

#### Internet/e-Commerce

# December app data: Social media mixed while eCommerce decelerates

**Industry Overview** 

#### Mixed month for app usage in December

We track monthly global mobile app downloads (DLs) and DAUs per Sensor Tower to help gauge user trends across social media, eCommerce, subscription services, and more. For December, social media was mixed though Pinterest and Snap DAU's decelerated. eCommerce metrics generally decelerated while OTA DAUs were relatively stable, with Airbnb accelerating. Real Estate remains mixed with stable DAU trends for Zillow and Redfin.

#### Media: Mixed social trends with TT and IG DAUs up most

**Facebook** downloads were +4% y/y (10pt accel) in Dec, while DAUs were stable +2% y/y (vs. Nov). **Instagram** DLs decelerated 2pts to +5% y/y, while DAUs accelerated to +10% y/y vs. 8% in Nov. **Threads** DLs of 34.3mn grew 162% m/m (vs. -2% prior), while DAUs improved to 32% m/m. **Pinterest** DLs slowed to +7% y/y (4pt decel), while DAUs fell 2pts to +5% y/y. **Snap** DLs contracted 26% y/y, while DAUs grew +8% y/y vs 12% in Nov. **TikTok** DLs were +4% y/y vs. +12% in Nov while DAUs accel'd 14pts to +15% y/y vs. +1% prior. **YouTube** DLs accelerated 3pts to -1% y/y, while DAUs stabilized at +7% y/y. **Roblox** downloads accelerated 1pts to +25% y/y, while DAUs increased to +27% y/y vs. +25% in Nov. **Twitch** DLs/DAUs both accelerated y/y to 28%/flat vs. 13%/-7% prior.

#### eComm: December trends generally slow from November

Amazon DLs fell 31% y/y (-18pts vs. Nov), while DAUs slowed to +3% y/y from +8% in Nov. eBay downloads grew +7% y/y (+13pts), while DAUs accelerated 1pt to -2% y/y. Etsy downloads/DAUs stabilized at -12%/1%. Wayfair downloads slowed to +7% y/y (22pt decel), while DAUs fell 5% y/y from +4% prior. Chewy DLs were up +7% y/y (4pt decel), while DAUs contracted 2% from flat y/y. DoorDash DLs grew +18% y/y, a 13pt accel, while DAUs decel'd 2pts to +2% y/y. Uber Eats downloads declined 9% y/y, while DAUs were -12% y/y (3pt decel vs. Nov). Bed Bath DLs decelerated 46pts to +55% y/y (vs. +101% prior), while DAUs fell 14% y/y (a 8pt decel). Instacart DLs/DAUs were -11%/+7% y/y vs. -13%/+7% in Nov.

#### Travel/transport: Still solid DAU growth, Airbnb uptick

**Airbnb** downloads grew +37% y/y from +20% y/y in Nov, while DAUs accel'd 3pts to +12% y/y. **Booking** DLs/DAUs were stable at -8%/+16% y/y. **Expedia** DLs y/y were +15% y/y, a 7pt decel, while DAUs slowed to +19% y/y vs 22% in Nov. **Vrbo** DLs declined 25% y/y, while DAUs were stable at -16% y/y (vs. -23%/-16% prior). **Uber** DLs fell 1% y/y (7pts decel), while DAUs were +12% y/y vs. +15% y/y in Nov. **Lyft** DLs were +9% y/y (vs. 13% prior), and DAUs slowed to +6% y/y vs +9% prior.

#### Real estate: generally stable DAUs trends

**Zillow** downloads decelerated 12pts to +1%, while DAUs were stable at -12%. **Redfin** downloads slowed to +15% y/y (-5pt), while DAUs stabilized at -12% y/y. **Opendoor** DLs accel'd 18pts to -35% y/y, but DAUs contracted -20% y/y vs. +10% in Nov.

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DLs: Downloads

**DAUs: Daily Active Users** 

TT: TikTok

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### December mobile data update

Sensor Tower download and DAU estimates are generated by combining App Store and Google Play data provided by Publisher & Developer partnerships with signals from the App Stores, including App Rankings and App Metadata to backfill non-partner data. Sensor Tower has data sharing partnerships with many top Publishers and Developers with >50% of all App Store revenue coming from ST partner apps. We have aggregated this data on our covered applications to gauge potential user & usage trends.

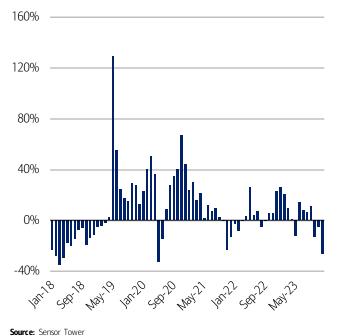
We note Sensor Tower has made **revisions to downloads and app revenue estimates, with the most recent revision in December 2023**. Metrics on apps could reportedly change by up to ±5% for Android and iOS. According to Sensor Tower, this update is the result of incorporating more data from their global mobile panel apps and is expected to better measure app usage in specific regions. These changes could improve future accuracy but may impact historical data.

#### **Online Media**

#### Snap

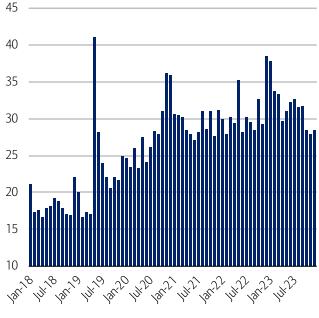
Per Sensor Tower, global downloads declined 26% y/y to 28.5mn in December (tough comps vs Dec '22) vs. -5% in November and were 2% on a m/m basis. US downloads increased 5% y/y and International downloads decreased 28% y/y (vs. -6% in November).





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### Exhibit 2: Snap worldwide gross downloads (mn) Snap worldwide gross downloads reached 28.5mn in December



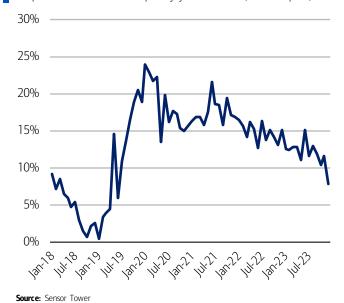
Source: Sensor Tower



Worldwide Snap DAUs of 395.6mn grew 8% y/y in December (down vs 12% vs. November) and were +2% m/m. US DAUs were -3% on a y/y and +1% m/m basis, while European users grew 3% y/y (and +2% m/m). RoW DAUs grew 13% y/y in December (a 4pt decel vs. 17% in November) and increased 1% m/m.

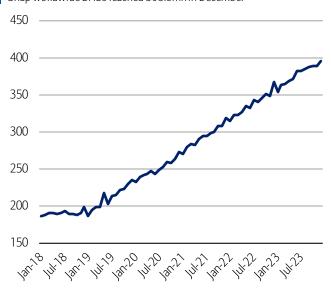
#### Exhibit 3: Snap worldwide DAU trend (y/y)

Snap worldwide DAUs were up 8% y/y in December (vs. +12% prior)



#### Exhibit 4: Snap worldwide DAUs (mn)

Snap worldwide DAUs reached 395.6mn in December



Source: Sensor Tower

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#### **Pinterest**

Pinterest app download growth decelerated 3pts to +7% y/y, but increased +2% m/m. US downloads grew 12% y/y (vs. 24% prior) and were up 2% m/m, while International downloads trends were 7% y/y (vs. 10% in November). Worldwide downloads of 16.5mn remain above 2019 levels but were 16% below the COVID peak in May 2020.

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#### Exhibit 5: Pinterest monthly download trends (y/y)

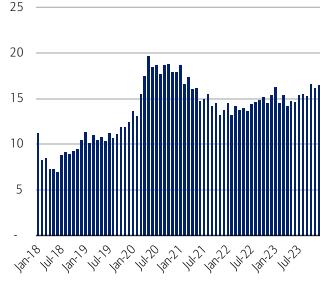
Pinterest downloads trends were +7% y/y in December (vs. +11% prior)



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#### Exhibit 6: Pinterest worldwide gross downloads (mn)

Pinterest reached 16.5mn worldwide downloads in December



Source: Sensor Tower



Pinterest DAUs of 109.9mn grew 5% y/y in December (-2pts from November). US DAUs grew 2% y/y (vs. 5% prior) and International DAUs grew 5% y/y. For the month of December, US DAUs were 19.5mn. Versus September, global DAUs were up 3%.

#### Exhibit 7: Pinterest DAU trend (y/y)

Pinterest DAUs grew 5% y/y in December (vs. 7% prior)

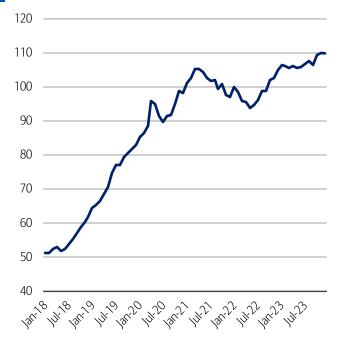


Source: Sensor Tower

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#### Exhibit 8: Pinterest worldwide DAUs (mn)

Pinterest worldwide DAUs reached 109.9mn in December



Source: Sensor Tower



### **Exhibit 9: Worldwide Download and DAU trends – Online Media** Monthly Sensor Tower estimates for Online media apps

Online Media	Jan- 22	Feb- 22	Mar- 22	Apr- 22	May- 22	Jun- 22	Jul- 22	Aug- 22	Sep- 22	Oct- 22	Nov- 22	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
Facebook	22	ZZ	22	22	22	22	22	22	22	22	22	22	25	25	25	2.5	25	25	25	25	25	25	25	25
Downloads																								
M/M	0%	-8%	19%	0%	-3%	-2%	6%	5%	-2%	-3%	-9%	5%	-1%	-3%	5%	-5%	2%	-2%	10%	-5%	0%	0%	-12%	17%
Y/Y	-1%	-7%	5%	10%	5%	7%	10%	10%	15%	7%	3%	4%	3%	9%	-4%	-8%	-3%	-2%	1%	-8%	-7%	-3%	-6%	4%
DAUs	1,70	, ,0	3 70	10 70	3 /0	, ,0	10 70	10 70	13 70	, ,0	5 70	1,70	5 70	3 70	. 70	0 70	5 70	270	. ,0	0 70	, ,0	3 /0	0 70	1 70
M/M	0%	0%	1%	-1%	0%	0%	0%	0%	0%	0%	0%	1%	0%	1%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Y/Y	4%	3%	3%	2%	1%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%	3%	2%	2%	2%	2%	2%
Instagram																								
Downloads																								
M/M	-4%	-12%	11%	-6%	3%	4%	8%	-7%	0%	14%	-9%	25%	8%	-13%	4%	-14%	5%	14%	8%	-3%	-11%	-11%	4%	22%
Y/Y	23%	7%	6%	3%	4%	7%	16%	-12%	2%	10%	9%	24%	39%	37%	28%	16%	18%	29%	29%	34%	19%	-7%	7%	5%
DAUs																								
M/M	1%	0%	0%	0%	0%	1%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	0%	1%	1%	2%
Y/Y	20%	19%	12%	11%	8%	7%	6%	6%	6%	5%	6%	6%	6%	6%	7%	8%	10%	10%	10%	10%	9%	9%	8%	10%
Pinterest																								
Downloads																								
M/M	5%	-9%	7%	-3%	2%	-2%	5%	2%	2%	2%	-5%	7%	5%	-11%	6%	-8%	4%	-1%	6%	0%	-2%	9%	-3%	2%
Y/Y	-22%	-20%	-18%	-14%	-14%	-8%	-4%	-5%	4%	5%	9%	12%	12%	9%	8%	3%	6%	7%	7%	6%	2%	9%	11%	7%
DAUs																								
M/M	3%	-2%	-3%	0%	-2%	1%	2%	3%	0%	3%	1%	2%	2%	0%	-1%	1%	-1%	0%	1%	1%	-1%	3%	0%	0%
Y/Y	-1%	-4%	-9%	-9%	-10%	-8%	-6%	-3%	-1%	1%	5%	8%	6%	8%	10%	11%	13%	12%	11%	9%	8%	7%	7%	5%
Snap																								
Downloads																								
M/M	-4%	-7%	9%	-3%	20%	-20%	7%	-2%	-4%	15%	-10%	31%	-2%	-11%	-1%	-11%	5%	4%	1%	-3%	0%	-10%	-2%	2%
Y/Y	-3%	-8%	0%	3%	26%	4%	7%	-5%	-1%	6%	6%	23%	26%	21%	10%	1%	-12%	15%	8%	7%	11%	-13%	-5%	-26%
DAUs																								
M/M	-1%	3%	0%	1%	2%	-1%	3%	-1%	2%	2%	-1%	5%	-4%	3%	0%	1%	1%	3%	0%	0%	1%	0%	0%	2%
Y/Y	16%	16%	14%	16%	15%	13%	16%	14%	15%	14%	13%	15%	13%	12%	13%	13%	11%	15%	12%	13%	12%	10%	12%	8%
TikTok																								
Downloads	70/	100/	120/	10/	20/	20/	120/	40/	40/	10/	120/	110/	70/	00/	COV	20/	Γ0/	20/	00/	COV	F0/	40/	110/	20/
M/M Y/Y	7% 2%	-16% -9%	12% 3%	-1% 1%	2% -25%	-3% -12%	13% 7%	-4% -6%	-4% 2%	1% 9%	-12% -1%	11% 0%	7% -1%	-8% 9%	6% 4%	-3% 1%	5% 4%	3% 11%	0% -2%	6% 8%	-5% 7%	4% 10%	-11% 12%	3% 4%
DAUs	2%	-9%	3%	1%	-25%	-12%	7%	-0%	2%	9%	-1%	U%	-1%	9%	4%	1%	4%	11%	-2%	8%	7%	10%	12%	4%
M/M	2%	0%	0%	1%	0%	0%	0%	1%	0%	1%	1%	0%	0%	-1%	0%	2%	0%	2%	1%	0%	-1%	0%	-1%	14%
Y/Y	58%	46%	31%	26%	13%	10%	10%	8%	8%	8%	9%	7%	4%	-1% 4%	4%	2% 5%	5%	2% 6%	1% 7%	6%	-1% 5%	3%	1%	15%
YouTube	36%	40%	31%	20%	13%	10%	10%	6%	0%	0%0	9%	7 %0	4%	4%0	4%	3%	3%	0%	7 %0	0%	3%	3%	190	13%
Downloads																								
M/M	-3%	-19%	21%	-26%	-9%	19%	15%	6%	-10%	-3%	-18%	15%	0%	-6%	3%	5%	-3%	3%	2%	-4%	-8%	5%	-13%	19%
Y/Y	3%	-19%	-4%	-18%	-24%	-5%	8%	4%	4%	-9%	-28%	-24%	-21%	-9%	-22%	11%	19%	3%	-8%	-17%	-16%	-10%	-4%	-1%
DAUs	370	-5/0	<del>-4</del> /0	-10%	-Z <del>1</del> 70	-5/0	0.70	4 70	7 /0	-5/0	-20 /0	-Z+ /0	-21/0	-5/0	-22/0	11/0	13/0	J //0	-070	-17 70	-10/0	-10-/0	<del>-4</del> /0	- 1 70
M/M	1%	0%	0%	0%	-1%	0%	0%	1%	1%	1%	0%	0%	1%	0%	1%	1%	1%	0%	0%	1%	0%	1%	0%	0%
Y/Y	13%	12%	10%	8%	5%	4%	4%	5%	5%	5%	5%	4%	4%	4%	5%	6%	8%	8%	8%	8%	7%	7%	7%	7%
1/1	13%	12 70	10-/0	070	570	4 /0	4 70	J 70	J 1/0	J-/0	J //0	7 /0	4 /0	4 /0	J //0	0.70	0.70	0.70	070	0 //0	7 /0	7 70	7 70	/ /0

Source: Sensor Tower, BofA Global Research

### Exhibit 10: Worldwide Download and DAU trends – Online Media (cont.) Monthly Sensor Tower estimates for Online media apps

	Jan-	Feb-	Mar-	Apr-	May-	Jun-		Aug-	Sep-	Oct-	Nov-	Dec-	Jan-	Feb-	Mar-	Apr-	May-	Jun-	Jul-	Aug-	Sep-	Oct-	Nov-	Dec-
Online Media	22	22	22	22	22	22	22	22	22	22	22	22	23	23	23	23	23	23	23	23	23	23	23	23
N Downloads																								
M/M	6%	-7%	12%	3%	-9%	-15%	10%	-2%	-2%	16%	4%	-6%	8%	-18%	3%	0%	9%	-19%	11%	-4%	-24%	13%	-12%	1%
Y/Y	-8%	-8%	7%	18%	-9%	-13%	-7%	-13%	-2% -4%	-8%	-8%	-0% 5%	8%	-5%	-13%	-16%	1%	-3%	-2%	-4%	-24%	-27%	-39%	-35%
DAUs	-070	-070	7 70	1070	-370	-1470	-770	-1370	-470	-070	-070	370	070	-570	-1370	-1070	170	-570	-270	-470	-20%	-27 70	-3370	-55%
M/M	2%	0%	1%	-1%	0%	-1%	0%	-1%	1%	1%	1%	-4%	-1%	-2%	-1%	0%	0%	-1%	0%	-3%	-5%	0%	-2%	-2%
Y/Y	16%	15%	8%	4%	0%	-2%	0%	1%	2%	2%	3%	-1%	-3%	-6%	-7%	-6%	-6%	-6%	-7%	-9%	-15%	-15%	-18%	-16%
Threads	10 70	1370	070	470	070	-2.70	070	1 70	270	270	370	-170	-570	-070	-7 70	-0 70	-070	-0 70	-7 70	-570	-1570	-1370	-1070	-1070
Downloads																								
M/M																				-71%	-27%	-37%	-2%	162%
Y/Y																			'	7 1 70	21 /0	31 /0	2 /0	102 /0
DAUs																								
M/M																				-40%	-12%	22%	-18%	32%
Y/Y																				10 /0	12 /0	22 /0	10 /0	32 10
Roblox																								
Downloads																								
M/M	2%	-19%	0%	2%	-8%	1%	25%	-7%	-10%	5%	-7%	26%	13%	-6%	-4%	0%	1%	-2%	23%	-11%	-9%	6%	-6%	27%
Y/Y	32%	13%	3%	14%	4%	0%	11%	1%	-16%	-24%	-6%	1%	11%	28%	24%	21%	33%	30%	28%	21%	22%	23%	24%	25%
DAUs																								
M/M	2%	-2%	-4%	0%	-4%	7%	10%	1%	0%	3%	-3%	5%	6%	3%	-5%	4%	-2%	6%	12%	1%	-8%	2%	1%	6%
Y/Y	43%	29%	13%	10%	2%	7%	9%	5%	9%	8%	10%	15%	19%	25%	23%	27%	31%	31%	33%	32%	22%	20%	25%	27%
Discord																								
Downloads																								
M/M	15%	-17%	0%	-7%	-3%	-3%	4%	2%	-6%	0%	-6%	8%	10%	-10%	4%	-4%	-4%	3%	10%	-4%	-9%	0%	0%	9%
Y/Y	-12%	-12%	-14%	-19%	-24%	-24%	-18%	-26%	-16%	-18%	-16%	-16%	-19%	-13%	-9%	-5%	-6%	-1%	5%	-2%	-5%	-6%	0%	1%
DAUs																								
M/M	4%	2%	-1%	0%	-2%	1%	-1%	-1%	1%	4%	1%	0%	2%	1%	1%	1%	-1%	1%	0%	0%	-1%	1%	2%	0%
Y/Y	36%	31%	19%	14%	9%	9%	9%	6%	5%	7%	6%	6%	4%	3%	5%	6%	7%	8%	9%	10%	9%	6%	6%	6%
Twitch																								
Downloads																								
M/M	23%	-21%	-8%	-7%	-14%	8%	16%	-4%	-14%	11%	-10%	-5%	26%	-13%	2%	-13%	1%	20%	23%	-14%	-15%	10%	0%	8%
Y/Y	-19%	-20%	-28%	-27%	-36%	-29%	-18%	-20%	-14%	-7%	-12%	-30%	-28%	-21%	-12%	-18%	-2%	9%	15%	2%	2%	2%	13%	28%
DAUs																								
M/M	13%	-1%	-9%	-2%	-5%	1%	3%	-1%	-4%	-1%	-3%	-5%	8%	3%	-4%	-3%	0%	0%	3%	-1%	-8%	-2%	1%	2%
Y/Y	9%	4%	-12%	-18%	-21%	-18%	-13%	-12%	-9%	-9%	-9%	-14%	-18%	-14%	-10%	-10%	-5%	-5%	-6%	-6%	-10%	-11%	-7%	0%

Source: Sensor Tower, BofA Global Research





### **Exhibit 11: Worldwide Download and DAU trends – eCommerce**Monthly Sensor Tower estimates for eCommerce apps

eCommerce	Jan- 22	Feb- 22	Mar- 22	Apr- 22	May- 22	Jun- 22	Jul- 22	Aug- 22	Sep- 22	Oct- 22	Nov- 22	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
Amazon Shopping			ZZ		22	22	22			22	ZZ		23	2.5	2.3	2.5	2.5	2.5	23	2.3	23	23	23	23
Downloads																								
M/M	4%	-10%	13%	-15%	12%	13%	-6%	26%	10%	2%	-15%	1%	-14%	-22%	11%	-11%	-2%	1%	21%	-9%	-3%	23%	0%	-19%
Y/Y	-16%	-5%	12%	15%	21%	27%	26%	53%	62%	44%	32%	30%	8%	-7%	-8%	-4%	-16%	-25%	-4%	-30%	-39%	-27%	-13%	-31%
DAUs																								
M/M	1%	-7%	0%	0%	0%	1%	6%	-2%	4%	-1%	-1%	2%	-1%	-5%	1%	2%	1%	1%	7%	-2%	-4%	13%	-6%	-3%
Y/Y	14%	12%	4%	4%	2%	-3%	5%	3%	8%	-2%	0%	1%	-1%	1%	2%	4%	5%	6%	6%	5%	-2%	13%	8%	3%
eBay																								
Downloads																								
M/M	-3%	-6%	11%	-9%	0%	-4%	6%	6%	-4%	3%	1%	-5%	8%	-15%	3%	-6%	6%	-7%	8%	-1%	-1%	7%	0%	9%
Y/Y	-33%	-26%	-23%	-13%	-14%	-19%	-11%	-3%	-2%	-3%	0%	-6%	5%	-5%	-12%	-10%	-4%	-7%	-5%	-11%	-8%	-5%	-6%	7%
DAUs																								
M/M	0%	-4%	-3%	-1%	-2%	-1%	0%	1%	0%	-2%	2%	0%	1%	-2%	-1%	-2%	-1%	1%	1%	1%	-3%	-2%	5%	1%
Y/Y	-8%	-6%	-13%	-13%	-13%	-11%	-8%	-9%	-9%	-8%	-10%	-9%	-8%	-7%	-5%	-5%	-4%	-3%	-3%	-3%	-5%	-5%	-3%	-2%
Etsy																								
Downloads	7.50/	70/	40/	00/	701	501	00/	E0/	<b>5</b> 0/	00/	0.50/	00/	270/	100/	70/	F0/	70/	501	40/	501	201	70/	201	001
M/M	-16%	-7%	4%	9%	-7%	6%	9%	5%	-5%	9%	26%	0%	-17%	-13%	7%	-5%	-1%	-6%	4%	6%	2%	7%	9%	0%
Y/Y	33%	43%	42%	63%	48%	65%	45%	48%	33%	35%	42%	30%	28%	20%	23%	7%	14%	1%	-3%	-3%	4%	2%	-12%	-12%
DAUs	00/	Ε0/	20/	10/	20/	20/	20/	Ε0/	20/	10/	1.40/	F0/	100/	Ε0/	10/	10/	10/	20/	00/	10/	10/	10/	120/	Ε0/
M/M Y/Y	-8% 49%	-5%	-2% 31%	1%	-3% 25%	-3% 25%	3% 25%	5% 23%	3% 23%	1%	14%	5%	-10% 7%	-5% 7%	-1% 8%	-1%	-1%	3%	0%	1%	-1%	1%	13%	5%
	49%	43%	31%	27%	25%	25%	25%	25%	25%	20%	15%	10%	7%	7%	0%	6%	8%	14%	11%	6%	1%	1%	1%	1%
<b>Chewy</b> Downloads																								
M/M	23%	1%	8%	-13%	7%	-4%	3%	-6%	-1%	6%	-3%	-5%	29%	-7%	24%	1%	1%	-15%	-15%	16%	-14%	5%	2%	-8%
Y/Y	-47%	-33%	-22%	-24%	-20%	-23%	-33%	-19%	23%	14%	9%	11%	16%	7%	23%	44%	36%	20%	-1%	22%	5%	5%	11%	7%
DAUs	17 /0	<i>33 1</i> 0	22 /0	21/0	20 /0	25 /0	<i>33 1</i> 0	1370	25 /0	1170	3 /0	11/0	10 /0	7 70	25 /0	1170	50 /0	20 /0	1 /0	22 /0	370	370	1170	7 70
M/M	4%	-2%	-4%	-1%	-3%	0%	-2%	-3%	-1%	0%	-3%	-3%	6%	-2%	4%	2%	-1%	-3%	-2%	3%	-4%	1%	1%	-5%
Y/Y	-23%	-22%	-23%	-21%	-24%	-23%	-27%	-24%	-19%	-20%		-17%	-16%	-16%	-9%	-6%	-4%	-7%	-7%	-1%	-4%	-3%	0%	-2%
Temu						/-		, , ,			,.	,-			- ,-	- , -	.,.	. ,-		. , -	.,-			
Downloads																								
M/M										206%	325%	1%	51%	22%	10%	31%	112%	-10%	4%	12%	4%	11%	-5%	-3%
Y/Y																					7969%	2828%	557%	535%
DAUs																								
M/M										374%	378%	55%	47%	69%	39%	39%	45%	27%	20%	7%	13%	5%	11%	4%
Y/Y																					45133%	9974%	2242%	1471%
Wayfair																								
Downloads					_							_					_							
M/M	47%	-7%	-12%	0%	-4%	-17%	6%	-3%	-5%	20%	6%	-5%	34%	-32%	1%	15%	-1%	23%	-3%	7%	-26%	11%	25%	-21%
Y/Y	-25%	-11%	-27%	-20%	-9%	18%	29%	9%	15%	18%	-2%	14%	4%	-24%	-13%	-1%	3%	52%	39%	53%	19%	10%	29%	7%
DAUs																								
M/M	7%	-12%	-8%	1%		-10%	-7%	-11%	25%	-2%	21%	-17%	26%	-17%	-11%	3%	4%	5%	8%	-15%	8%	-4%	24%	-24%
Y/Y	-21%	-15%	-31%	-35%	-35%	-35%	-33%	-40%	-24%	-23%	-22%	-22%	-8%	-12%	-15%	-13%	-8%	8%	25%	19%	3%	1%	4%	-5%

Source: Sensor Tower, BofA Global Research

**Exhibit 12: Worldwide Download and DAU trends – eCommerce (cont.)**Monthly Sensor Tower estimates for eCommerce apps

M/M	Jan-	Feb-	Mar-	Apr-	May-	Jun-	Jul-	Aug-	Sep-	Oct-	Nov-	Dec-	Jan-	Feb-	Mar-	Apr-	May-	Jun-	Jul-	Aug-	Sep-	Oct-	Nov-	Dec-
Name	 22	22	22	22	22	22	22	22	22	22	22	22	23	23	23	23	23	23	23	23	23	23	23	23
MAM																								
YY Als   Als   M/M	210/	210/	270/	020/	200/	2.40/	150/	100/	1.00/	10/	250/	1.00/	20/	110/	220/	220/	200/	1.40/	270/	2000/	470/	220/	700/	250/
MMM 88% 29% -19% 34% 17% 67% 7% 119% 16% 59% -13% -7% -19% 44% -15% 89% 67% -1% 119% 17% 47% 17% 58% 29% 89% 18% 18% 18% 18% 89% 18% 88% 71% 34% 14% 14% 48 9% 13% 34% 34% 34% 34% 34% 34% 34% 34% 34% 3																				209%	-47%	-33%	78%	-35%
MMM 886 2396 1996 3496 1796 1049 1169 1649 1559 15296 839 8696 719 3496 1196 1496 1496 996 1136  Arrayana  Doverloads  MMM 1596 4496 22386 5-96 2196 3-39 1096 5296 3796 2896 2296 1306 596 596 396 1096 1096 1196 1196 3786  AMM 1996 1996 1196 1196 1996 2296 3796 3796 3496 3496 2896 2496 1996 1696 1696 1996 1996 1196 1996 2196 2996 3796 3496 2896 2496 1996 1696 1696 1996 1996 1996 1196 2196 2	21%	11/%	1/%	153%	19/%	149%	165%	2/9%	293%	150%	44%	/0%	44%	-2%	20%	-20%	-1/%	-6%	4%	174%	26%	-16%	101%	55%
TYY 17% 58% 25% 80% 106% 106% 106% 164% 159% 152% 83% 86% 71% 34% 41% 14% 44% 94% 13% 547% 547% 547% 547% 547% 547% 547% 547	00/	220/	100/	2.40/	170/	C0/	70/	110/	1.00/	Ε0/	120/	70/	10/	40/	150/	00/	C0/	10/	110/	1050/	170/	F20/	210/	150/
Downloads   19%   19%   19%   19%   19%   19%   19%   21%   29%   35%   35%   35%   37%   28%   28%   29%   13%   9%   5%   -10%   19%   19%   24%   321%   34%																- , -				105%	-17%	-52% -32%	21%	-15%
Downloads	17%	58%	25%	80%	106%	104%	116%	164%	195%	152%	83%	86%	/1%	34%	41%	14%	4%	9%	13%	108%	49%	-32%	-6%	-14%
MMM																								
YY	150/	40/	220/	En/	210/	20/	100/	E0/	100/	En/	100/	100/	120/	100/	100/	120/	00/	1E0/	En/	1.40/	120/	20/	00/	40/
AUS MMM						- ,-														14% -31%	-13% -34%	2% -36%	-9% -29%	4% -18%
MM	19%	19%	11%	19%	44%	52%	35%	3/%	26%	23%	13%	9%	5%	-9%	-10%	-24%	-51%	-40%	-3/%	-51%	-34%	-30%	-29%	-10%
TYY	E0/	70/	70/	10/	00/	20/	E0/	20/	20/	10/	En/	60/	20/	10/	10/	20/	10/	40/	70/	10/	4%	20/	40/	10/
Double   D							- 1-					- ,-						.,.		1% -21%	-16%	-3% -20%	-4% -19%	-1% -15%
Downloads M/M 8% 22% 28% 2% 26% -10% 6% 32% 7% 7% 2% -13% 0% 2% 49% -14% 9% -9% -5% 20AUs 27896 219% 121% 60% 6% -10% 13% 80% 20% 44% 64% 63% 52% 26% 47% 23% 82% 84% 66% 20AUs M/M 2% 8% 10% 7% -10% 14% 34% 22% 35% 41% 46% 46% 40% 49% 36% 58% 57% 54% 20AUs 20	2/%	31%	19%	21%	29%	3/%	34%	34%	20%	24%	19%	10%	14%	3%	-190	-3%	-12%	-10%	-20%	-21%	-10%	-20%	-19%	-15%
M/M 896 2296 2896 296 -2696 -1096 696 3296 796 796 296 -1396 096 296 4996 -1496 996 -996 5-96 YYY 27896 21996 12196 60% 696 -1096 1396 8096 2096 4446 6396 5296 2696 4796 2396 8296 8496 6696 DAULS M/M 296 886 1096 796 -1096 -1196 016 11196 796 796 296 -296 1196 496 1796 -296 496 -296 -196 Y/Y 5196 5396 5196 3996 1996 1096 1496 3496 2296 3596 4196 4696 4096 4996 3696 5896 5796 5496 DOODDASH DOONDASH DOWNLOADS M/M 596 -1896 996 -496 -396 -296 996 -11196 -496 1196 -596 11196 0196 -1996 -896 896 -1796 -1296 496 -896 Y/Y 4296 3596 2298 1996 1796 1196 896 4496 396 396 296 -1966 -1196 -1196 1196 1996 -1996 -1996 296 -1966 296 496 W/Y 4296 3596 2298 1996 1796 1196 896 496 396 496 496 496 496 496 496 496 496 496 4																								
Y/Y         278%         219%         121%         60%         6%         -10%         13%         80%         20%         44%         63%         52%         26%         47%         23%         82%         84%         66%           DAUS           M/M         2%         8%         10%         7%         -10%         0%         11%         7%         7%         2%         -2%         11%         4%         17%         -2%         4%         -2%         -1%           M/M         51%         53%         51%         39%         19%         10%         14%         34%         22%         35%         41%         46%         46%         40%         49%         36%         58%         57%         54%           Downloads         M/M         5%         -18%         -9%         -2%         9%         -11%         -4%         11%         -16%         -11%         -11%         -18%         -9%         -8%         -8%         -17%         10%         -4%         -8%           DAUS         40         -2%         -3%         -2%         -4%         11%         -1%         -11%         -11%         -11%         -11% <td>90%</td> <td>220%</td> <td>200/2</td> <td>20%</td> <td>260%</td> <td>100%</td> <td>60%</td> <td>370%</td> <td>70%</td> <td>70%</td> <td>20%</td> <td>130%</td> <td>00%</td> <td>20%</td> <td>400%</td> <td>1.40%</td> <td>Ω0/6</td> <td>Ω0/2</td> <td>50%</td> <td>10%</td> <td>16%</td> <td>-12%</td> <td>-23%</td> <td>-13%</td>	90%	220%	200/2	20%	260%	100%	60%	370%	70%	70%	20%	130%	00%	20%	400%	1.40%	Ω0/6	Ω0/2	50%	10%	16%	-12%	-23%	-13%
DAUS M/M 2% 8% 10% 7% -10% -1% 0% 11% 7% 7% 2% -2% 1% 4% 17% -2% 4% -2% -1% Y/Y 51% 53% 51% 39% 19% 10% 14% 34% 22% 35% 41% 46% 46% 40% 49% 36% 58% 57% 54%  Dowrloads M/M 5% -18% 9% -4% -3% -2% 9% -11% -4% 11% -5% 11% 0% -7% 10% -7% 10% -13% 2% 7% 49% Y/Y 17% -17% -18% -14% -13% -11% -11% -12% -21% -16% -11% -11% -14% -19% -8% -8% -8% -17% -12% -4% -8% DAUS M/M 3% -2% 0% 0% 0% -2% -4% 11% 8% 44% 39% 3% 11% 11% -3% 3% 2% -1% 2% -1% 2% 6% 49% Wber Eats Downloads M/M -6% -14% 12% -5% -6% -10% 5% -2% -4% 6% -9% -2% -4% 6% -9% -2% -2% -2% -1% -2% -23% -1% -2% -2% -2% -1% -3% -3% -2% -1% -1% -1% -1% -1% -1% -1% -2% -2% -2% -2% -2% -2% -2% -2% -2% -2																		- /-		39%		23%		
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PYY 51% 53% 51% 39% 19% 10% 14% 34% 22% 35% 41% 46% 46% 40% 49% 36% 58% 57% 54% 54% 50xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	20%	90%	100%	70%	100%	10%	00%	110/	70%	70%	20%	20%	10%	10%	170%	20%	10%	20%	10%	4%	11%	-3%	-9%	-14%
Downloads   Down																				45%	50%	37%	22%	7%
Downloads  M/M  5% -18% 9% -4% -3% -2% 9% -11% -4% 1% -5% 11% 0% -7% 10% -13% 2% 7% 4% Y/Y  -17% -18% -14% -13% -11% -11% -12% -21% -16% -11% -11% -11% -19% -8%  DAUS  M/M  3% -2% 0% 0% 0% -2% 4% 1% 1% 3% 3% 3% 1% 1% 5% 1% 3% 2% -1% 2% 6% 4%  Y/Y  42% 35% 22% 19% 17% 11% 8% 4% 3% 3% 3% 1% 1% 5% -10% 5% 2% -1% 2% 6% 4%  Uber Eats  Downloads  M/M  -6% -14% 12% -5% -6% -10% 5% -2% -4% 6% -9% 6% -4% -10% 5% -2% -1% -3% 8%  Y/Y  31% -32% -28% -23% -29% -26% -21% -22% -23% -19% -21% -25% -23% -20% -25% -23% -10% -10%  DAUS  M/M  -6% -14% 12% -5% -2% -4% 5% -2% -4% 6% -9% 6% -4% -10% 5% -2% -1% -3% 8%  M/M  -6% -14% 12% -5% -2% -2% -2% -2% -2% -2% -2% -1% -25% -23% -20% -25% -23% -10% -13% -11%  DAUS  M/M  -2% -3% -5% -2% -4% -5% -2% -2% -2% -2% -2% -2% -2% -2% -2% -2	31%	33%	31%	39%	19%	10%	14%	34%	22%	33%	41%	40%	40%	40%	49%	30%	36%	3/%	34%	45%	30%	3/%	22%	7 %0
M/M																								
Y/Y         -17%         -18%         -14%         -13%         -11%         -12%         -21%         -16%         -11%         -11%         -19%         -8%         -8%         -8%         -17%         -12%         -8%         DAUS           M/M         39%         -2%         0%         0%         -2%         -4%         1%         -1%         3%         -4%         5%         -1%         4%         0%         -3%         0%         1%         0%         0%         1%         0%         0%         -4%         5%         -4%         5%         -4%         1%         -1%         3%         2%         -1%         4%         0%         -3%         3%         1%         1%         -3%         3%         2%         -1%         2%         6%         4%           Uber Eats           Downloads         M/M         -6%         -14%         12%         -5%         -6%         -10%         5%         -2%         -4%         6%         -9%         6%         -4%         -10%         5%         -2%         -2%         -2%         -2%         -2%         -2%         -2%         -2%         -2%         -2%	50%	190%	Ω0/2	40%	30%	20%	Ω0/6	110/	40%	10%	50%	110/	00%	70%	100%	120%	20%	70%	40%	-2%	-4%	1%	-1%	24%
DAUS  M/M  3% -2% 0% 0% -2% -4% 1% 1% -1% 1% 3% -4% 5% -1% 44% 0% -3% 0% 1% 0% 0% -3% 0% 1% 0% 0% 1% 0% 0% 1% 0% 0% 1% 0% 0% 1% 0% 0% 1% 0% 0% 1% 0% 0% 1% 0% 0% 1% 0% 0% 1% 0% 0% 1% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%									- 112											1%	1%	0%	5%	18%
M/M Y/Y 42% 35% 22% 19% 17% 11% 8% 4% 3% 3% 1% 1% 1% -3% 3% 2% -1% 2% 6% 4%  Uber Eats  Downloads M/M Y/Y -31% -32% -28% -23% -29% -26% -21% -22% -23% -19% -21% -25% -23% -20% -25% -23% -19% -16% -13% -11%  DAUS M/M Y/Y -31% -32% -36% -5% -5% -18% -21% -20% -20% -20% -18% -20% -21% -22% -21% -22% -21% -22% -21% -20% -21% -20% -21% -20% -21% -20% -21% -20% -21% -20% -21% -20% -21% -20% -21% -20% -21% -20% -21% -20% -21% -20% -21% -20% -21% -20% -21% -20% -21% -20% -21% -20% -21% -23% -20% -20% -16% -16% -13% -10% -8%  Instacart  Downloads M/M 22% -36% -8% 9% 16% 0% 10% -11% -7% 1% 2% 12% -10% -14% 10% 2% 1% 49% 2% Y/Y 21% -12% -5% 6% 33% 44% 49% 14% 9% 13% 9% -5% -30% -5% 13% 6% -8% -5% -12%  DAUS  DAUS	17 /0	10 /0	17/0	13/0	11/0	11/0	12 /0	21/0	10 /0	11/0	11/0	17/0	13/0	0 /0	0 /0	17 /0	12 /0	7 /0	0 /0	1 /0	1 /0	0 /0	370	10 /0
Y/Y 42% 35% 22% 19% 17% 11% 8% 4% 3% 3% 1% 1% 1% -3% 3% 2% -1% 2% 6% 4% 4% 4% 4% 4% 4% 4% 3% 3% 1% 1% 1% -3% 3% 2% -1% 2% 6% 4% 4% 4% 4% 49% 14% 9% 13% 9% -5% -30% -5% 13% 6% -8% -5% -5% -12% DAUS  M/M	30%	-7%	00%	0%	-7%	-10%	1%	-1%	10/6	30%	-/10/6	5%	-1%	10%	0%	-30%	Ω%	1%	∩%	-5%	4%	-1%	0%	3%
Uber Eats  Downloads  M/M  -6% -14% 12% -5% -6% -10% 59% -2% -4% 6% -9% 6% -4% -10% 59% -29% -19% -11% -3% 8% Y/Y  -31% -32% -28% -23% -29% -26% -21% -22% -23% -19% -21% -25% -23% -20% -25% -23% -19% -19% -11%  DAUS  M/M  -2% -3% -5% -2% -4% -5% -2% -2% -2% 2% 0% -5% 3% -5% 2% -1% -1% 0% -2% 0% Y/Y  -6% -1% -15% -15% -18% -21% -20% -20% -18% -20% -21% -21% -23% -20% -16% -16% -13% -10% -8%   Instacart  Downloads  M/M  -2% -36% -8% 99% 16% 0% 10% -11% -7% 1% 2% 12% -10% -14% 10% 2% 19 4% 2% Y/Y  -21% -12% -5% 6% 33% 44% 49% 14% 99% 13% 99% -5% -30% -5% 13% 6% -8% -5% -12% -12% -12% -12% -12% -12% -12% -12										- /-	. , .									1%	3%	0%	4%	2%
Downloads  M/M  -6% -14% 12% -5% -6% -10% 5% -2% -4% 6% -9% 6% -4% -10% 5% -29% -1% -3% 8%  Y/Y  -31% -32% -28% -23% -29% -26% -21% -22% -23% -19% -25% -23% -20% -25% -23% -19% -11%  DAUS  M/M  -2% -3% -5% -2% -4% -5% -2% -2% -2% 2% 0% -5% 3% -5% 2% -1% -1% 0% -2% 0%  Y/Y  -6% -1% -15% -15% -18% -21% -20% -20% -18% -20% -21% -21% -23% -20% -16% -16% -13% -10% -8%  Instacart  Downloads  M/M  22% -36% -8% 9% 16% 0% 10% -11% -7% 1% 2% 12% -10% -14% 10% 2% 1% 4% 2%  Y/Y  21% -12% -5% 6% 33% 44% 49% 14% 9% 13% 9% -5% -30% -5% 13% 6% -8% -5% -12%  DAUS	12 /0	33 /0	22 /0	13 /0	17 /0	1170	0 /0	1 /0	570	5 /0	1 /0	1 /0	270	570	2 /0	1 /0	2 /0	0 /0	1 /0	1 70	5 /0	0 /0	1 /0	2 /0
M/M																								
Y/Y -31% -32% -28% -23% -29% -26% -21% -22% -23% -19% -21% -25% -23% -20% -25% -23% -19% -13% -11%  DAUs M/M -2% -3% -5% -2% -4% -5% -2% -2% -2% 2% 0% -5% 3% -5% 2% -1% -1% -1% 0% -2% 0% Y/Y 6% -1% -15% -15% -18% -21% -20% -20% -18% -20% -21% -21% -23% -20% -16% -16% -13% -10% -8%  Instacart  Downloads M/M 22% -36% -8% 9% 16% 0% 10% -11% -7% 1% 2% 12% -10% -14% 10% 2% 1% 4% 2% Y/Y 21% -12% -5% 6% 33% 44% 49% 14% 9% 13% 9% -5% -30% -5% 13% 6% -8% -5% -12%  DAUs	-6%	-14%	12%	-5%	-6%	-10%	5%	-2%	-4%	6%	-9%	6%	-4%	-10%	5%	-2%	-1%	-3%	8%	-5%	-1%	7%	-4%	3%
DAUs M/M																	-	- /-	- /-	-14%	-11%	-10%	-6%	-9%
M/M	3.70	32 70	20 /0	23 /0	23 70	20 70	2.70	22 /0	23 /0	.5 ,6	2170	25 /6	25 /6	20 /0	25 70	25 /6	13 /0	.5 ,6	, 0	, 0	,0	1070	0,0	3 70
Y/Y 6% -1% -15% -15% -18% -21% -20% -20% -18% -20% -21% -21% -23% -20% -16% -16% -13% -10% -8%  Instacart  Downloads  M/M 22% -36% -8% 9% 16% 0% 10% -11% -7% 1% 2% 12% -10% -14% 10% 2% 1% 4% 2% Y/Y 21% -12% -5% 6% 33% 44% 49% 14% 9% 13% 9% -5% -30% -5% 13% 6% -8% -5% -12%  DAUs	-2%	-3%	-5%	-2%	-4%	-5%	-2%	-2%	2%	0%	-5%	3%	-5%	2%	-1%	-1%	0%	-2%	0%	-4%	1%	2%	-2%	-1%
Instacart   Downloads   M/M																				-10%	-12%	-11%	-9%	-12%
Downloads  M/M  22% -36% -8% 9% 16% 0% 10% -11% -7% 1% 2% 12% -10% -14% 10% 2% 1% 4% 2% Y/Y  21% -12% -5% 6% 33% 44% 49% 14% 9% 13% 9% -5% -30% -5% 13% 6% -8% -5% -12% DAUs	0 70	. 70	.5 70	.5,6	.0,0		20 /0	20 /0	.070	20,0	2.70	2.70	25 ,6	20 ,0	.0,0	.0,0	.5 ,0	.0,0	0,0	.0,0	.2,0	,		.2,0
M/M 22% -36% -8% 9% 16% 0% 10% -11% -7% 1% 2% 12% -10% -14% 10% 2% 1% 4% 2% Y/Y 21% -12% -5% 6% 33% 44% 49% 14% 9% 13% 9% -5% -30% -5% 13% 6% -8% -5% -12% DAUs																								
Y/Y 21% -12% -5% 6% 33% 44% 49% 14% 9% 13% 9% -5% -30% -5% 13% 6% -8% -5% -12% DAUs	22%	-36%	-8%	9%	16%	0%	10%	-11%	-7%	1%	2%	12%	-10%	-14%	10%	2%	1%	4%	2%	-1%	-9%	4%	-9%	14%
DAUs												-								-2%	-5%	-2%	-13%	-11%
	2170	.2 /3	5,0	5 /5	33 /3	. 173	.5 ,6	. 1 /0	3 70	.5 70	3 73	5,0	3370	5,0	.5 /0	370	0,0	5 /0	.2 70	2 /0	5,0	2 /0	.5 /0	. 1 70
M/M 18% -10% -11% -1% -5% -3% 1% 1% -4% 2% 1% 2% 2% 1% 0% -7% -2% 2% -3%	18%	-10%	-11%	-1%	-5%	-3%	1%	1%	-4%	2%	1%	2%	2%	1%	0%	-7%	-2%	2%	-3%	4%	0%	0%	7%	3%
Y/Y 42% 30% 16% 24% 28% 27% 24% 12% 4% 0% -3% -11% -23% -13% -3% -8% -5% 0% -4%						- ,-							-						- ,-	-1%	4%	1%	7%	7%

Source: Sensor Tower, BofA Global Research





### **Exhibit 13: Worldwide Download and DAU trends – Subscription**Monthly Sensor Tower estimates for Subscription apps

	Jan-	Feb-	Mar-	Apr-	May-	Jun-	Jul-	Aug-	Sep-	Oct-	Nov-	Dec-	Jan-	Feb-	Mar-	Apr-	May-	Jun-	Jul-	Aug-	Sep-	Oct-	Nov-	Dec-
Subscription	22	22	22	22	22	22	22	22	22	22	22	22	23	23	23	23	23_	23	23	23	23	23	23	23
Netflix																								
Downloads																								
M/M	3%	-19%	2%	-1%	-4%	-1%	14%	-5%	-10%	5%	-4%	30%	-2%	-23%	5%	-4%	2%	5%	10%	-8%	-8%	2%	-6%	15%
Y/Y	-4%	-1%	-3%	1%	-9%	-7%	3%	-3%	-24%	-26%	-9%	-1%	-5%	-9%	-6%	-9%	-3%	4%	1%	-2%	0%	-2%	-4%	-14%
DAUs																								
M/M	2%	-7%	-6%	-1%	-3%	3%	3%	-2%	-6%	-1%	0%	5%	1%	-7%	-5%	-2%	0%	1%	1%	-2%	-3%	-1%	-1%	4%
Y/Y	10%	7%	-2%	-4%	-7%	-8%	-7%	-7%	-15%	-19%	-13%	-12%	-13%	-13%	-12%	-13%	-10%	-12%	-13%	-13%	-11%	-11%	-12%	-13%
Peloton																								
Downloads																					_			
M/M	66%	-48%	-12%	-1%	0%	10%	-8%	5%	-19%	23%	9%	16%	31%	-40%	-5%	-3%	4%	77%	4%	-7%	-23%	22%	-5%	51%
Y/Y	-44%	-48%	-55%	-41%	-4%	10%	-2%	-9%	-27%	-4%	-27%	0%	-22%	-9%	-1%	-2%	2%	64%	85%	64%	55%	53%	33%	75%
DAUs																								
M/M	11%	-10%	2%	-1%	-3%	1%	-3%	-1%	-4%	3%	-1%	-1%	4%	-6%	-1%	0%	0%	6%	-2%	1%	-3%	5%	-3%	9%
Y/Y	2%	-4%	-6%	-3%	-3%	-3%	-3%	-5%	-8%	-2%	-11%	-6%	-11%	-8%	-10%	-10%	-8%	-3%	-2%	0%	0%	2%	0%	9%
Duolingo																								
Downloads																								
M/M	29%	-13%	9%	-7%	-3%	2%	11%	27%	-5%	-13%	-2%	7%	37%	-9%	-9%	-10%	3%	4%	19%	16%	-2%	-16%	5%	-4%
Y/Y	31%	40%	50%	60%	40%	34%	33%	36%	39%	32%	35%	35%	44%	51%	26%	22%	29%	33%	43%	30%	35%	31%	40%	25%
DAUs																								
M/M	20%	4%	3%	2%	-1%	4%	6%	7%	1%	-2%	2%	5%	16%	5%	1%	1%	1%	4%	5%	8%	2%	5%	5%	2%
Y/Y	31%	34%	37%	44%	46%	47%	45%	45%	51%	54%	56%	60%	54%	56%	52%	50%	54%	56%	54%	56%	57%	68%	74%	69%

Source: Sensor Tower, BofA Global Research

**Exhibit 14: Worldwide Download and DAU trends – Subscription (cont.)** Monthly Sensor Tower estimates for Subscription apps

	Jan-	Feb-	Mar-	Apr-	May-	Jun-	Jul-	Aug-	Sep-	Oct-	Nov-	Dec-	Jan-	Feb-	Mar-	Apr-	May-	Jun-	Jul-	Aug-	Sep-	Oct-	Nov-	Dec-
Subscription	22	22	22	22	22	22	22	22	22	22	22	22	23	23	23	23	23_	23	23	23	23	23	23_	23
Tinder																								
Downloads																								
M/M	8%	-1%	1%	-8%	-2%	-3%	5%	1%	-2%	-1%	0%	-2%	5%	-13%	7%	3%	3%	0%	5%	-9%	-4%	-1%	-7%	-1%
Y/Y	-10%	2%	1%	-4%	-11%	-9%	-7%	-9%	-2%	-8%	-7%	-5%	-8%	-19%	-14%	-3%	1%	5%	4%	-6%	-8%	-8%	-14%	-12%
DAUs																								
M/M	4%	-1%	-1%	0%	-1%	-1%	0%	-1%	0%	-3%	0%	-2%	2%	-2%	-3%	0%	-2%	0%	-3%	-1%	-2%	0%	0%	-1%
Y/Y	3%	3%	-2%	-3%	-4%	-6%	-5%	-5%	-3%	-7%	-6%	-6%	-8%	-10%	-11%	-11%	-11%	-11%	-13%	-13%	-15%	-13%	-12%	-12%
Hinge																								
Downloads		_																						
M/M	7%	-18%	2%	5%	0%	5%	13%	5%	2%	9%	-5%	5%	10%	-9%	12%	-4%	1%	3%	15%	-5%	7%	-3%	-5%	-4%
Y/Y	29%	19%	28%	34%	27%	33%	44%	43%	37%	38%	22%	31%	34%	50%	64%	49%	50%	47%	49%	35%	42%	26%	26%	14%
DAUs																								
M/M	8%	0%	-1%	1%	0%	3%	-1%	1%	1%	0%	4%	-1%	6%	2%	0%	0%	0%	6%	-2%	0%	0%	2%	1%	1%
Y/Y	29%	30%	22%	26%	24%	22%	20%	17%	18%	16%	20%	17%	15%	17%	17%	16%	16%	20%	19%	18%	17%	18%	15%	17%
Bumble																								
Downloads																								
M/M	15%	-14%	14%	-6%	11%	4%	4%	9%	-5%	5%	6%	-13%	9%	8%	-5%	2%	-1%	6%	0%	-3%	2%	0%	0%	-6%
Y/Y	21%	2%	45%	38%	43%	56%	41%	43%	34%	41%	58%	28%	22%	53%	28%	38%	22%	24%	20%	7%	15%	9%	3%	11%
DAUs																								
M/M	6%	-2%	-1%	4%	1%	2%	5%	1%	1%	0%	1%	0%	4%	1%	0%	1%	1%	2%	0%	-1%	-1%	0%	-1%	-2%
Y/Y	30%	22%	14%	17%	16%	16%	19%	19%	19%	18%	19%	20%	18%	21%	22%	19%	19%	18%	13%	10%	8%	7%	5%	3%
Match																								
Downloads																								
M/M	19%	-17%	6%	-2%	8%	-1%	2%	0%	-2%	-1%	-11%	-6%	24%	-22%	-4%	-6%	9%	7%	-2%	8%	-1%	-6%	-8%	-4%
Y/Y	-34%	-22%	-24%	-20%	-9%	-4%	-9%	-7%	-2%	0%	-7%	-9%	-4%	-10%	-19%	-23%	-22%	-16%	-19%	-13%	-12%	-16%	-13%	-12%
DAUs																								
M/M	3%	-4%	-2%	0%	0%	-1%	-1%	-1%	-2%	-1%	-2%	-3%	4%	-4%	-3%	0%	-1%	0%	-1%	1%	0%	-1%	-1%	-3%
Y/Y	-20%	-18%	-21%	-18%	-18%	-16%	-16%	-16%	-15%	-13%	-14%	-12%	-11%	-11%	-12%	-12%	-13%	-12%	-12%	-10%	-9%	-9%	-8%	-8%
Badoo																								
Downloads																								
M/M	6%	-17%	-14%	4%	22%	-5%	6%	-1%	-8%	18%	-16%	4%	9%	-18%	15%	-2%	1%	1%	8%	3%	-8%	7%	-11%	-1%
Y/Y	-21%	-28%	-47%	-42%	-32%	-25%	-20%	-21%	-22%	-11%	-18%	-9%	-7%	-8%	22%	15%	-4%	1%	4%	8%	7%	-3%	4%	-2%
DAUs																								
M/M	-1%	-5%	-4%	0%	0%	-2%	1%	-2%	-3%	-1%	-3%	0%	2%	-3%	-1%	-1%	-1%	1%	1%	0%	-9%	2%	1%	0%
Y/Y	0%	-6%	-16%	-17%	-15%	-14%	-11%	-13%	-16%	-17%	-21%	-18%	-16%	-14%	-12%	-13%	-14%	-11%	-11%	-10%	-16%	-13%	-9%	-9%
Source: Consor Tower			1073	17 /3	15,0	1170	11,0	15 /0	10 /0	17,0	21,0	10 ,0	10,0	11,0	12 /0	15 /3	11,0	1173	11,0	10,0	10 /0	15 ,0	3 73	3 /0

Source: Sensor Tower, BofA Global Research





### **Exhibit 15: Worldwide Download and DAU trends – Travel and Transportation**Monthly Sensor Tower estimates for Travel and Transportation apps

Travel	Jan- 22	Feb- 22	Mar- 22	Apr- 22	May- 22	Jun- 22	Jul- 22	Aug- 22	Sep- 22	Oct- 22	Nov-	Dec- 22	Jan- 23	Feb- 23	Mar- 23	Apr- 23	May- 23	Jun- 23	Jul- 23	Aug- 23	Sep- 23	Oct- 23	Nov-	Dec- 23
Airbnb	ZZ	ZZ	ZZ	22	22	ZZ	22	ZZ	ZZ	ZZ	ZZ	ZZ	25	23	23	2.5	23	23	23	23	23	23	23	23
Downloads																								
M/M	2%	-12%	13%	3%	23%	-4%	16%	-8%	-17%	-3%	2%	-3%	30%	-17%	3%	-3%	10%	6%	14%	-10%	-1%	-1%	-3%	11%
Y/Y	44%	45%	30%	45%	46%	32%	39%	50%	35%	16%	15%	6%	35%	29%	18%	11%	-1%	9%	7%	4%	24%	26%	20%	37%
DAUs	1170	15 /0	30 70	15 /0	10 /0	32 10	33 70	30 /0	33 /0	10 /0	13 /0	0 70	33 /0	25 /0	10 /0	1170	1 /0	3 70	7 70	170	2170	20 /0	20 /0	31 10
M/M	4%	4%	-1%	7%	2%	2%	8%	2%	-8%	-2%	-6%	0%	14%	0%	2%	6%	0%	3%	9%	-2%	-11%	-3%	-7%	3%
Y/Y	45%	40%	24%	32%	13%	5%	6%	9%	12%	13%	10%	10%	21%	17%	19%	19%	17%	18%	18%	14%	10%	9%	9%	12%
Booking.com																								
Downloads																								
M/M	6%	-3%	17%	8%	10%	1%	19%	-13%	-28%	2%	10%	11%	21%	-14%	3%	-8%	8%	7%	10%	-9%	-19%	-4%	-6%	12%
Y/Y	47%	52%	48%	70%	46%	20%	23%	15%	8%	6%	23%	34%	53%	35%	19%	2%	0%	6%	-2%	3%	14%	8%	-8%	-8%
DAUs																								
M/M	7%	4%	3%	10%	0%	7%	10%	1%	-17%	-4%	-5%	2%	12%	-1%	3%	5%	0%	5%	12%	1%	-14%	-4%	-4%	2%
Y/Y	96%	85%	80%	92%	38%	20%	11%	10%	8%	7%	11%	17%	23%	17%	17%	11%	11%	9%	11%	11%	15%	15%	16%	16%
Expedia																								
Downloads																								
M/M	17%	22%	26%	6%	20%	11%	13%	-4%	-22%	-9%	-12%	6%	27%	-6%	10%	-10%	-10%	13%	16%	-9%	-12%	-2%	5%	0%
Y/Y	63%	95%	58%	47%	62%	40%	71%	121%	125%	86%	58%	84%	100%	54%	34%	15%	-14%	-13%	-11%	-16%	-5%	2%	22%	15%
DAUs																								
M/M	4%	2%	4%	5%	3%	6%	6%	4%	2%	2%	1%	1%	4%	1%	2%	3%	-1%	4%	3%	0%	0%	0%	2%	-2%
Y/Y	69%	66%	38%	38%	21%	13%	12%	19%	32%	40%	46%	47%	48%	46%	43%	40%	35%	33%	29%	24%	22%	20%	22%	19%
Tripadvisor																								
Downloads																								
M/M	10%	-11%	17%	6%	9%	5%	15%	-3%	-27%	-5%	-7%	9%	14%	-16%	17%	2%	2%	4%	16%	-3%	-22%	-6%	-15%	8%
Y/Y	22%	27%	32%	61%	32%	7%	-7%	-5%	-7%	-5%	1%	9%	14%	7%	7%	3%	-3%	-4%	-4%	-5%	1%	0%	-9%	-9%
DAUs																								
M/M	4%	6%	-2%	15%	-4%	4%	13%	6%	-23%	-5%	-11%	-2%	7%	1%	0%	9%	-5%	1%	15%	5%	-19%	-6%	-10%	-2%
Y/Y	16%	21%	25%	44%	5%	-9%	-14%	-17%	-13%	-14%	-10%	-5%	-2%	-7%	-5%	-10%	-11%	-13%	-11%	-13%	-8%	-8%	-7%	-7%
Vrbo																								
Downloads	700/	150/	250/	1.00/	110/	70/	110/	1.00/	200/	70/	C0/	270/	7.40/	2.40/	Ε0/	00/	100/	70/	120/	150/	250/	20/	100/	2.40/
M/M	76%	15%	25%	-16%	-11%	-7%	11%	-16%	-29%	-7%	-6%	27%	74%	-34%	5%	-8%	-19%	7%	12%	-15%	-25%	-3%	-10%	24%
Υ/Υ	16%	38%	33%	44%	37%	11%	37%	69%	43%	14%	17%	31%	29%	-26%	-38%	-33%	-39%	-29%	-28%	-27%	-22%	-20%	-23%	-25%
DAUs	15%	16%	100/	9%	40/	20/	20/	-5%	-10%	-6%	-7%	20/	12%	-3%	40/	2%	-5%	10/	20/	-6%	-7%	-5%	60/	10/
M/M Y/Y	15%	27%	19% 33%	43%	4% 44%	2% 39%	2% 48%	-5% 52%	45%	-6% 42%	-/% 41%	-2% 37%	12% 34%		4% -2%	-9%	-5%	1% -18%	-2% -21%	-6%	-19%	-5%	-6% -16%	-1% -16%
Y/Y  Source: Sonsor Town			22%	45%	44%	39%	40%	52%	45%	42%	41%	3/%	34%	11%	-2%	-9%	-17%	-10%	-21%	-21%	-19%	-17%	-10%	-10%

Source: Sensor Tower, BofA Global Research

### **Exhibit 16: Worldwide Download and DAU trends – Travel and Transportation (cont.)**Monthly Sensor Tower estimates for Travel and Transportation apps

	Jan-	Feb-	Mar-	Apr-	Mav-	Jun-	Jul-	Aug-	Sep-	Oct-	Nov-	Dec-	lan-	Feb-	Mar-	Apr-	May-	Jun-	Jul-	Aug-	Sep-	Oct-	Nov-	Dec-
Travel	22	22	22	22	22	22	22	22	22	22	22	22	23	23	23	23	23	23	23	23	23	23	23	23
Uber																								
Downloads																								
M/M	-25%	1%	22%	-3%	6%	-4%	5%	-1%	-1%	3%	-11%	21%	-13%	-10%	9%	-4%	6%	6%	5%	-5%	-1%	1%	-6%	13%
Y/Y	-1%	7%	23%	37%	35%	21%	13%	4%	5%	1%	-6%	4%	22%	8%	-3%	-4%	-4%	6%	7%	3%	3%	0%	6%	-1%
DAUs																								
M/M	-19%	15%	7%	2%	1%	-2%	0%	1%	2%	0%	-3%	6%	-8%	6%	1%	0%	2%	3%	0%	1%	3%	1%	0%	3%
Y/Y	11%	22%	33%	43%	38%	27%	20%	19%	18%	11%	5%	6%	20%	11%	6%	3%	5%	10%	10%	9%	10%	12%	15%	12%
Lyft																								
Downloads																								
M/M	-15%	0%	25%	-11%	-3%	1%	8%	2%	-5%	3%	-13%	6%	-10%	-4%	14%	-5%	5%	7%	11%	3%	-3%	4%	-10%	3%
Y/Y	11%	15%	7%	3%	-8%	-10%	-9%	-5%	-7%	-2%	-5%	-8%	-3%	-7%	-15%	-10%	-3%	3%	6%	7%	10%	10%	13%	9%
DAUs																								
M/M	-15%	15%	11%	-1%	2%	-2%	1%	2%	2%	3%	-7%	-3%	-5%	6%	6%	-1%	2%	2%	0%	3%	0%	3%	-4%	-6%
Y/Y	49%	58%	52%	43%	29%	10%	10%	7%	10%	7%	4%	6%	19%	9%	3%	3%	3%	8%	7%	9%	7%	7%	9%	6%

Source: Sensor Tower, BofA Global Research





## **Exhibit 17: Worldwide Download and DAU trends – Real Estate**Monthly Sensor Tower estimates for Real Estate apps

D. 15.44	Jan-	Feb-	Mar-	Apr-	May-	Jun-	Jul-	Aug-	Sep-	Oct-	Nov-	Dec-	Jan-	Feb-	Mar-	Apr-	May-	Jun-	Jul-	Aug-	Sep-	Oct-	Nov-	Dec-
Real Estate Zillow	22	22	22	22	22	22	22	22	22	22	22	22	23	23	23	23	23	23	23	23	23	23	23	23
Downloads																								
M/M	23%	-19%	12%	-6%	-6%	-2%	11%	-5%	-16%	-4%	-14%	9%	33%	-15%	15%	-6%	-2%	10%	8%	-9%	-14%	2%	-8%	-2%
Y/Y	-7%	-17%	-13%	-14%	-18%	-17%	-13%	-11%	-22%	-25%	-28%	-22%	-16%	-12%	-10%	-9%	-5%	5%	2%	-3%	-14%	6%	13%	1%
DAUs	-7 70	-1770	-1370	-1470	-1070	-1770	-1370	-1170	-22%	-23%	-20%	-2270	-1070	-1270	-10%	-370	-570	3%	270	-570	- 170	070	1370	170
	13%	0%	2%	40/	-3%	-2%	1%	40/	-7%	40/	-6%	-3%	12%	-2%	2%	0%	10/	1%	-1%	40/	-9%	-1%	-7%	-3%
M/M Y/Y		23%	2% 9%	4% 9%	-5% 9%	-2% 6%	4%	-4% 2%	-7%	-4% -7%		-5% -9%					1%		-12%	-4%				
	28%	23%	9%	9%	9%	6%	4%	2%	-2%	-/%	-10%	-9%	-10%	-12%	-12%	-15%	-12%	-10%	-12%	-12%	-13%	-11%	-12%	-12%
Redfin																								
Downloads	260/	20/	220/	70/	100/	601	00/	00/	7.40/	100/	200/	250/	CE0/	120/	40/	20/	20/	10/	120/	00/	150/	00/	100/	200/
M/M	26%	3%	23%	7%	-10%	-6%	0%	0%	-14%	-19%	-29%	26%	65%	-12%	4%	2%	-3%	-1%	13%	-9%	-15%	-8%	-19%	20%
Y/Y	-30%	2%	8%	24%	8%	10%	7%	21%	5%	-7%	-33%	-8%	19%	2%	-15%	-19%	-12%	-9%	3%	-6%	-7%	6%	20%	15%
DAUs																								
M/M	14%	1%	2%	0%	-4%	-5%	-5%	1%	-2%	-10%	-9%	-3%	14%	2%	2%	0%	-2%	1%	-1%	-4%	-8%	-5%	-6%	-2%
Y/Y	16%	13%	4%	1%	-2%	-2%	-5%	-6%	-8%	-21%	-22%	-20%	-20%	-19%	-19%	-19%	-18%	-13%	-9%	-14%	-19%	-15%	-12%	-12%
Opendoor																								
Downloads																								
M/M	39%	-11%	16%	15%	-1%	-10%	-7%	27%	-10%	-12%	-25%	-3%	48%	-21%	1%	-13%	-9%	-30%	44%	-30%	5%	1%	-30%	36%
Y/Y	8%	46%	56%	74%	61%	39%	9%	19%	25%	0%	-14%	1%	7%	-5%	-18%	-38%	-43%	-56%	-32%	-62%	-56%	-49%	-53%	-35%
DAUs																								
M/M	8%	-2%	3%	5%	0%	-1%	-4%	9%	3%	24%	-8%	-15%	7%	-8%	-2%	-4%	6%	3%	10%	-7%	4%	9%	11%	-38%
Y/Y	-23%	-31%	-16%	-2%	-1%	0%	-4%	3%	11%	35%	30%	20%	19%	11%	5%	-3%	3%	7%	22%	4%	4%	-9%	10%	-20%

Source: Sensor Tower, BofA Global Research

### **Exhibit 18: Worldwide Download and DAU trends – Search** Monthly Sensor Tower estimates for Search apps

	Jan-	Feb-	Mar-	Apr-	May-	Jun-		Aug-		Oct-	Nov-	Dec-	Jan-	Feb-	Mar-	Apr-	May-	Jun-	Jul-	Aug-	Sep-	Oct-	Nov-	Dec-
Search	22	22	22	22	22	22	22	22	22	22	22	22	23	23	23	23	23	23	23	23	23	23	23	23
Google																								
Downloads																								
M/M	-7%	-14%	12%	-5%	8%	23%	6%	12%	0%	19%	-14%	-5%	11%	-16%	17%	-6%	4%	-11%	7%	7%	-3%	3%	-5%	-2%
Y/Y	-9%	-12%	-16%	-8%	-2%	23%	35%	41%	47%	71%	52%	30%	56%	52%	60%	59%	53%	11%	12%	7%	4%	-10%	-1%	2%
DAUs																								
M/M	1%	0%	0%	0%	-1%	0%	0%	1%	1%	1%	1%	0%	0%	1%	1%	1%	1%	-1%	0%	0%	1%	1%	0%	0%
Y/Y	16%	14%	9%	8%	6%	4%	4%	3%	3%	3%	4%	3%	2%	3%	3%	4%	6%	6%	6%	5%	5%	5%	4%	4%
Bing																								.,.
Downloads																								
M/M	-83%	-3%	48%	-3%	-18%	23%	90%	-20%	13%	143%	-3%	-38%	8%	652%	-3%	12%	43%	23%	-25%	26%	-18%	42%	-5%	-17%
Y/Y	-8%	25%	-22%	43%	40%	-4%	106%	121%		390%	262%	-42%	273%	2786%	1788%	2074%	3695%	3708%	1411%	2300%	1640%	917%	895%	1233%
DAUs	0 70	23 /0	22 /0	15 70	10 70	1 /0	10070	12170	10170	330 10	202 /0	12 /0	2/3/0	27 00 70	17 00 70	207 170	303370	37 00 70	111170	2500 /0	10 10 70	317 /0	03370	1233 /0
M/M	-1%	-2%	0%	-2%	0%	2%	3%	1%	-8%	7%	6%	2%	7%	81%	52%	17%	17%	15%	6%	19%	7%	17%	8%	1%
Y/Y	16%	21%	9%	5%	5%	12%	24%	28%	11%	15%	22%	8%	16%	115%	227%	288%	357%	416%	431%	525%	626%	689%	706%	695%
ChatGPT	10 /0	21/0	270	370	<i>J</i> /0	12 /0	27 /0	20 /0	1170	1370	22 /0	0 /0	10 /0	115/0	221 /0	200 /0	331 10	71070	- 1 /U	J2J /0	020 /0	0007/0	70070	05570
Downloads																								
M/M																		228%	-13%	37%	15%	5%	15%	-5%
Y/Y																		220%	-13%	3/%	13%	3%	13%	-5%
DAUs																		2020/	200/	400/	220/	600/	200/	170/
M/M																		292%	30%	49%	33%	60%	28%	17%
Y/Y																								

Source: Sensor Tower, BofA Global Research





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