	(1%)	(3%)
m/m %	10%	7%	(7%)	5%	6%	(4%)	3%	2%	(5%)	(10%)	4%	(15%)	16%	5%
TikTok	55	60	55	58	56	59	61	61	65	62	64	56	60	61
y/y %	0%	0%	8%	3%	1%	(4%)	10%	(4%)	8%	7%	12%	13%	9%	2%
m/m %	10%	10%	(8%)	6%	(3%)	4%	3%	1%	6%	(5%)	3%	(12%)	7%	2%

Source: Sensor Tower and BofA Global Research

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Exhibit 20: Sensor Tower International Mobile Downloads Estimates (mn) & Y/Y Growth (%) – January 2024

In January, IG had the highest number of US mobile downloads (71mn), followed by TikTok (61mn), and Facebook (52mn).



Source: Sensor Tower and BofA Global Research

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ARPU Trends

US/North America

In 4Q'23, YouTube had the highest growth in US ARPU (up 16% y/y) to \$35.3, followed by Meta (\$86.8 up 15% y/y), Pinterest (\$24.1, up 6% y/y), and Snap (\$9.0, up 2% y/y). For 1Q'24E, we estimate Meta US ARPU to grow 22% y/y, YouTube to grow 18% y/y, Snap up 14% y/y, and Pinterest up 9% y/y.

Note: Historical ARPU calculated using reported revenue and DAUs; 1Q'24 ARPU based on BofA estimates. YouTube US ARPU calculated assuming 60% of total revenue from US and 156mn US DAUS; Pinterest DAUs estimated assuming 0.33x of reported MAUs. Does not back out subscription revenues.

Exhibit 21: Estimated US ARPU and Y/Y Change (\$, %)

In 4Q'23, YouTube had the highest growth in US ARPU (up 16% y/y) to \$35.3.

Company	20'21	30'21	40'21	10'22	20'22	30'22	40'22	10'23	20'23	30'23	40'23	10'24F



Exhibit 21: Estimated US ARPU and Y/Y Change (\$, %)

In 4Q'23, YouTube had the highest growth in US ARPU (up 16% y/y) to \$35.3.

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y/y %				1%	(5%)	(3%)	(2%)	4%	8%	14%	15%	22%
q/q %	12%	(3%)	16%	(21%)	6%	(0%)	16%	(16%)	10%	5%	18%	(11%)
YouTube US ARPU	\$27.1	\$27.9	\$32.8	\$26.4	\$28.7	\$27.4	\$30.5	\$25.6	\$29.4	\$30.6	\$35.3	\$30.1
y/y %				10%	6%	(2%)	(7%)	(3%)	2%	12%	16%	18%
q/q %	13%	3%	18%	(20%)	9%	(5%)	12%	(16%)	15%	4%	15%	(15%)
Snap US ARPU	\$7.4	\$8.2	\$9.6	\$7.7	\$7.9	\$8.1	\$8.8	\$6.4	\$6.8	\$7.8	\$9.0	\$7.3
y/y %				30%	7%	(1%)	(8%)	(17%)	(14%)	(4%)	2%	14%
q/q %	24%	11%	17%	(19%)	3%	2%	8%	(27%)	6%	14%	16%	(19%)
Pinterest US ARPU	\$15.2	\$16.1	\$21.8	\$15.0	\$17.7	\$18.2	\$22.8	\$15.3	\$17.8	\$19.3	\$24.1	\$16.8
y/y %				33%	16%	13%	5%	2%	1%	6%	6%	9%
q/q %	35%	6%	35%	(31%)	18%	3%	26%	(33%)	16%	8%	25%	(30%)

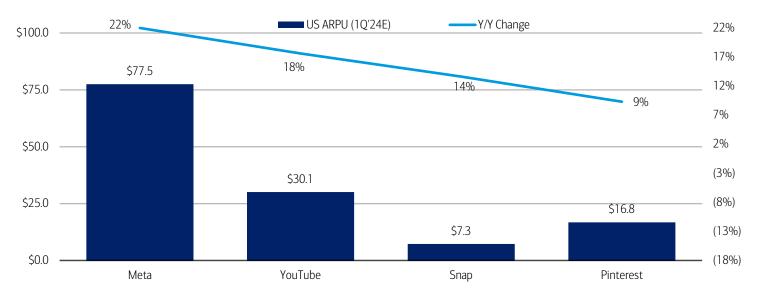
Source: Company Filings, Sensor Tower and BofA Global Research Estimates

Note: Pinterest DAUs estimated using 0.33x DAU/MAU ratio; YouTube ARPU calculated assuming 60% revenue from US and 156mn US DAUs and 1.9bn international DAUs.

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Exhibit 22: Estimated US ARPU and Growth (\$, %) - 1Q'24E

In 1Q'24, we estimate Meta US ARPU to grow 22% y/y.



Source: Company Filings, Sensor Tower and BofA Global Research Estimates

Note: Pinterest DAUs estimated using 0.33x DAU/MAU ratio; YouTube ARPU calculated assuming 60% revenue from US and 156mn US DAUs and 1.9bn international DAUs.

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International

In 4Q'23, Meta had the highest growth in international ARPU (up 22% y/y) to \$11.0 followed by Pinterest, up 15% y/y to \$1.5, and YouTube, up 12% y/y to \$2.0, while Snap (\$1.5, down 4% y/y) declined. For 1Q'24E, we estimate Meta international ARPU to grow 21% y/y, followed by Pinterest up 19% y/y, YouTube up 15% y/y, and Snap up 1% y/y.

Note: Historical ARPU calculated using reported revenue and DAUs; 1Q'24 ARPU based on BofA estimates. YouTube US ARPU calculated assuming 40% of total revenue from international markets and 1.9bn international DAUS; Pinterest DAUs calculated assuming 0.33x of reported MAUs. Does not back out subscription revenues.

Exhibit 23: Estimated International ARPU and Y/Y Change (\$, %)

In 4Q'23, Meta had the highest growth in international ARPU (up 22% y/y) to \$11.0

Company	2Q'21	3Q'21	4Q'21	1Q'22	2Q'22	3Q'22	4Q'22	1Q'23	2Q'23	3Q'23	4Q'23	1Q'24E
Meta Int'l ARPU	\$8.9	\$8.8	\$10.1	\$8.5	\$8.7	\$8.1	\$9.0	\$8.4	\$9.3	\$9.9	\$11.0	\$10.1
y/y %				5%	(2%)	(8%)	(11%)	(1%)	7%	23%	22%	21%



Exhibit 23: Estimated International ARPU and Y/Y Change (\$, %)

In 4Q'23, Meta had the highest growth in international ARPU (up 22% y/y) to \$11.0

4/4 70	1070	(170)	1070	(1070)	∠ 7/∪	(7.70)	1170	(170)	1170	/ 7/0	1170	(070)
YouTube Int'l ARPU	\$1.7	\$1.7	\$2.0	\$1.6	\$1.7	\$1.6	\$1.7	\$1.4	\$1.7	\$1.7	\$2.0	\$1.6
y/y %				1%	(2%)	(8%)	(13%)	(8%)	0%	9%	12%	15%
q/q %	10%	1%	17%	(22%)	7%	(6%)	11%	(18%)	17%	2%	14%	(16%)
Snap Int'l ARPU	\$1.4	\$1.3	\$1.6	\$1.3	\$1.3	\$1.2	\$1.5	\$1.2	\$1.3	\$1.3	\$1.5	\$1.2
y/y %				13%	(7%)	(10%)	(7%)	(5%)	(2%)	10%	(4%)	1%
9/9 %	23%	(6%)	23%	(21%)	1%	(8%)	27%	(19%)	4%	3%	11%	(15%)
Pinterest Int'l ARPU	\$0.9	\$0.9	\$1.4	\$0.9	\$1.1	\$0.9	\$1.3	\$1.0	\$1.2	\$1.1	\$1.5	\$1.1
y/y %				52%	22%	1%	(7%)	2%	6%	20%	15%	19%
q/q %	46%	4%	52%	(34%)	18%	(14%)	40%	(28%)	22%	(3%)	34%	(25%)

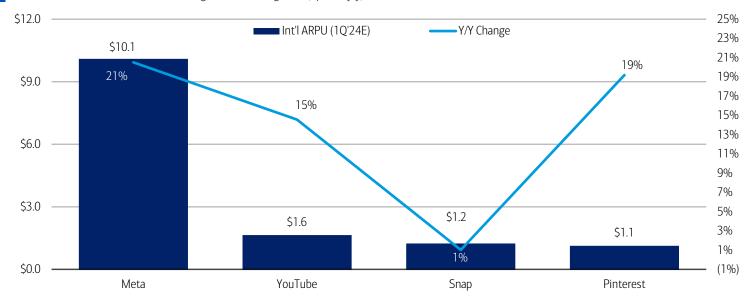
Source: Company Filings, Sensor Tower and BofA Global Research Estimates

Note: Pinterest DAUs estimated using 0.33x DAU/MAU ratio; YouTube ARPU calculated assuming 60% revenue from US and 156mn US DAUs and 1.9bn international DAUs.

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Exhibit 24: Estimated International ARPU and Growth (\$, %) - 1Q'24E

For 1Q'24, we estimate Meta to have the highest Int'l ARPU growth (up 21% y/y).



Source: Company Filings, Sensor Tower and BofA Global Research Estimates

Note: Pinterest DAUs estimated using 0.33x DAU/MAU ratio; YouTube ARPU calculated assuming 60% revenue from US and 156mn US DAUs and 1.9bn international DAUs.

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Revenue per Hour of Engagement Trends

US/North America

In 4Q'23, Meta had the highest growth in US revenue per hour (RPH) of engagement (up 23% y/y to \$0.92), followed by YouTube (up 13% y/y to \$0.31), Pinterest (up 10% y/y to \$2.15), and Snap (up 6% y/y to \$0.49). For 1Q'24E, we estimate Meta US RPH to grow 35% y/y, Snap up 14% y/y, YouTube up 14% y/y and Pinterest up 11% y/y.

Note: Historical RPH calculated using reported revenue and Sensor Tower total time spent estimates; 1Q'24 RPH based on BofA estimates; Meta estimates include time spent on both FB & IG; YouTube US RPH calculated assuming 60% of revenue from US.

Exhibit 25: Estimated US Revenue per hour of engagement & Growth (\$, %)

In 4Q'23, Meta had the highest growth in US revenue per hour (RPH) of engagement (up 23% y/y) to \$0.92.

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Company	20'21	3Q'21	4Q'21	1Q'22	2Q'22	3Q'22	4Q'22	1Q'23	2Q'23	3Q'23	4Q'23	1Q'24E
Meta US Rev/hour	\$0.68	\$0.65	\$0.78	\$0.63	\$0.66	\$0.65	\$0.74	\$0.63	\$0.73	\$0.76	\$0.92	\$0.85
y/y %				(2%)	(3%)	(1%)	(5%)	0%	10%	17%	23%	35%
q/q %	7%	(4%)	19%	(19%)	6%	(3%)	15%	(15%)	16%	3%	21%	(8%)
YouTube US Rev/hour	\$0.26	\$0.26	\$0.31	\$0.24	\$0.26	\$0.25	\$0.27	\$0.22	\$0.26	\$0.26	\$0.31	\$0.25



Exhibit 25: Estimated US Revenue per hour of engagement & Growth (\$, %)

In 4Q'23, Meta had the highest growth in US revenue per hour (RPH) of engagement (up 23% y/y) to \$0.92.

y/ y -70				U 7/U	(170)	(270)	(1270)	(U 70)	(U 70)	U 70	1.70	1770
q/q %	14%	1%	17%	(21%)	6%	(3%)	8%	(17%)	15%	2%	16%	(17%)
Snap US Rev/hour	\$0.35	\$0.41	\$0.46	\$0.38	\$0.39	\$0.42	\$0.46	\$0.36	\$0.37	\$0.43	\$0.49	\$0.41
y/y %				41%	13%	3%	1%	(6%)	(7%)	3%	6%	14%
q/q %	29%	18%	12%	(17%)	3%	7%	10%	(23%)	3%	19%	13%	(17%)
Pinterest US Rev/hour	\$1.52	\$1.65	\$2.28	\$1.53	\$1.79	\$1.64	\$1.96	\$1.30	\$1.61	\$1.71	\$2.15	\$1.44
y/y %				41%	18%	(0%)	(14%)	(15%)	(10%)	4%	10%	11%
g/g %	41%	8%	38%	(33%)	17%	(8%)	19%	(34%)	24%	6%	26%	(33%)

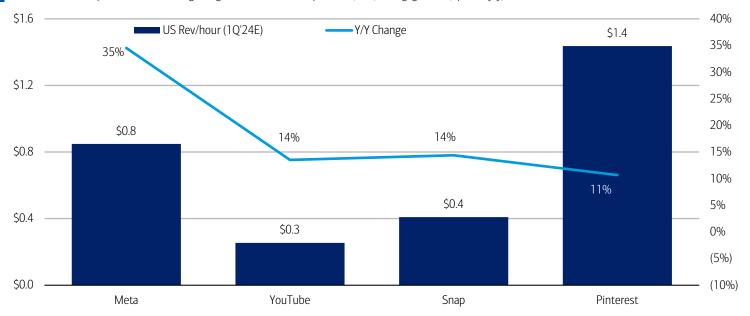
Source: Company Filings, Sensor Tower and BofA Global Research Estimates

Note: Pinterest DAUs estimated using 0.33x DAU/MAU ratio; YouTube ARPU calculated assuming 60% revenue from US and 156mn US DAUs and 1.9bn international DAUs.

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Exhibit 26: Estimated US Revenue per hour of engagement & Growth (\$, %) - 1Q'24E

In 1Q'24, Meta is expected to have the highest growth in US revenue per hour (RPH) of engagement (up 35% y/y) to \$0.85.



Source: Company Filings, Sensor Tower and BofA Global Research Estimates

Note: Pinterest DAUs estimated using 0.33x DAU/MAU ratio; YouTube ARPU calculated assuming 60% revenue from US and 156mn US DAUs and 1.9bn international DAUs.

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International

In 4Q'23, Pinterest had the highest growth in international revenue per hour (RPH) of engagement (up 36% y/y) to \$0.12, followed by Meta up 17% y/y to \$0.11, YouTube up 9% y/y to \$0.02, and Snap flat y/y at \$0.05. For 1Q'24E, we estimate Pinterest Int'l RPH to grow 35% y/y, Meta up 16% y/y, YouTube up 10% y/y and Snap up 1% y/y.

Note: Historical RPH calculated using reported revenue and Sensor Tower total time spent estimates; 1Q'24 RPH based on BofA estimates; Meta estimates include time spent on both FB & IG; YouTube international RPH calculated assuming 40% of revenue from international markets.

Exhibit 27: Estimated Int'l Revenue per hour of engagement & Growth (\$, %)

In 4Q'23, Pinterest had the highest growth in international revenue per hour (RPH) of engagement (up 36% y/y) to \$0.12.

Company	2Q'21	3Q'21	4Q'21	1Q'22	2Q'22	3Q'22	4Q'22	1Q'23	2Q'23	3Q'23	4Q'23	1Q'24E
Meta Int'l Rev/hour	\$0.097	\$0.095	\$0.114	\$0.097	\$0.098	\$0.089	\$0.097	\$0.090	\$0.097	\$0.101	\$0.113	\$0.104
y/y %				6%	1%	(6%)	(15%)	(7%)	(1%)	13%	17%	16%
q/q %	7%	(2%)	20%	(15%)	2%	(9%)	8%	(8%)	8%	4%	12%	(8%)
YouTube Int'l Rev/hour	\$0.016	\$0.016	\$0.019	\$0.014	\$0.015	\$0.014	\$0.015	\$0.013	\$0.015	\$0.015	\$0.017	\$0.014
y/y %				(2%)	(8%)	(11%)	(18%)	(13%)	(3%)	2%	9%	10%



Exhibit 27: Estimated Int'l Revenue per hour of engagement & Growth (\$, %)

In 4Q'23, Pinterest had the highest growth in international revenue per hour (RPH) of engagement (up 36% y/y) to \$0.12.

4/4 70	1∠ 7/U	(Z 7U)	17.70	(4)70)	770	(270)	/ 70	(1070)	17 70	U-70	I 7 7U	(1070)
Snap Int'l Rev/hour	\$0.037	\$0.037	\$0.044	\$0.036	\$0.037	\$0.036	\$0.046	\$0.039	\$0.039	\$0.041	\$0.046	\$0.039
y/y %				25%	1%	(3%)	4%	7%	6%	15%	0%	1%
q/q %	26%	1%	19%	(18%)	2%	(3%)	28%	(15%)	1%	6%	12%	(15%)
Pinterest Int'l Rev/hour	\$0.071	\$0.074	\$0.114	\$0.074	\$0.088	\$0.069	\$0.091	\$0.067	\$0.091	\$0.088	\$0.123	\$0.091
y/y %				55%	24%	(7%)	(20%)	(10%)	3%	28%	36%	35%
q/q %	50%	3%	55%	(35%)	19%	(22%)	32%	(26%)	36%	(3%)	39%	(26%)

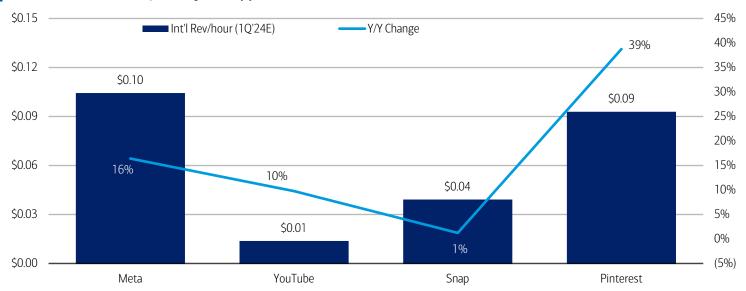
Source: Company Filings, Sensor Tower and BofA Global Research Estimates

Note: Pinterest DAUs estimated using 0.33x DAU/MAU ratio; YouTube ARPU calculated assuming 60% revenue from US and 156mn US DAUs and 1.9bn international DAUs.

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Exhibit 28: Estimated Int'l Revenue per hour of engagement & Growth (\$, %) - 1Q'24E

Pinterest international RPH is expected to grow 35% y/y in 1Q'24.



Source: Company Filings, Sensor Tower and BofA Global Research Estimates

Note: Pinterest DAUs estimated using 0.33x DAU/MAU ratio; YouTube ARPU calculated assuming 60% revenue from US and 156mn US DAUs and 1.9bn international DAUs.

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Investment rating Total return expectation (within 12-month period of date of initial rating) Ratings dispersion guidelines for coverage cluster^{R1}

 Buy
 ≥ 10%
 ≤ 70%

 Neutral
 ≥ 0%
 ≤ 30%

 Underperform
 N/A
 ≥ 20%

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