

# Internet/e-Commerce

# Travel data update: Intl demand trends still strong, US mixed y/y but stable

Industry Overview

## Intl destinations are still the place to be

August travel data metrics suggest still strong Intl trends, especially in Asia, with some softening around the edges. In the US, air volumes have improved vs 2Q, while hotel data remains sluggish y/y. Travel app metrics have slowed y/y, and AirDNA August data suggested deceleration in ADR growth even as nights booked y/y growth accelerated in August'23. Overall, travel remains resilient, and we are not seeing any major deviations or surprises in the data.

## US mixed, lodging card spend growth slowed in August

In the US, we think our BAC US aggregated credit and debit card spending data (bookings) is a better indicator of leisure travel intentions than RevPAR (a trailing indicator). For August, BAC card spend for Airlines improved to +9% y/y vs 6% in July, while lodging spend slowed to 7% vs 16% in July. For 3Q23 QTD, BAC card data spend for Airlines vs 2019 shows average spend grew 7%, decelerating vs +10% in 2Q, while lodging spend 3Q23 QTD spend grew 12%, decelerating vs 18% in 2Q.

# Intl RevPAR still healthy, but growth slowing through 3Q

BofA lodging analyst Shaun Kelley estimates Aug'23, US RevPAR was up a still sluggish 2% y/y (stable vs 1% y/y in July), European RevPAR growth was at 13% y/y (vs +17% y/y in July), and Asia ex-China RevPAR grew at +24% y/y (vs 36% y/y in July). China y/y August'23 RevPAR growth decelerated to 29% (vs +31% y/y in July). For 3QTD, RevPAR y/y growth is decelerating through the quarter across most regions, but International RevPAR continues to outperform domestic, with the recovery led by APAC.

# Airline bookings: 3Q y/y volumes improve vs 2Q

According to our Airlines analyst's, Andrew Didora, system net sales growth for 3QTD averaged at 8% y/y (vs 6.7% in 2Q) on volumes up 9.3% y/y and prices down 1.2% y/y. Domestic volumes have improved to 6% y/y QTD vs 1% last quarter, while Intl volumes have been stable in mid-teens. In recent weeks, Intl volumes have slowed, see <u>latest</u> <u>airline bookings report</u>,

# We think travel growth will slow in 2024

Overall, we see a relatively strong summer travel season winding down, and expect Asia travel to remain strong (China reopening), while Europe seems likely to decelerate. We continue to favor eCommerce over Online travel (one-year outlook), based on our view that eCommerce spend is depressed (especially home and discretionary) and travel is likely to slow after this summer. Uber remains our top stock for travel/transportation, and we think that Buy-rated Expedia has an attractive return profile given a FCF multiple below 10x.

#### 13 September 2023

Equity United States

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ADR - Average Daily Rate

AA – Alternative Accommodation

NA - North America

OTA – Online Travel Agency

RevPAR – Revenue per Available Room

MTD – Month to date

QTD – Quarter to date

3P - 3<sup>rd</sup> Party

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Refer to important disclosures on page 8 to 11. Analyst Certification on page 7. Price
Objective Basis/Risk on page 6.

# **Travel Data Update**

Below we show several data points for the travel & Online travel industry which may be helpful in addition to ongoing updates from BofA's Airlines and Lodging teams.

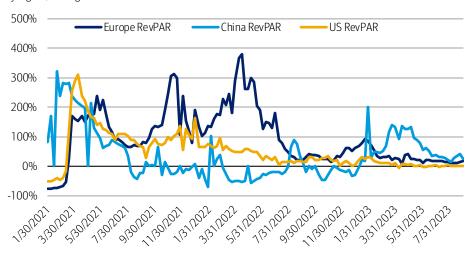
#### **RevPAR**

#### International growth still strong, with some 3Q deceleration

In Aug'23, US RevPAR growth was 2% y/y (stable vs 1% y/y in July), European RevPAR growth was 13% y/y (vs +17% y/y in July), and Asia ex-China RevPAR grew at +24% y/y (vs 36% y/y in July). China y/y August'23 RevPAR growth decelerated to 29% (vs +31% y/y in July). Read full RevPAR report by our lodging analysts here - Lodging: Weekly RevPAR: US +2%, EU +18%, APAC +19%, China +24% Y/Y 11 September 2023

#### Exhibit 1: RevPAR y/y growth trends

By region, through week ended 09/02/2023



Source: BofA Global Research, STR

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# BAC aggregated credit and debit card data

**Aug y/y spend mixed**: For Aug'23, BAC aggregated credit and debit card data spending for Airlines showed average spend growth at 9% vs 2019, compared to 6% vs 2019 in July. BAC card data spend for lodging in Aug'23 shows an average growth of 7% vs 2019, compared to July at 16% vs 2019. On y/y basis, both airline and lodging spend growth in August saw deceleration vs July.

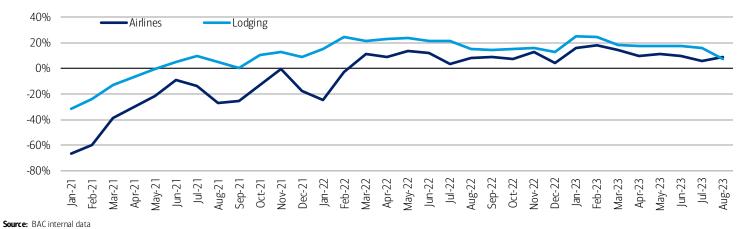
**Growth vs 2019 decelerates:** The charts below illustrate y/y changes (vs. 2019 levels) in BAC aggregated credit and debit card spending data on airlines and lodging through August 2023. For 3Q23 QTD, BAC card data for **Airlines** spending shows average spend grew 7% vs. 2019, a deceleration vs +10% in 2Q23. On a y/y basis, BAC card data on Airlines spending is up 2% y/y in 3QTD vs down 1% in 2Q23. For **Lodging**, 3Q23 QTD BAC card data spend grew 12% vs 2019, decelerating vs 18% in 2Q23. On a y/y basis, BAC card data for Lodging spending was down 5% in 3QTD vs down 4% y/y in 2Q23.

See <u>BofA on USA: Keep calm and carry, dated 12 September 2023</u> report for methodology, limitations, and disclaimers related to BAC aggregated credit and debit card data.



#### Exhibit 2: BAC aggregated credit and debit card data for Airlines and Lodging spend vs. 2019 (up to Aug'23)

Monthly spend growth averages vs 2019 levels for Airlines was at 9% and Lodging at 7% in Aug'23



# US airline volume growth improves in 3Q, Intl stable

Domestic volumes are up 6% y/y QTD vs 1% last quarter, while Intl was stable in midteens. In recent weeks, Intl volumes have slowed, see report by our Airlines analyst here: Airlines: Bookings: System sales remain positive but pricing is getting weaker 11 September 2023

#### Exhibit 3: Latest booking trends and quarterly comparison

3Q23 net sales to date are +8% YoY, ahead of 2Q23

		Trailing 4-weeks ending				Latest Week					
	4/23/2023	5/28/2023	6/25/2023	7/23/2023	8/20/2023	9/3/2023	3Q22	4Q22	1Q23	2Q23	3Q23 to date
<u>System:</u>											
System Sales	14.9%	2.9%	1.2%	7.1%	10.6%	4.3%	112.6%	68.5%	73.1%	6.7%	8.0%
System Volumes	6.7%	5.1%	5.7%	10.3%	9.6%	7.2%	29.6%	16.5%	19.8%	5.9%	9.3%
System Price	7.7%	-2.1%	-4.2%	-2.9%	0.9%	-2.7%	64.0%	44.9%	43.0%	0.8%	-1.2%
Domestic:											
Domestic Sales	-2.8%	-9.5%	-6.5%	1.2%	5.9%	-0.9%	67.9%	40.7%	41.9%	-6.2%	2.9%
Domestic Volumes	0.4%	0.9%	1.2%	6.1%	6.2%	3.5%	17.7%	6.3%	9.4%	0.9%	5.7%
Domestic Price	-3.2%	-10.3%	-7.6%	-4.7%	-0.2%	-4.2%	42.2%	32.4%	28.7%	-7.0%	-2.7%
International:											
International Sales	34.6%	15.7%	8.8%	12.7%	15.0%	9.2%	186.4%	107.4%	112.8%	20.5%	12.9%
International Volumes	18.9%	12.5%	13.7%	17.7%	16.1%	14.2%	59.9%	39.6%	41.2%	15.1%	16.1%
International Price	13.3%	2.9%	-4.3%	-4.3%	-1.0%	-4.4%	79.8%	48.6%	48.5%	4.5%	-2.8%
Large Corporate:											
Large Corporate Sales	11.4%	-3.6%	-2.6%	0.3%	2.0%	-3.9%	169.1%	90.9%	91.2%	2.0%	0.4%
Large Corporate Volumes	6.8%	0.4%	0.5%	1.0%	0.5%	-2.3%	73.7%	38.0%	37.0%	2.7%	0.2%
Large Corporate Price	4.3%	-3.9%	-3.2%	-0.7%	1.5%	-1.6%	55.1%	38.5%	37.0%	-0.7%	0.2%
SME Corporate:											
SME Corporate Sales	24.6%	9.9%	7.0%	12.2%	17.2%	11.0%	138.6%	85.2%	89.0%	14.3%	14.0%
SME Corporate Volumes	16.5%	11.6%	11.9%	15.5%	16.7%	14.2%	51.4%	30.9%	33.3%	13.5%	15.6%
SME Corporate Price	7.0%	-1.6%	-4.4%	-2.9%	0.5%	-2.8%	57.7%	41.8%	40.5%	0.7%	-1.4%
<u>Leisure:</u>											
Leisure Sales	-4.1%	-8.7%	-9.0%	0.2%	1.5%	-6.3%	46.8%	26.5%	32.2%	-7.1%	-0.4%
Leisure Volumes	-7.5%	-3.3%	-1.6%	6.2%	2.6%	-0.2%	-4.0%	-7.8%	-3.4%	-4.2%	3.4%
Leisure Price	3.7%	-5.6%	-7.5%	-5.6%	-1.1%	-6.1%	52.7%	37.6%	35.6%	-2.9%	-3.7%

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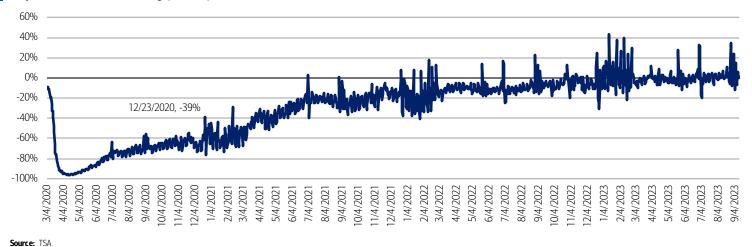
Source: ARC

# **TSA Traveler Throughput**

For 3Q'23TD, the average is at 102% of 2019 levels vs. 100% average in 2Q. For Sep'23TD, TSA throughput is approximately 105% vs 2019 levels (monthly average) stepping up from 103% vs 2019 in August and 99% in July. Strength in early Sept'23 trends was likely aided by Labor day holiday travel.

#### Exhibit 4: TSA throughput (vs. 2019, updated through 09/11/2023)

Daily data travel shows TSA throughput in Sep'23(TD) is 105% vs 2019



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# Office occupancy still below 50%

According to Kastle's 10-city Back to Work Barometer, office occupancy was around 47% for the week ended 09/06. Office occupancy has mostly hovered around 47% for the last few weeks.

## Exhibit 5: US office occupancy rates: Kastle

Office occupancy was at 47% (avg. for week ended 09/06)



Source: Kastle, Bloomberg

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# Travel app metrics - mixed OTA trends

Sensor Tower's travel app August data suggests that Travel/OTA downloads growth remained muted. **Airbnb** download growth decelerated 3pts to +3% y/y while DAUs decelerated 4pts to +15% y/y. **Booking** DLs grew 2% y/y (5pt m/m accel) while DAU growth was 11% y/y. **Expedia** DLs decel'd 5pts to -15% y/y on a 52pt tougher comp, while DAUs grew 23% (6pt decel vs July on 8pt tougher comp). **Vrbo** DLs were stable at -29% y/y while DAUs remained under pressure at -22% y/y.

#### Exhibit 6: Worldwide Download and DAU trends - Online Travel and Transportation

 $Monthly\,Sensor\,Tower\,estimates\,of\,online\,travel\,and\,transportation\,applications\,under\,our\,coverage$ 

Travel	Nov-	Dec- 21	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
Airbnb	ZI	<u> </u>	ZZ	ZZ	ZZ	ZZ	ZZ		LL		ZZ			LL	23		23		25			23
Downloads																						
M/M	4%	5%	2%	-12%	13%	3%	23%	-4%	16%	-8%	-17%	-3%	2%	-2%	30%	-16%	3%	-3%	10%	6%	13%	-10%
Y/Y	66%	60%	44%	45%	30%	45%	47%	32%	39%	50%	36%	17%	15%	7%	35%	29%	18%	11%	-1%	9%	6%	3%
DAUs																						
M/M	-4%	0%	4%	4%	-1%	7%	2%	2%	8%	2%	-8%	-2%	-6%	0%	14%	0%	1%	6%	0%	3%	9%	-2%
Y/Y	41%	38%	45%	40%	25%	32%	13%	6%	6%	9%	12%	13%	11%	10%	21%	17%	19%	19%	17%	18%	19%	15%
Booking.com																						
Downloads																						
M/M	-5%	2%	6%	-2%	16%	7%	10%	1%	19%	-13%	-28%	2%	10%	11%	21%	-14%	3%	-8%	8%	8%	8%	-8%
Y/Y	60%	40%	47%	54%	48%	69%	46%	20%	23%	15%	8%	7%	23%	34%	54%	35%	20%	3%	0%	6%	-3%	2%
DAUs																						
M/M	-9%	-4%	8%	5%	3%	10%	0%	6%	9%	0%	-17%	-4%	-6%	2%	12%	-1%	4%	5%	1%	4%	12%	1%
Y/Y	93%	81%	93%	83%	78%	89%	36%	17%	9%	7%	6%	6%	9%	15%	19%	13%	14%	9%	9%	7%	10%	11%
Expedia																						
Downloads																						
M/M	4%	-8%	17%	23%	26%	6%	19%	10%	14%	-3%	-21%	-10%	-12%	6%	28%	-5%	11%	-11%	-10%	13%	16%	-8%
Y/Y	84%	62%	63%	97%	59%	50%	63%	39%	71%	123%	131%	87%	59%	84%	101%	55%	36%	14%	-14%	-11%	-10%	-15%
DAUs	201	001	401	00/	101	==/	201	601	<b>C</b> 0/	40/	20/	201	7.0/	201	•01		201	201		<b>5</b> 0/	201	00/
M/M	-3%	0%	4%	2%	4%	5%	3%	6%	6%	4%	2%	2%	1%	1%	4%	1%	2%	3%	-1%	5%	3%	0%
Y/Y	53%	60%	69%	66%	38%	38%	21%	13%	12%	20%	32%	40%	46%	47%	48%	46%	43%	40%	34%	33%	29%	23%
Vrbo																						
Downloads	70/	120/	700/	170/	250/	1.00/	110/	00/	110/	150/	200/	00/	C0/	250/	770/	220/	C0/	100/	200/	70/	120/	150/
M/M	-7%	12% 5%	78% 16%	17% 42%	25% 36%	-16%	-11% 39%	-8% 12%	11% 38%	-15% 72%	-28% 48%	-8% 16%	-6% 18%	25% 31%	77% 30%	-33%	6% -37%	-10% -33%	-20% -40%	7% -30%	12% -29%	-15% -29%
Y/Y DAUs	16%	5%	10%	42%	30%	46%	39%	12%	30%	72%	40%	10%	16%	31%	30%	-26%	-37%	-33%	-40%	-30%	-29%	-29%
M/M	-7%	1%	14%	17%	18%	10%	4%	2%	2%	-5%	-10%	-6%	-7%	-2%	12%	-3%	5%	2%	-5%	1%	-2%	-6%
Y/Y	10%	10%	16%	28%	33%	43%	44%	39%	48%	52%	45%	42%	42%	37%	34%	10%	-3%	-9%	-17%	-18%	-21%	-22%
Uber	10 /0	10 /0	10 /0	20 /0	33 70	15 70	1170	33 /0	10 /0	J2 /0	15 /0	12 /0	12 /0	37 10	5170	10 /0	570	3 /0	17 /0	10 /0	2170	22 /0
Downloads																						
M/M	-4%	9%	-25%	2%	21%	-3%	6%	-4%	5%	-1%	-1%	3%	-10%	21%	-12%	-9%	10%	-5%	6%	8%	5%	-5%
Y/Y	23%	22%	-1%	7%	24%	37%	35%	21%	14%	4%	6%	2%	-6%	4%	22%	9%	-2%	-3%	-3%	9%	8%	4%
DAUs																						
M/M	3%	5%	-20%	15%	7%	3%	1%	-2%	0%	1%	2%	0%	-3%	6%	-8%	6%	1%	0%	3%	3%	0%	1%
Y/Y	27%	27%	13%	25%	36%	47%	42%	31%	22%	22%	20%	12%	6%	7%	22%	12%	6%	4%	5%	10%	10%	10%
Lyft																						
Downloads																						
M/M	-10%	10%	-15%	2%	26%	-11%	-3%	0%	8%	3%	-5%	3%	-13%	4%	-10%	-3%	15%	-8%	5%	8%	10%	5%
Y/Y	36%	45%	11%	17%	10%	6%	-5%	-8%	-7%	-2%	-3%	1%	-2%	-7%	-2%	-6%	-14%	-11%	-3%	3%	6%	9%
DAUs																						
M/M	-4%	-4%	-15%	16%	12%	-1%	3%	-2%	1%	2%	2%	4%	-7%	-3%	-5%	6%	6%	-1%	2%	2%	0%	4%
Y/Y	58%	73%	50%	59%	54%	45%	30%	11%	11%	9%	12%	9%	6%	8%	22%	11%	5%	5%	5%	10%	9%	11%

Source: Sensor Tower

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#### **Exhibit 7: Stocks mentioned**

Rating and price summary

<b>BofA Ticker</b>	Bloomberg ticker	Company name	Price	Rating
EXPE	EXPE US	Expedia	US\$ 109.65	C-1-8
UBER	UBER US	Uber Technologies	US\$ 47.92	C-1-9

Source: BofA Global Research



#### Exhibit 6: Worldwide Download and DAU trends - Online Travel and Transportation

Monthly Sensor Tower estimates of online travel and transportation applications under our coverage

Travel

Nov-	Dec-	Jan-	Feb-	Mar-	Apr-	May-	Jun-	Jul-	Aug-	Sep-	Oct-	Nov-	Dec-	Jan-	Feb-	Mar-	Apr-	May-	Jun-	Jul-	Aug-
21	21	22	22	22	22	22	22	22	22	22	22	22	22	23	23	23	23	23	23	23	23

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#### Disclaimer

Selected Bank of America ("BAC") transaction data are used to inform the macroeconomic views expressed in this report and should be considered in the context of other economic indicators and publicly available information. In certain instances, the data August provide directional and/or predictive value. The data used are not comprehensive; they are based on aggregated and anonymized selections of BAC data and August reflect a degree of selection bias and limitations on the data available.

#### Methodology explained

Readers should be aware that although the BAC datasets utilized in our analysis represent a significant number of data points, they nevertheless present a degree of selection bias, including but not limited to income levels and geographies. In addition, the data is limited to debit and credit cards and does not include other payment methods such as cash or checks.

Data regarding merchants who receive payments are identified and classified by the Merchant Categorization Code (MCC) defined by financial services companies. The data are mapped using proprietary methods from the MCCs to the North American Industry Classification System (NAICS), which is also used by the Census Bureau, in order to classify spending data by subsector. Spending data August also be classified by other proprietary methods not using MCCs.

BAC data used in this report include spending from active US households (HHs) only. Spending from corporate cards are excluded.

Our methodology for calculating the growth rates for daily data: we calculate the %y/y growth rate and the 4-year % change by matching calendar days (Jan 1 2023 is matched to Jan 1 2022, and Jan 1, 2019, respectively). The % change is calculated based on the 7-day moving average of spending levels.

Unless otherwise noted, the monthly subsector data are adjusted to control for seasonality and other factors.

# Price objective basis & risk

#### Expedia (EXPE)

Our \$145 PO is based on a 50-50 blend of P/E and sum-of-the-parts valuations based on 2024 estimates. Our sum-of-the-parts valuation is based on a 8x EBITDA, and separate values for Trivago and assets. Our P/E valuation is based on 13x EPS. Our P/E multiple is within Expedia's historical ranges of forward EPS and a discount compared to Booking valuation given use of non-GAAP EPS.

Downside risks to our PO are 1) economic downturn or prolonged new wave virus



outbreak leading to fewer travel bookings, 2) competition traffic lowering the company's growth or margin opportunity, 3) more aggressive hotel direct booking initiatives 4) Google disintermediation, and 5) slowdown in VRBO growth post-pandemic.

#### Uber (UBER)

Our SOTP applies an EV/2024E Revenue valuation of 2.5x for Mobility, 3.0x revenue for Delivery, and 1.0x revenue for Freight, which are slight premiums to peers given potential network effects. Our SOTP valuation implies segment values of \$61bn for Mobility, \$44bn for Delivery, and \$5.5bn for Freight, which implies a Total Enterprise Value for Uber of \$110bn. Including assets we estimate a target market cap of \$110bn. Our Price Objective of \$53 is based on 2.1bn shares outstanding.

Downside risks are 1) multiple compression given macro economic exposure, 2) slowing user/revenue growth due to competitive initiatives from Lyft or DoorDash, 3) new competition from self-driving technology companies, and 4) new regulations, fees, and/or minimum wages.

# **Analyst Certification**

I, Justin Post, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

# **Special Disclosures**

BofA Securities is currently acting as financial adviser to Uber Technologies Inc in connection with Emirates Telecommunications Group Co PJSC's acquisition of a majority stake in the Super App spinout of Careem Networks FZ LLC, a subsidiary of Uber Technologies Inc, which was announced on April 10, 2023.



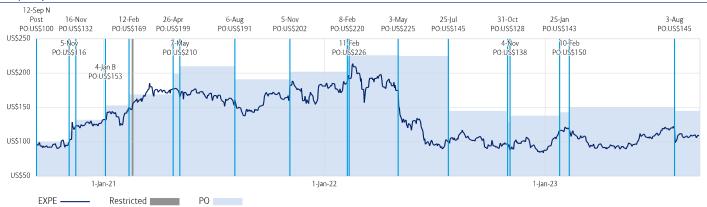
#### **US - Internet Coverage Cluster**

Investment rating	Company	Bof A Ticker	Bloomberg symbol	Analyst
BUY				
	Alphabet	GOOGL	GOOGL US	Justin Post
	Alphabet	GOOG	GOOG US	Justin Post
	Amazon.com	AMZN	AMZN US	Justin Post
	AppLovin	APP	APP US	Omar Dessouky, CFA
	Digital Turbine, Inc	APPS	APPS US	Omar Dessouky, CFA
	DoorDash	DASH	DASH US	Michael McGovern
	Expedia	EXPE	EXPE US	Justin Post
	Meta Platforms Inc	META	META US	Justin Post
	RH	RH	RH US	Curtis Nagle, CFA
	Roblox Corp. Class A	RBLX	RBLX US	Omar Dessouky, CFA
	Take-Two Interactive	TTWO	TTWO US	Omar Dessouky, CFA
	Uber	UBER	UBER US	Justin Post
	Vivid Seats	SEAT	SEAT US	Curtis Nagle, CFA
	Wayfair	W	W US	Curtis Nagle, CFA
	Zillow	ZG	ZG US	Curtis Nagle, CFA
	Zillow	Z	ZUS	Curtis Nagle, CFA
NEUTRAL				
	1stDibs.com	DIBS	DIBS US	Curtis Nagle, CFA
	Airbnb	ABNB	ABNB US	Justin Post
	Booking Holdings Inc	BKNG	BKNG US	Justin Post
	eBay	EBAY	EBAY US	Curtis Nagle, CFA
	Electronic Arts	EA	EA US	Omar Dessouky, CFA
	Etsy, Inc.	ETSY	ETSY US	Curtis Nagle, CFA
	Overstock.com Inc	OSTK	OSTK US	Curtis Nagle, CFA
	Peloton	PTON	PTON US	Justin Post
	Pinterest	PINS	PINS US	Justin Post
	Playtika	PLTK	PLTK US	Omar Dessouky, CFA
	Snap	SNAP	SNAP US	Justin Post
UNDERPERFORM				
	Lyft, Inc.	LYFT	LYFT US	Michael McGovern
	Opendoor Technologies	OPEN	OPEN US	Curtis Nagle, CFA
	Redfin Corp	RDFN	RDFN US	Curtis Nagle, CFA
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# **Disclosures**

# **Important Disclosures**

#### Expedia (EXPE) Price Chart

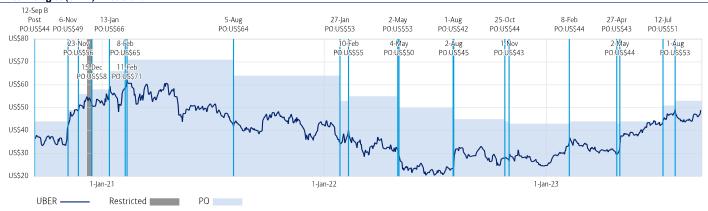


 $B: Buy, N: Neutral, U: Underperform, PO: Price \ Objective, NA: \ No \ longer \ valid, \ NR: \ No \ Rating$ 

The Investment Opinion System is contained at the end of the report under the heading "Fundamental Equity Opinion Key". Dark grey shading indicates the security is restricted with the opinion suspended. Medium grey shading indicates the security is under review with the opinion withdrawn. Light grey shading indicates the security is not covered. Chart is current as of a date no more than one trading day prior to the date of the report.



#### **Uber Technologies (UBER) Price Chart**



B: Buy, N: Neutral, U: Underperform, PO: Price Objective, NA: No longer valid, NR: No Rating

The Investment Opinion System is contained at the end of the report under the heading "Fundamental Equity Opinion Key". Dark grey shading indicates the security is restricted with the opinion suspended. Medium grey shading indicates the security is under review with the opinion withdrawn. Light grey shading indicates the security is not covered. Chart is current as of a date no more than one trading day prior to the date of the report.

#### Equity Investment Rating Distribution: Technology Group (as of 30 Jun 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships R1	Count	Percent
Buy	212	53.13%	Buy	103	48.58%
Hold	89	22.31%	Hold	45	50.56%
Sell	98	24.56%	Sell	30	30.61%

#### Equity Investment Rating Distribution: Global Group (as of 30 Jun 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships R1	Count	Percent
Buy	1877	53.28%	Buy	1040	55.41%
Hold	815	23.13%	Hold	464	56.93%
Sell	831	23.59%	Sell	385	46.33%

RI Issuers that were investment banking clients of BofA Securities or one of its affiliates within the past 12 months. For purposes of this Investment Rating Distribution, the coverage universe includes only stocks. A stock rated Neutral is included as a Hold, and a stock rated Underperform is included as a Sell.

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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>R2</sup>

Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

Ratings dispersions may vary from time to time where BofA Global Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

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