

Apple Inc.

Survey signals incoming iPhone refresh cycle and strong customer loyalty

Maintain Rating: BUY | PO: 225.00 USD | Price: 182.63 USD

Expect strong refresh cycle to take place in coming years

We update our global smartphone survey, conducted across the US, UK, China, and India. We saw an elongation of iPhone refresh cycle with 41% of respondents in Feb 24 (vs. 36% [from our last published report in Feb 22](#)) indicating intent to upgrade their phones every 4 or more years. However, we also noted a significant number of iPhone users using older iPhones, where 28% own an iPhone in the iPhone 13 family, 14% in the iPhone 12 family, and more than 35% in the iPhone 11 family or older (see Fig 10). We believe the installed base is due for an upgrade and anticipate a strong refresh cycle to take place over the next two years as Generative AI features start to take hold on smartphones. Maintain Buy given multi-year iPhone cycle driven by GenAI, strong services growth, and margin expansion.

Regained mindshare in China post initial Huawei success

In Sep–Oct 23, iPhone lost mindshare to Huawei in China but quickly regained its preferential status in the region (Fig 8). Customer loyalty for Apple remains strong with 57% of current iPhone users intending to buy an iPhone during their next upgrade, which compares to 55% for Samsung, 43% for Huawei and 33% for Xiaomi (Fig 9).

Early days for Vision Pro but appealing at a lower price

10% of respondents in the U.S. reported that they are planning on buying the Apple Vision Pro (vs. 8% in UK, 19% in China, and 33% in India). We gauged purchase interest for those that do not plan on buying the Vision Pro at current prices (to determine their desired price points). On average, China respondents have the highest price points of \$2,338 (~16,827 RMB) followed by UK respondents (\$2,124 or £1,673), US respondents (\$2,090), while India respondents have the lowest price point of \$1,741 (~144,333 INR).

Takeaways for Services and other Apple products

Avg. spending for Apple services increased in the US and the UK with users paying \$31.57 per month (vs. \$28.05 from previous report) in the US, and £24.70 (vs. £22.35 from previous report) in the UK, on average. Interest in Apple Services bundle grew in the US (37% reported interests vs. 34% in our previous report) and in the UK (33% reported interests vs. 32% in our previous report). Plans to upgrade the Apple Watch are highest in India (60%) followed by China (54%), the US (54%), and the UK (20%).

Estimates (Sep) (US\$)	2022A	2023A	2024E	2025E	2026E
EPS	6.11	6.13	6.70	7.59	8.16
GAAP EPS	6.12	6.12	6.70	7.59	8.16
EPS Change (YoY)	8.9%	0.3%	9.3%	13.3%	7.5%
Consensus EPS (Bloomberg)			6.60	7.16	7.79
DPS	0.90	0.94	0.99	1.04	1.09
Valuation (Sep)					
P/E	29.9x	29.8x	27.3x	24.1x	22.4x
GAAP P/E	29.8x	29.8x	27.3x	24.1x	22.4x
Dividend Yield	0.5%	0.5%	0.5%	0.6%	0.6%
EV / EBITDA*	21.4x	22.1x	20.6x	18.6x	17.7x
Free Cash Flow Yield*	3.9%	3.5%	3.6%	3.8%	4.1%

* For full definitions of *IQmethod*SM measures, see page 24.

28 February 2024

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Stock Data

Price	182.63 USD
Price Objective	225.00 USD
Date Established	18-Jan-2024
Investment Opinion	B-1-7
52-Week Range	143.90 USD - 199.62 USD
Mkt Val (mn) / Shares Out (mn)	2,823,806 USD / 15,461.9
Free Float	94.0%
Average Daily Value (mn)	9959.87 USD
BofA Ticker / Exchange	AAPL / NAS
Bloomberg / Reuters	AAPL US / AAPLOQ
ROE (2024E)	139.3%
Net Dbt to Eqty (Sep-2023A)	130.5%
ESGMeter™	High

ESGMeter is not indicative of a company's future stock price performance and is not an investment recommendation or rating. ESGMeter is independent of BofA Global Research's equity investment rating, volatility risk rating, income rating, and price objective for that company. For full details, refer to ["BofA ESGMeter Methodology"](#).

AI: Artificial Intelligence

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Timestamp: 28 February 2024 05:00AM EST

iQprofileSM Apple Inc.

iQmethodSM – Bus Performance*

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Return on Capital Employed	46.6%	47.5%	48.1%	47.7%	41.7%
Return on Equity	175.5%	171.9%	139.3%	111.3%	77.5%
Operating Margin	32.1%	31.8%	33.2%	33.4%	33.5%
Free Cash Flow	111,443	99,584	100,365	107,672	115,795

iQmethodSM – Quality of Earnings*

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Cash Realization Ratio	1.2x	1.1x	1.1x	1.1x	1.1x
Asset Replacement Ratio	1.0x	1.0x	1.0x	1.2x	1.2x
Tax Rate	16.2%	14.7%	16.0%	16.0%	16.0%
Net Debt-to-Equity Ratio	190.3%	130.5%	79.5%	44.1%	-2.0%
Interest Cover	NM	NM	NM	NM	NM

Income Statement Data (Sep)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Sales	394,328	383,285	396,240	434,681	455,001
% Change	7.8%	-2.8%	3.4%	9.7%	4.7%
Gross Profit	172,026	170,452	182,746	200,891	210,842
% Change	11.7%	-0.9%	7.2%	9.9%	5.0%
EBITDA	137,601	133,300	142,919	157,810	166,228
% Change	8.5%	-3.1%	7.2%	10.4%	5.3%
Net Interest & Other Income	(291)	(765)	(253)	(145)	128
Net Income (Adjusted)	99,803	96,995	103,600	114,933	120,936
% Change	5.4%	-2.8%	6.8%	10.9%	5.2%

Free Cash Flow Data (Sep)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Net Income from Cont Operations (GAAP)	105,764	103,187	110,214	121,922	128,277
Depreciation & Amortization	11,104	11,519	11,511	12,520	13,645
Change in Working Capital	1,200	(6,577)	(10,603)	(12,885)	(11,599)
Deferred Taxation Charge	895	0	0	0	0
Other Adjustments, Net	3,188	2,414	1,320	1,331	1,398
Capital Expenditure	(10,708)	(10,959)	(12,076)	(15,216)	(15,927)
Free Cash Flow	111,443	99,584	100,365	107,672	115,795
% Change	19.9%	-10.6%	0.8%	7.3%	7.5%
Share / Issue Repurchase	(89,402)	(77,550)	(77,139)	(76,000)	(43,000)
Cost of Dividends Paid	(14,841)	(14,875)	(15,366)	(15,735)	(16,172)
Change in Debt	(4,078)	(5,923)	0	0	0

Balance Sheet Data (Sep)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Cash & Equivalents	23,646	29,965	36,295	52,232	108,855
Trade Receivables	28,184	29,508	39,019	46,356	56,612
Other Current Assets	83,575	84,093	85,731	85,885	86,502
Property, Plant & Equipment	42,117	43,715	45,926	50,411	54,643
Other Non-Current Assets	175,233	165,302	166,138	166,707	167,281
Total Assets	352,755	352,583	373,109	401,590	473,892
Short-Term Debt	21,110	15,807	10,000	10,000	10,000
Other Current Liabilities	132,872	129,501	131,138	126,301	126,146
Long-Term Debt	98,959	95,281	95,088	95,088	95,088
Other Non-Current Liabilities	49,142	49,848	50,311	50,322	50,325
Total Liabilities	302,083	290,437	286,537	281,710	281,559
Total Equity	50,672	62,146	86,573	119,880	192,333
Total Equity & Liabilities	352,755	352,583	373,109	401,590	473,892

* For full definitions of iQmethodSM measures, see page 24.

Company Sector

IT Hardware

Company Description

Apple Inc. (AAPL) designs, manufactures, and markets consumer electronics and computers, and has developed its own proprietary iOS, Mac OS, tvOS and Watch OS operating systems and related software platform/ecosystem.

Revenues are principally derived from the iPhone line of smartphones, Services, hardware sales of the Macintosh family of notebook and desktop computers, iPad tablets, and wearables.

Investment Rationale

Our Buy rating on Apple is based on: 1) expected strong iPhone upgrade cycle in F25 driven by the need for latest hardware to enable Gen AI features, 2) higher growth in Services revenue, 3) higher margins from more internally developed silicon, 4) continuing capital returns, 5) AI features that can drive higher institutional ownership, and 6) risk around legal issues being manageable.

Stock Data

Average Daily Volume 54,535,768

Quarterly Earnings Estimates

	2023	2024
Q1	1.88A	2.18A
Q2	1.52A	1.52E
Q3	1.26A	1.36E
Q4	1.46A	1.64E

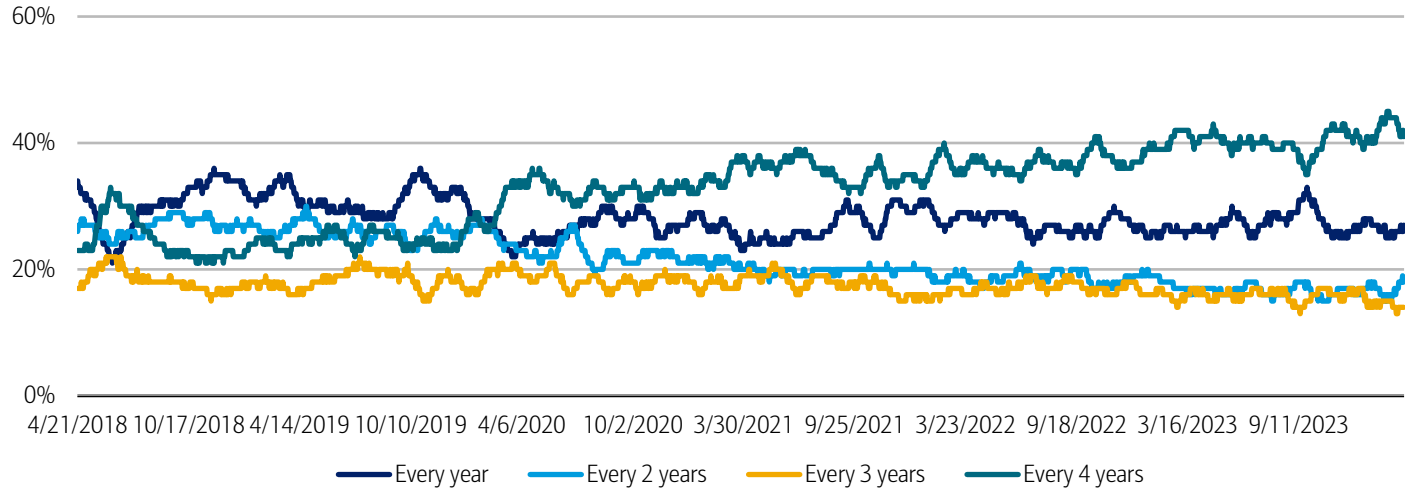
Discussion of survey results

Survey shows elongation of smartphone replacement cycle

Since the start of the COVID-19 pandemic, we had noted an increase in the percent of users answering “every 4 or more years” to the question “how often do you typically upgrade your smartphone”, corresponding with declines in all other answer options. This survey result suggests longer replacement cycles for smartphone upgrades.

Figure 1: How often do you typically upgrade your smartphone (Global) (Time series, 30-day rolling average), Apr 18 – Feb 24

As of Feb 2024, interest in upgrading smartphone has been every 4 or more years.

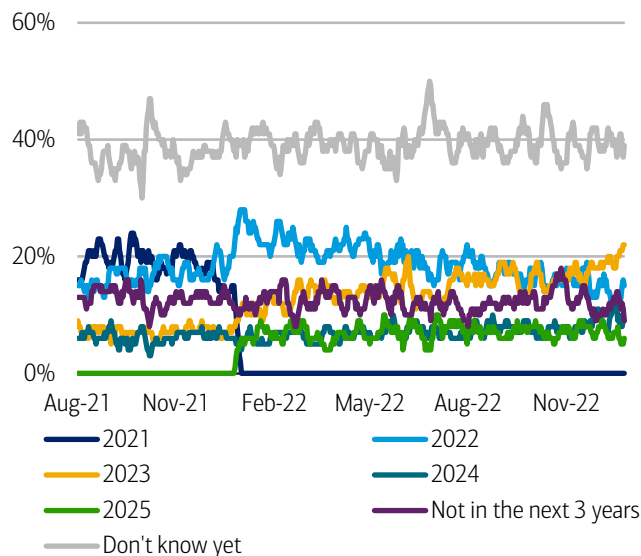


Source: BofA Global Research
Sample size = 316,241

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Figure 2: When do you plan on getting your next smartphone? (Global, Time series, 7-day rolling average, Aug 21 – Dec 22)

% of respondents answering “don’t know yet” remains high

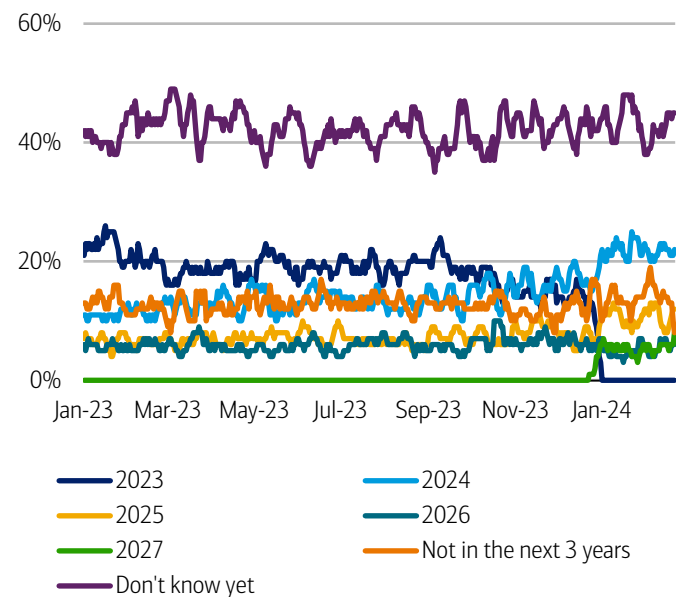


Source: BofA Global Research
Sample size = 100,195

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Figure 3: When do you plan on getting your next smartphone? (Global, Time series, 7-day rolling average, Jan 23 – Feb 24)

% of respondents answering “don’t know yet” remains high



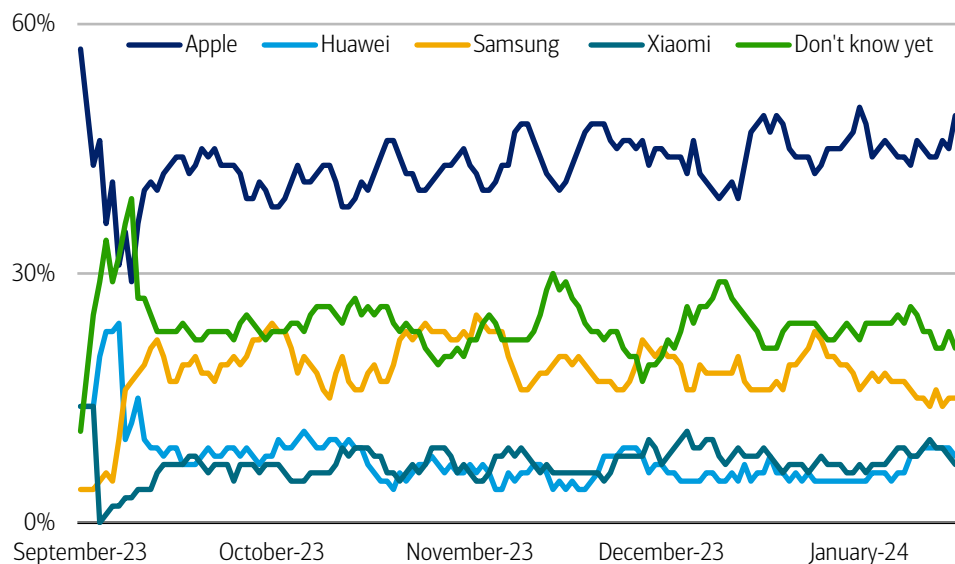
Source: BofA Global Research
Sample size = 68,755

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In our survey, we view respondents' answer to "Which brand of smartphone do you think you will get next?" as a key signal of user stickiness for various smartphone manufacturers. Our survey suggests interest in upgrading to an iPhone dominates other vendors. However, the percentage of respondents answering "Don't know yet" remains high, which in our view signals users delaying purchasing decisions in general, implying a broad impact to smartphone demand.

Figure 4: Which brand of smartphone do you think you will get next? (Time series, 7-day rolling average), Sep 23 – Jan 24

Interest in upgrading to an iPhone is above other vendors.



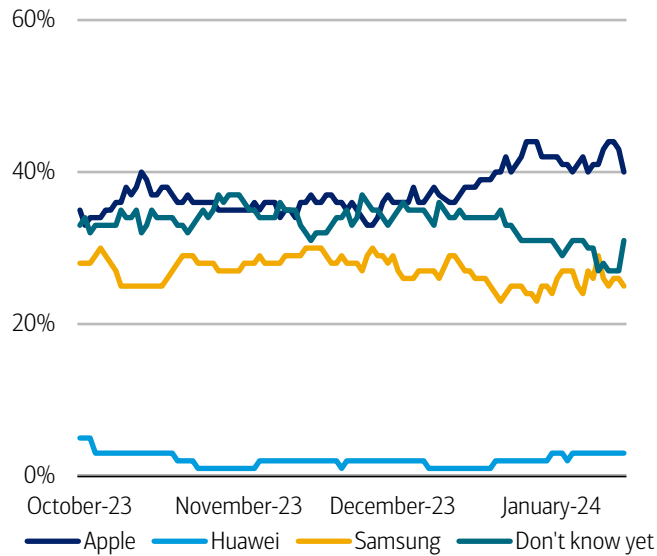
Source: BofA Global Research
Sample size = 16,420

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Since October 2023, we have seen a decline in the "Don't Know Yet" answer in the US in our survey. Across all four regions, intent to upgrade to an iPhone has been trending positively. In all four regions, iPhone remains the top pick vs. other smartphones. In China, we noted a slight drop in respondents' interest in upgrading to an iPhone which was offset by a slight increase in respondents' interest to upgrade to a Huawei smartphone in September 2023 – October 2023, which Apple quickly regained thereafter.

Figure 5: Which brand of smartphone do you think you will get next? (US, Time series, 30-day rolling average), Oct 23 – Feb 24

In Feb 2024, 40% of U.S. respondents reported intent to upgrade to an iPhone.

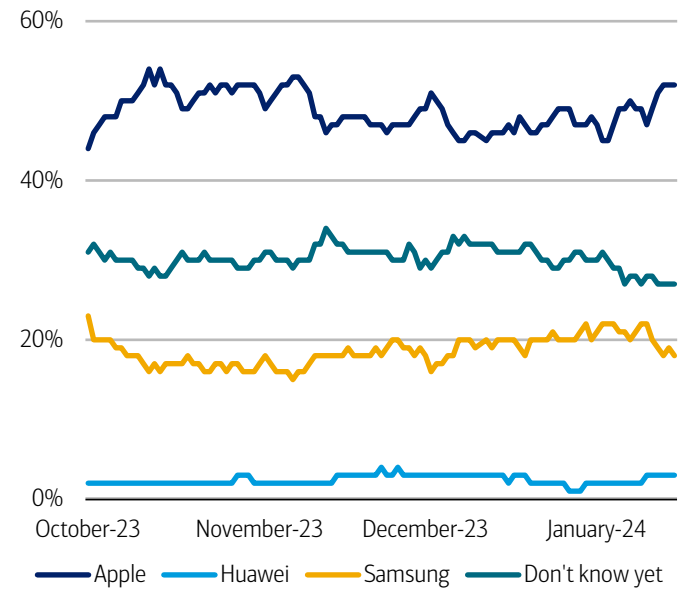


Source: BofA Global Research
Sample size = 2,196

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Figure 6: Which brand of smartphone do you think you will get next? (UK, Time series, 30-day rolling average), Oct 23 – Feb 24

In Feb 2024, 52% of respondents reported intent to upgrade to an iPhone.

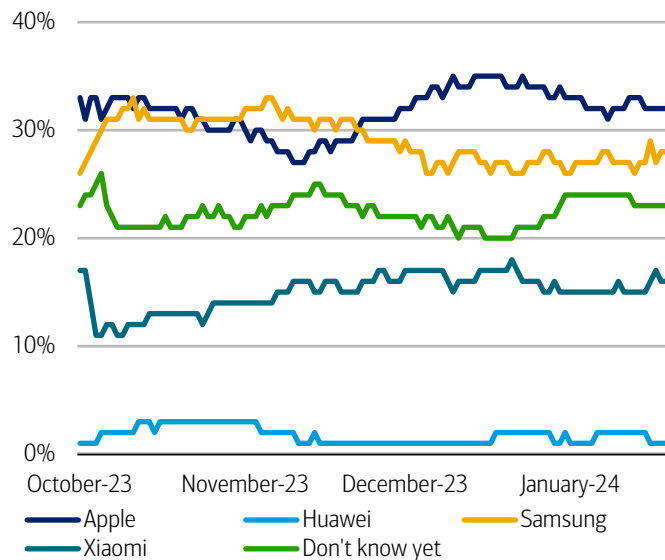


Source: BofA Global Research
Sample size = 5,177

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Figure 7: Which brand of smartphone do you think you will get next? (India, Time series, 30-day rolling average), Oct 23 – Feb 24

In Feb 2024, 32% of India respondents reported intent to upgrade to an iPhone.

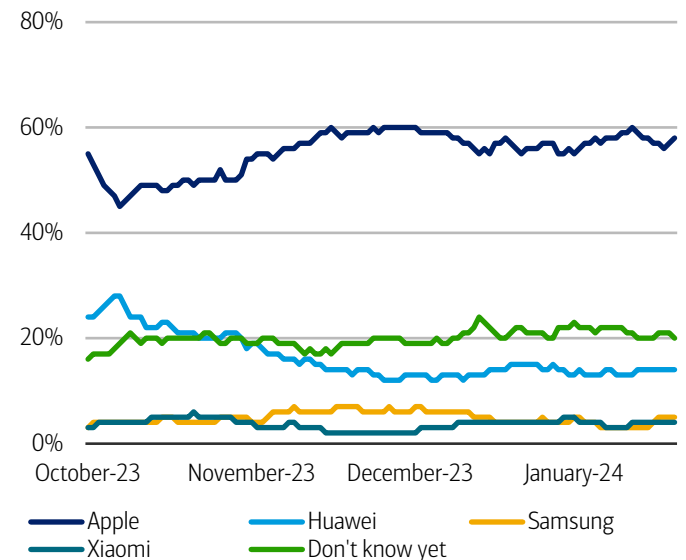


Source: BofA Global Research
Sample size = 5,996

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Figure 8: Which brand of smartphone do you think you will get next? (China, Time series, 30-day rolling average), Oct 23 – Feb 24

In Feb 2024, 58% of China respondents reported intent to upgrade to an iPhone.



Source: BofA Global Research
Sample size = 6,286

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iPhone users' loyalty dominates the Smartphone market

57% of current iPhone owners noted they intend to buy an iPhone with their next upgrade, down from 67% noted in the last report (Feb 2022). Apple stickiness remains dominant, significantly above key competitors Samsung (55%), Huawei (43%), and Xiaomi (33%).

Figure 9: Smartphone brand respondents intend to buy next categorized by brand currently owned

Apple stickiness remains dominant with 57% of current iPhone owners intending to buy an iPhone with their next upgrade.

	Apple	Huawei	Oppo	Samsung	Vivo	Xiaomi	Other brand
Apple	57%	15%	15%	10%	14%	15%	16%
Huawei	6%	43%	4%	1%	5%	4%	6%
Oppo	4%	3%	46%	3%	5%	5%	7%
Samsung	4%	6%	7%	55%	6%	7%	8%
Vivo	1%	0%	5%	2%	48%	3%	6%
Xiaomi	1%	1%	2%	1%	2%	33%	7%
Other brand	2%	3%	4%	3%	3%	9%	16%
Don't know yet	16%	21%	11%	17%	13%	17%	22%

Source: BofA Global Research
Sample size = 22,618

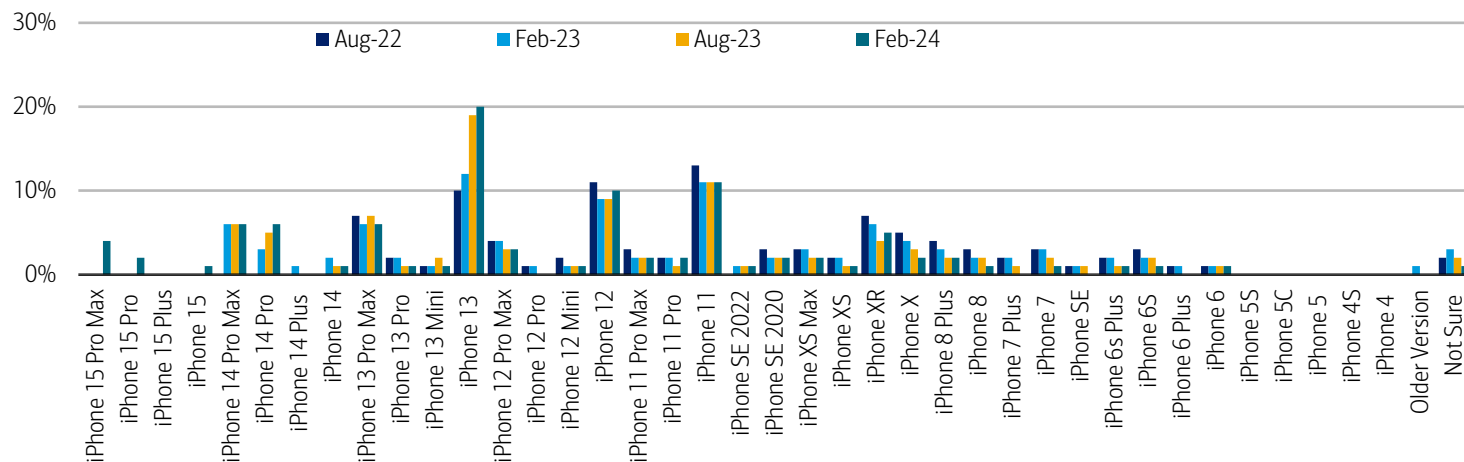
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iPhone 13 use remains high across all regions

During the six months ending in Jan 2024, 28% of respondents to our survey used an iPhone in the iPhone 13 family vs. 13% in the iPhone 14 family and 7% in the iPhone 15 family. A significant percentage of the implied installed base uses older iPhones, including the iPhone 12 (combined 14% for the iPhone 12/12 Mini/ 12 Pro/ 12 Pro Max), iPhone 11 (combined 15% for the 11/11 Pro/ 11 Pro Max versions), and iPhone X (combined 10% for XS Max/ XS/ XR/ X). In our view, this outcome signals continued room for upgrade demand from older device owners.

Figure 10: iPhone ownership among survey respondents, rolling 6-months (Global)

Older iPhone use still high across regions signaling continued room for upgrade demand from older device owners



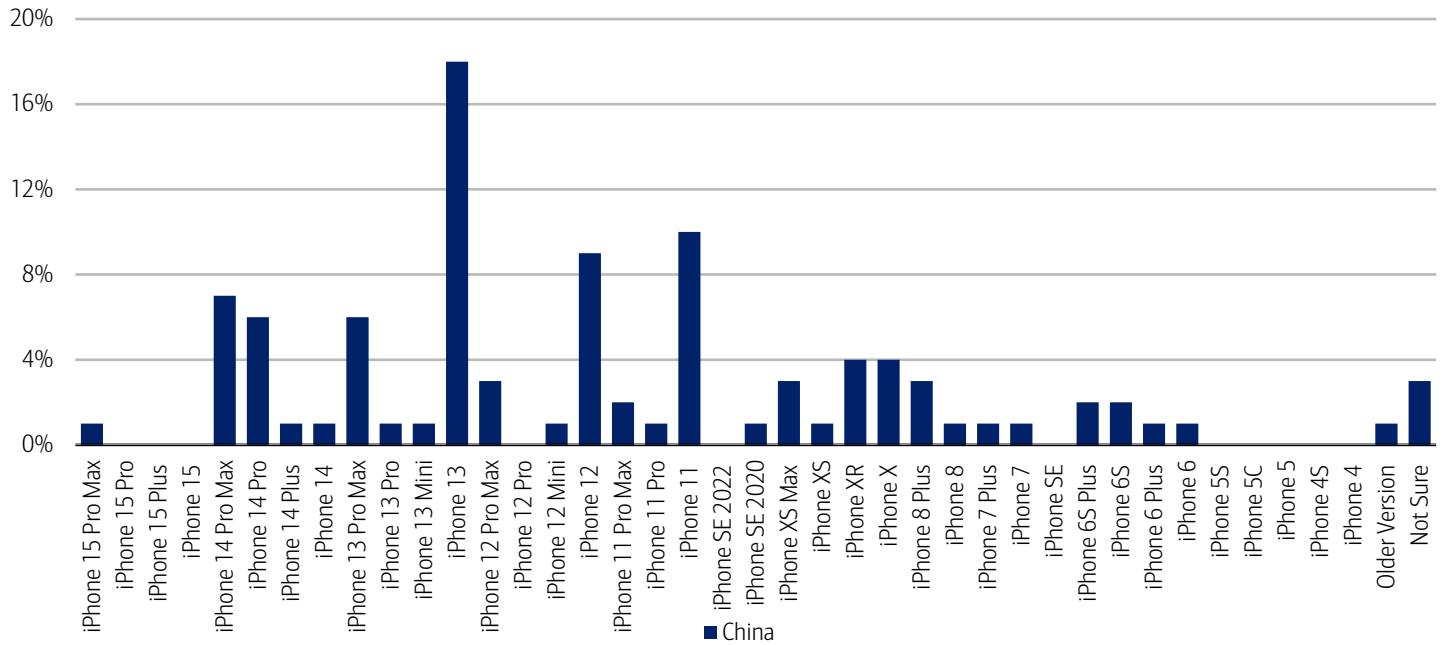
Source: BofA Global Research
Sample size:
Mar 2022 – Aug 2022 = 24,353
Sep 2022 – Feb 2023 = 33,404
Mar 2023 – Aug 2023 = 32,128
Sep 2023 – Feb 2024 = 23,769

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iPhone 13 use is high across all regions (18% respondents in China, 17% respondents in the UK, 24% respondents in India, and 17% respondents in the US), highlighting the opportunity for future upgrades.

Exhibit 1: iPhone ownership among survey respondents (Jan 2023 – Dec 2023), China

iPhone 13 is the most popular iPhone in China, with 18% of respondents reported that they own this version of the device.

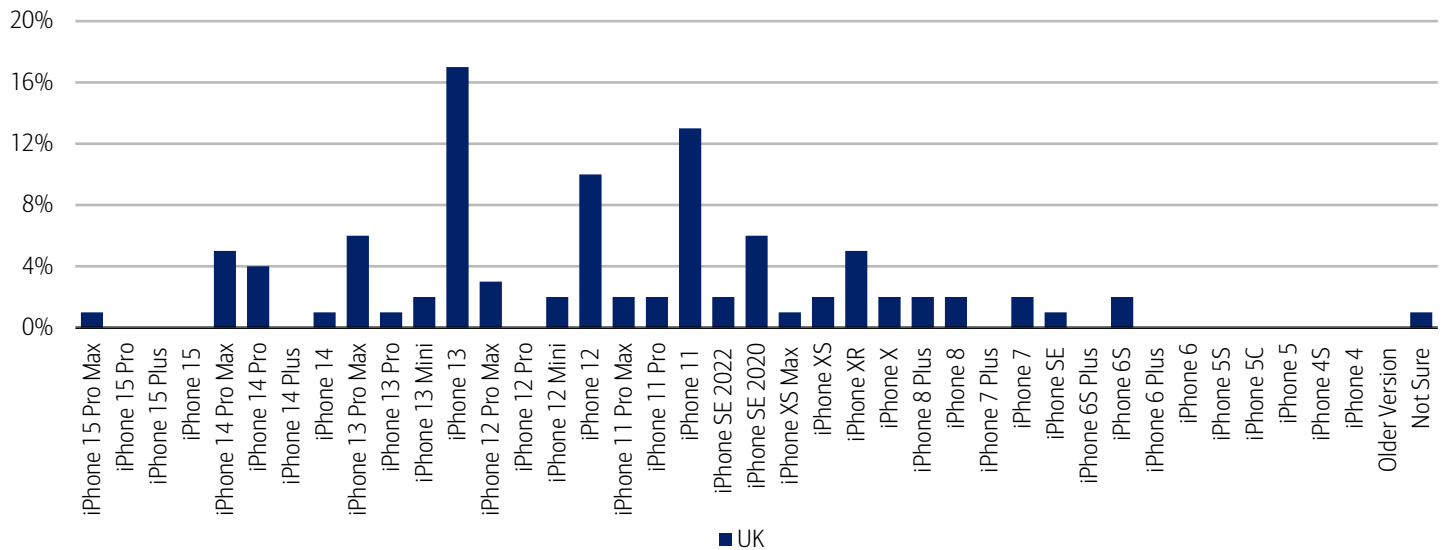


Source: BofA Global Research
Sample size = 36,559

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Exhibit 2: iPhone ownership among survey respondents (Jan 2023 – Dec 2023), UK

iPhone 13 is the most popular iPhone in the UK, with 17% of respondents reporting that they own this version of the device.

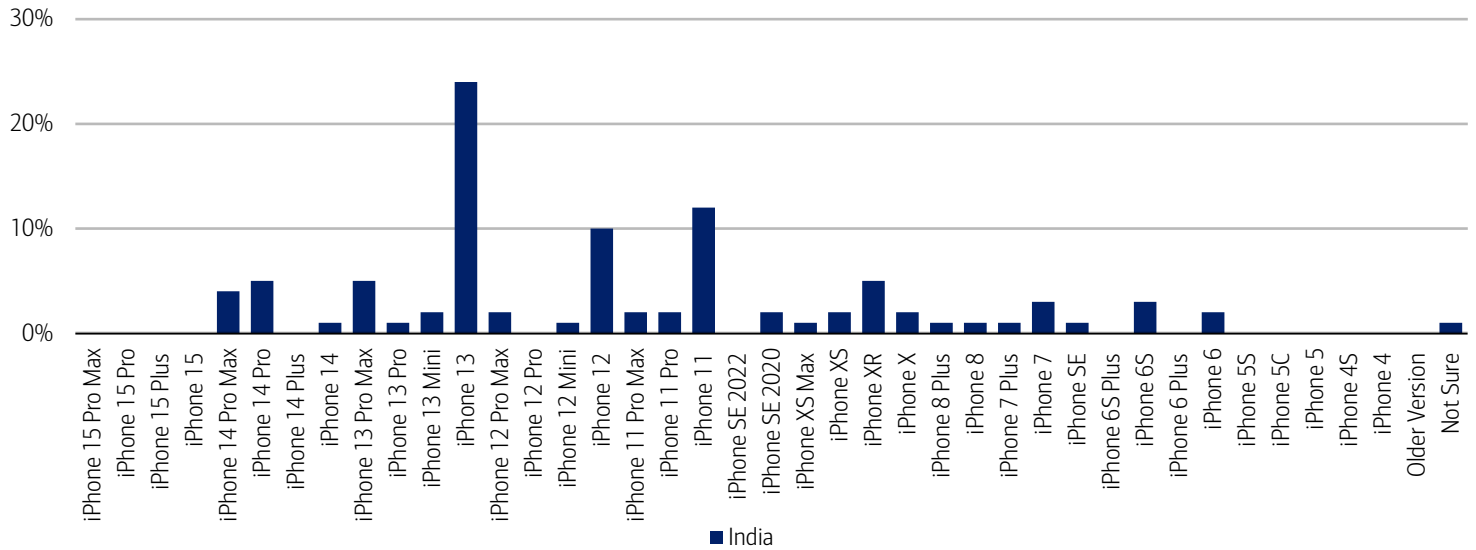


Source: BofA Global Research
Sample size = 7,936

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Exhibit 3: iPhone ownership among survey respondents (Jan 2023 – Dec 2023), India

iPhone 13 is the most popular in India, with 24% of respondents reporting that they own this version of the device.

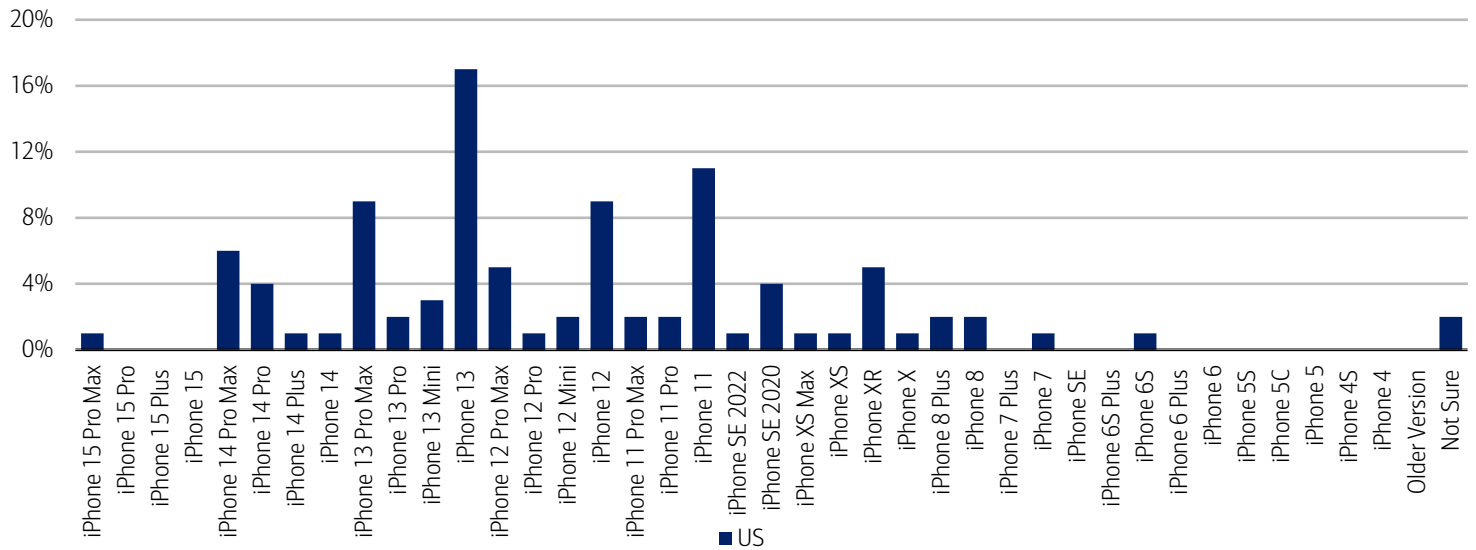


Source: BofA Global Research
Sample size = 7,821

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Exhibit 4: iPhone ownership among survey respondents (Jan 2023 – Dec 2023), US

iPhone 13 is the most widely used in the US, with 17% of respondents reporting that they own this version of the device.



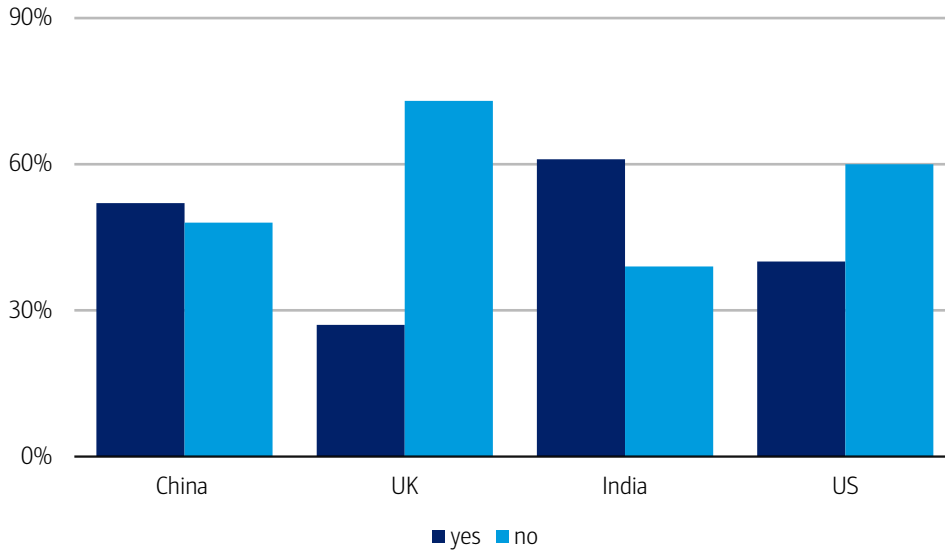
Source: BofA Global Research
Sample size = 7,383

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5G remains an important driver of EM upgrade decisions

We asked respondents “Is 5G an important capability in driving your next smartphone upgrade?” Across the four regions where we conduct the survey, respondents in EM markets (China and India) continue to be significantly more positive on 5G as a reason for upgrading their smartphone. We still see 5G as a meaningful driver for upgrades as 5G networks are launched globally.

Figure 11: Is 5G an important capability in driving your next smartphone upgrade? (Per Country)
Respondents in China and India view 5G as a key reason for upgrading their smartphone.



Source: BofA Global Research
Sample size = 721,380

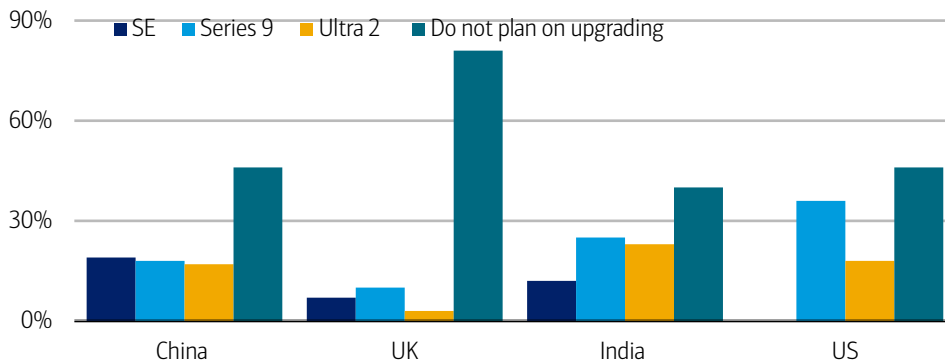
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Interest in upgrading Apple Watch Series 9 and SE

We asked respondents “If you plan to upgrade your Apple watch, which model do you think you will get?” In UK, India, and US, the majority of the respondents who plan on upgrading their Apple Watch plan to buy the Series 9. Plans to upgrade the Apple Watch are highest in India (60%), followed by China (54%), and the US (54%) while plans to upgrade were the lowest in the UK at 20%.

Figure 12: If you plan to upgrade your Apple watch, which model do you think you will get? (Per Country)

Apple Watch Series 9 is the most popular choice of upgraders for UK, India, and US. Apple Watch SE is the most popular choice of upgraders for China.



Source: BofA Global Research
Sample size = 210

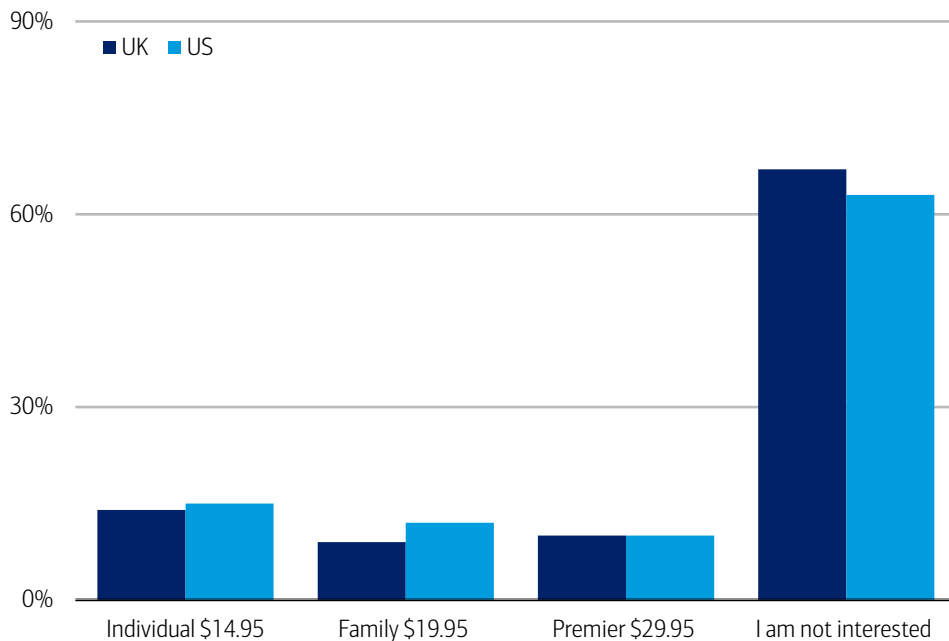
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Rooms for penetration in the Apple Services bundle

We asked “Which of these Apple services bundle subscriptions are you most interested in?”. 37% of respondents (up from 34%) in the US and 33% (up from 32%) in the UK indicated that they were interested in subscribing to the Apple services bundle. Among respondents interested in subscribing to the services bundle, the majority of them showed interest towards the Individual (lowest tier) plan.

Figure 13: Which of these Apple services bundle subscriptions are you most interested in? (Per country)

37% respondents in the US are interested in the Apple services bundle.



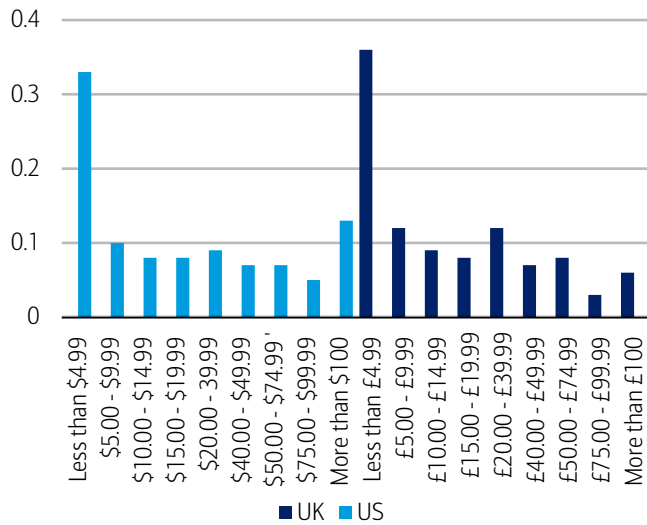
Source: BofA Global Research
Sample size = 9,583

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We also queried respondents on how much they currently pay every month for all of their Apple services. In the US, 62% of respondents pay more than \$9.99 and similarly in the UK, 65% of respondents pay more than £9.99. In China, 52% of respondents pay more than RMB 64 while in India 40% of respondents pay more than INR 699. On average, users in the US pay \$31.57 per month for all of their Apple services while UK users pay £24.70, China users pay RMB 191 and India users pay INR 1,486.

Figure 14: How much do you currently pay every month for all of your Apple Services (US, UK)

62% of US respondents pay more than \$9.99 per month and 65% of UK respondents pay more than £9.99

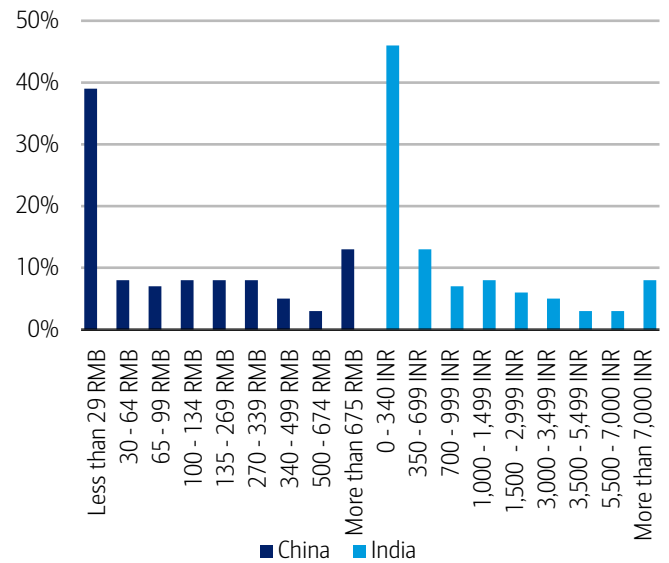


Source: BofA Global Research
Sample size = 10,572

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Figure 15: How much do you currently pay every month for all of your Apple Services (China, India)

52% of China respondents pay more than 64 RMB per month while 40% of India respondents pay more than 699 INR per month



Source: BofA Global Research
Sample size = 17,123

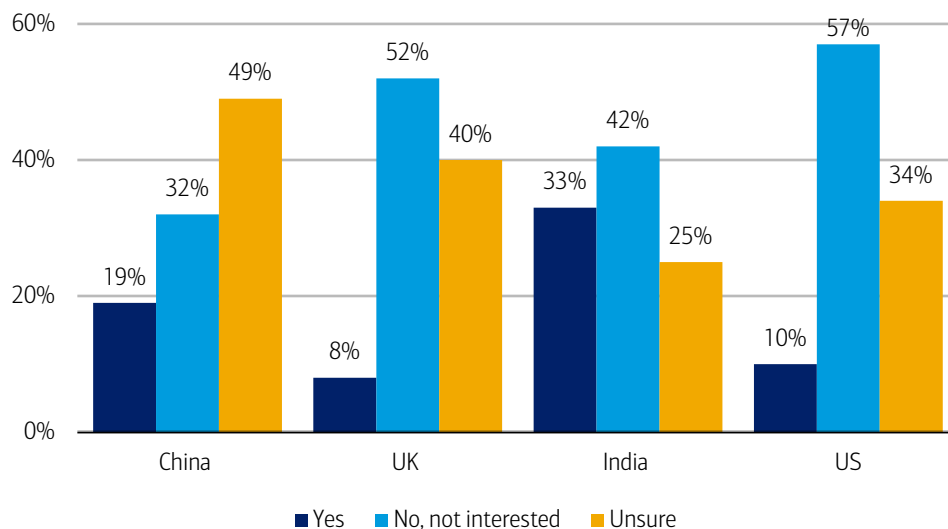
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Apple Vision Pro is still in its early days

We recently added to the survey the question “Do you plan on buying the Apple Vision Pro (priced at \$3,499)? 10% of respondents in the U.S. reported that they are planning on buying the Apple Vision Pro (vs. 8% in UK, 19% in China, and 33% in India).

Figure 16: Do you plan on buying the Apple Vision Pro (priced at \$3,499)?

The majority of respondents in China responded “Unsure”, while the majority of respondents in the U.K. the U.S. and India responded “No, not interested.”



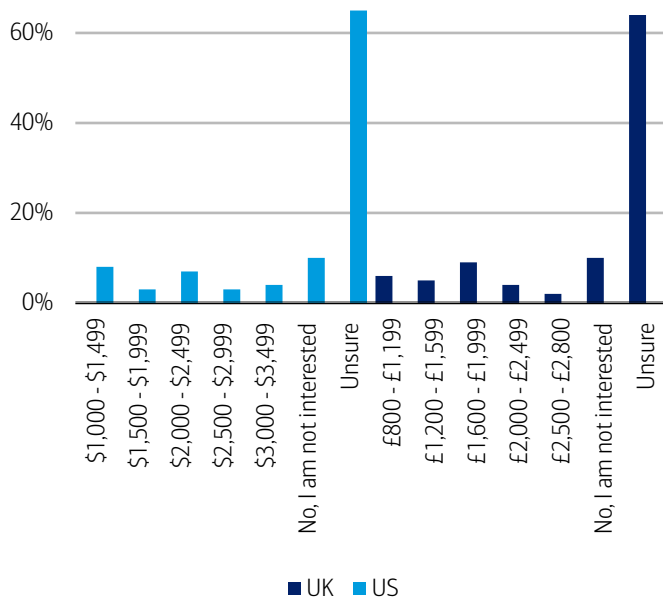
Source: BofA Global Research
Sample size = 19,752

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We also queried respondents who responded “No, I am not interested” or “Unsure” in the previous question regarding plans to buy the Vision Pro to see at what price point they would consider buying. On average, China respondents have the highest price point of \$2,338 (~16,827 RMB) followed by UK respondents (\$2,124 or £1,673), US respondents (\$2,090), while India respondents have the lowest price point of \$1,741 (~144,333 INR).

Figure 17: At what price point would you buy the Apple Vision Pro

The majority of respondents are unsure of the price point for the Vision Pro that is appealing to them.

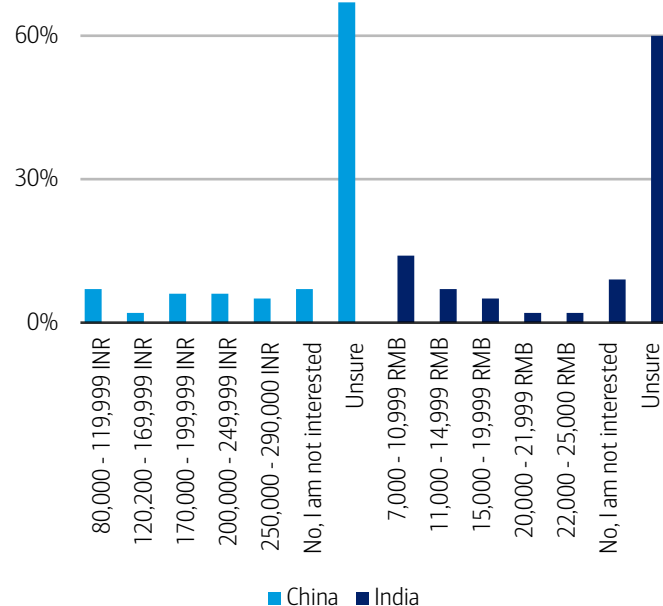


Source: BofA Global Research
Sample size = 1,568

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Figure 18: At what price point would you buy the Apple Vision Pro

The majority of respondents are unsure of the price point for the Vision Pro that is appealing to them.

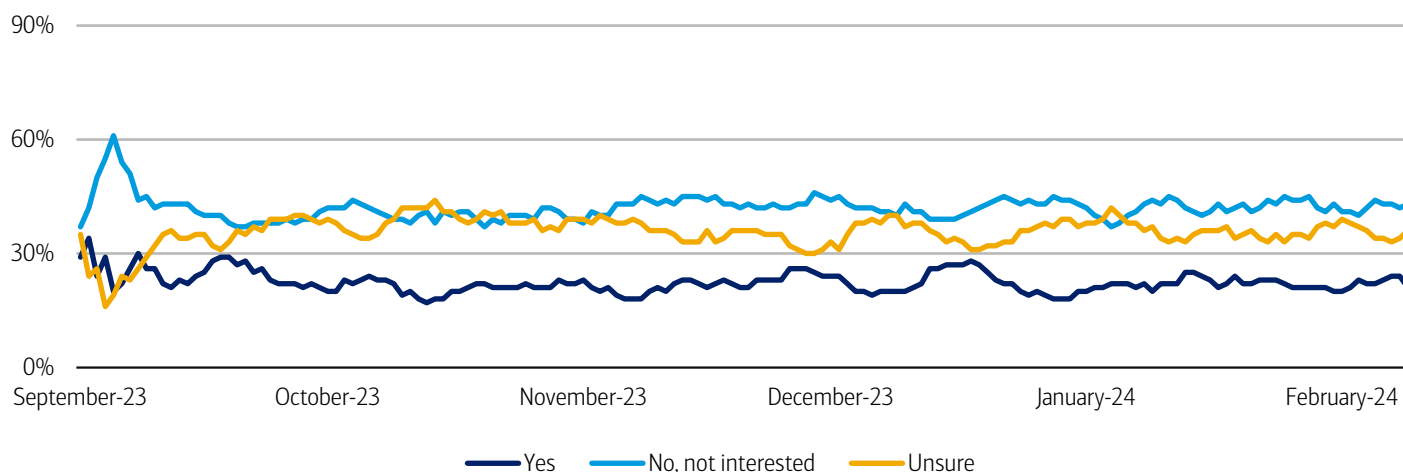


Source: BofA Global Research
Sample size = 4,459

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Figure 19: Do you plan on buying the Apple Vision Pro (priced at \$3,499)? (Time series, 7-day rolling average), Sep 23 – Feb 24

In Feb 2024, the majority of respondents reported that they are not interested in buying the Apple Vision Pro



Source: BofA Global Research
Sample size = 19,723

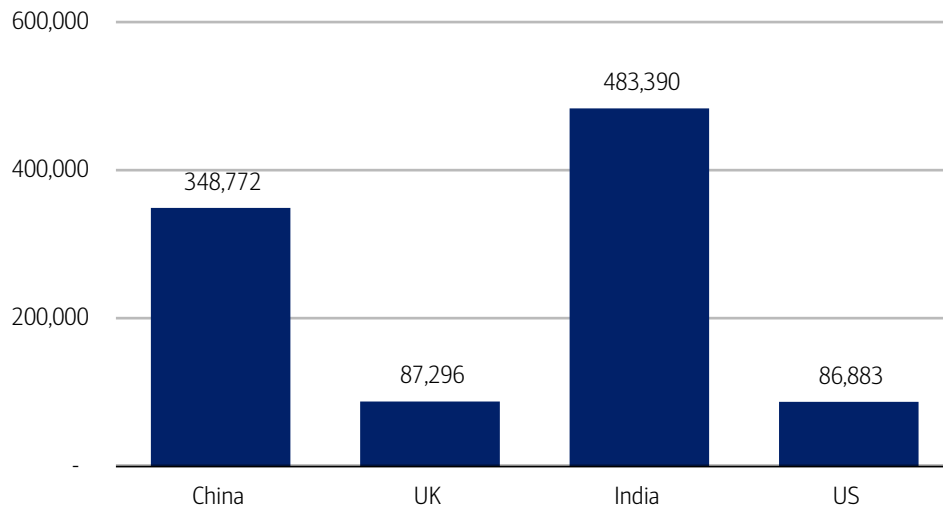
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Demographics

With a sample size of approx. 1,006,000 respondents across the US, China, India, and the UK, we believe the survey is statistically significant. The respondents are a diverse set of individuals. The set consists of 27% women (F) and 73% men (M), with 40% of respondents between 16-24 years of age, 31% between 25 – 34 years, 14% between 35 – 44 years, 6% between 45 – 54 years, 4% between 55 – 64 years, and 5% over 65 years old. All results were weighted in accordance with actual share of the population in each country represented. The respondents belong to a variety of different regions and tier cities across the countries specified.

Figure 20: Number of respondents per country since 2018

Most of the respondents are in India

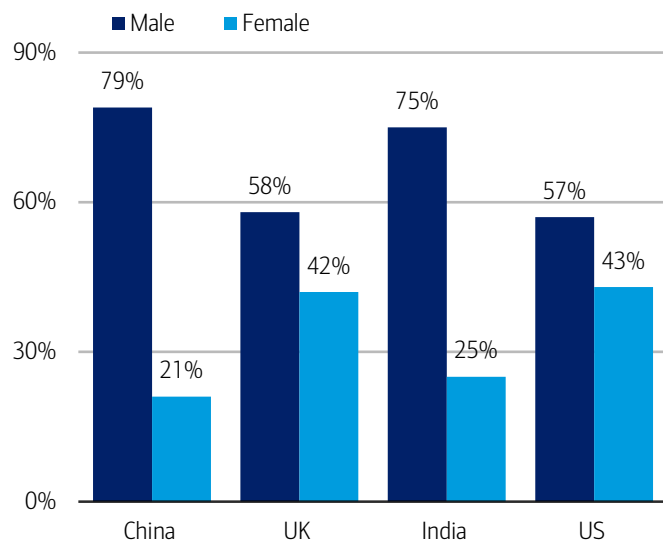


Source: BofA Global Research
Sample size = 1,006,341

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Figure 21: Gender of respondents

73% of total respondents are male and 27% of total respondents are female.

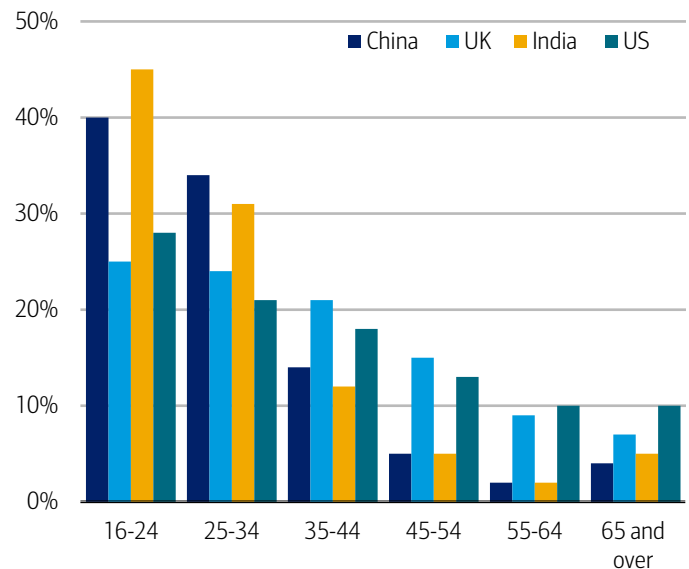


Source: BofA Global Research
Sample size = 1,006,332

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Figure 22: Age of respondents

85% of the respondents were between 16-44 years of age

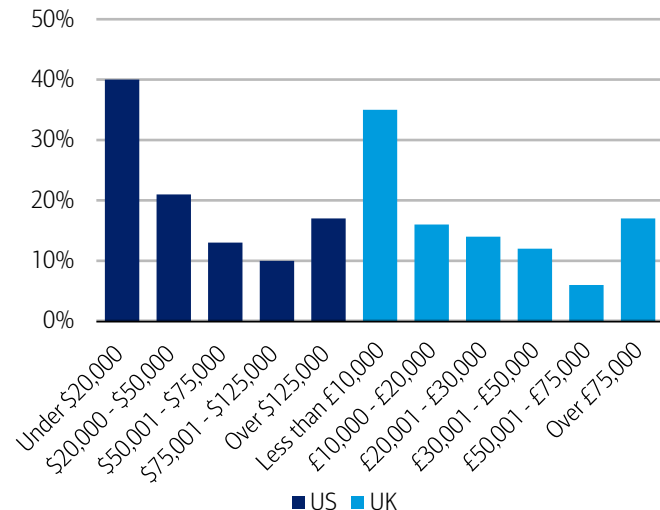


Source: BofA Global Research
Sample size = 1,006,341

BofA GLOBAL RESEARCH

Figure 23: Household Income of respondents (Annual)

Majority of US respondents have an average annual income above \$20k while majority of UK respondents have an average annual income above £10k.

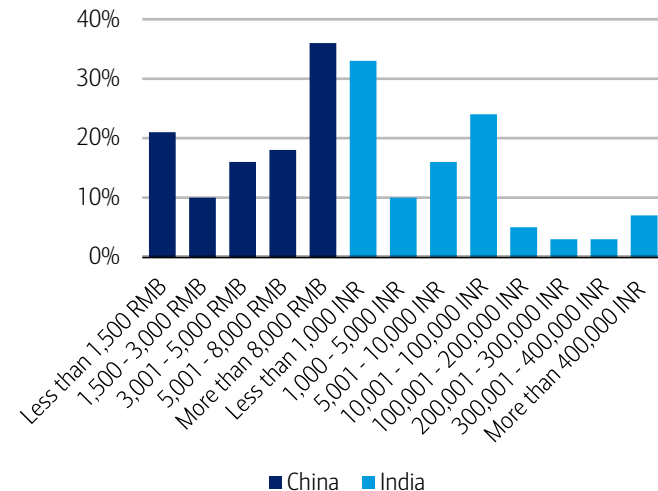


Source: BofA Global Research
Sample size = 45,602

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Figure 24: Household income of respondents (Monthly)

Majority of China respondents have an average monthly income above 5k RMB while majority of India respondents have an average monthly income above 5k INR.

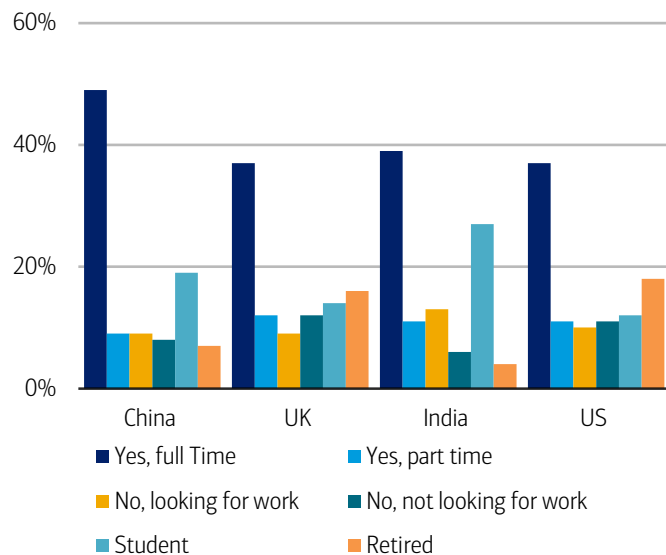


Source: BofA Global Research
Sample size = 175,186

BofA GLOBAL RESEARCH

Figure 25: Employment status of respondents

Most respondents across regions are employed full time.

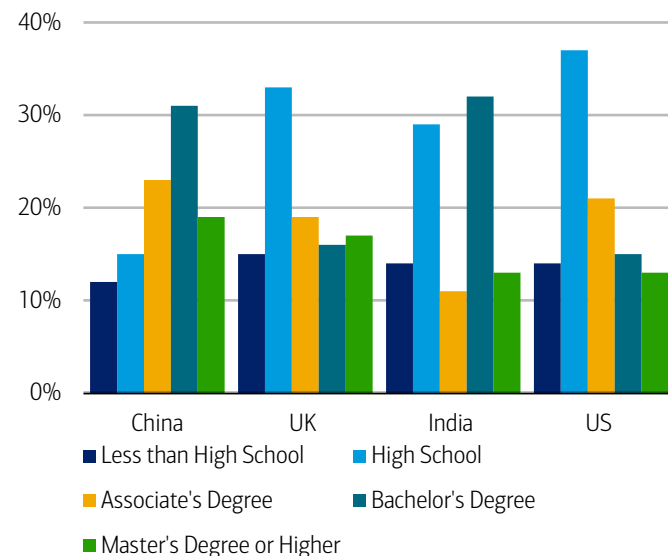


Source: BofA Global Research
Sample Size = 182,892

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Figure 26: Respondents' level of education

Respondents have diverse education levels. Most of the respondents in China and India's highest level of education is Bachelor's degree, while most of the respondents in UK and US's highest level of education is high school.



Source: BofA Global Research
Sample Size = 181,480

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Appendix

Sampling Method

Our survey data is collected online by survey company RIWI using 'Random Domain Intercept Technology'. This directs respondents who enter an incorrect or lapsed URL address to a randomized RIWI survey site. People who make errors entering a URL address should constitute a random sample of the online population.

One potential advantage of this survey method is that it does not rely on surveying a panel of self-selected online respondents. However, because some respondents chose not to respond to all questions, we will not achieve the same sample size for every question. Under each chart, we intend to note the sample size that the analysis is based on each month. The potential disadvantage of this method is that we collect less comprehensive personal data about respondents, which means we cannot weight the sample with as many variables as some pollsters. That said, RIWI provides respondent weight values which are generated post-stratification to match the age and gender of the specific country's population. That said, the more random the underlying sample is, the less need there should be to weight the results. But there is a risk that our sample is skewed towards heavy internet users.

Sample size

Our survey incorporates the views of approximately 1,006,000 participants. Because some people choose not to respond to every question, we will not have the same sample size for every question. The questions are presented to respondents in a randomized order. We have run our survey continuously from March 2018 to February 2024

Survey questions used in this report (possible responses in italics):

When you got your iPhone, was it new or used?

1. *New*
2. *Used*

Have you owned a smartphone that wasn't an iPhone in the last two years?

1. *Yes*
2. *No*

Which of the following Apple products do you own? (Please select all that apply)

1. *iPhone*
2. *Macbook*
3. *iMac*
4. *iPad*
5. *iPod*
6. *Apple Watch*
7. *Apple TV*
8. *Airpods*
9. *HomePod*
10. *AirPods Max*
11. *AirTag*
12. *Vision Pro*
13. *None of the above*



What year did you buy your current smartphone?

1. 2024
2. 2023
3. 2022
4. 2021
5. 2020
6. 2019
7. 2018
8. 2017
9. 2016
10. 2015
11. 2014
12. 2013
13. 2012
14. 2011
15. 2010
16. *Before 2010*
17. *Can't remember*

Is 5G an important capability in driving your next smartphone upgrade?

1. Yes
2. No

(to US respondents) How much do you currently pay every month for all of your Apple Services?

1. *Less than \$4.99 per month*
2. *\$5.00 - \$9.99 per month*
3. *\$10.00 - \$14.99 per month*
4. *\$15.00 - \$19.99 per month*
5. *\$20.00 - \$39.99 per month*
6. *\$40.00 - \$49.99 per month*
7. *\$50.00 - \$74.99 per month*
8. *\$75.00 - \$99.99 per month*
9. *More than \$100 per month*

(to UK respondents) How much do you currently pay every month for all of your Apple Services?

1. *Less than £4.99 per month*
2. *£5.00 - £9.99 per month*
3. *£10.00 - £14.99 per month*
4. *£15.00 - £19.99 per month*
5. *£20.00 - £39.99 per month*
6. *£40.00 - £49.99 per month*
7. *£50.00 - £74.99 per month*
8. *£75.00 - £99.99 per month*
9. *More than £100 per month*

(to CN respondents) How much do you currently pay every month for all of your Apple Services?

1. *Less than 29 RMB per month*
2. *30 - 64 RMB per month*
3. *65 - 99 RMB per month*
4. *100 - 134 RMB per month*
5. *135 - 269 RMB per month*
6. *270 - 339 RMB per month*
7. *340 - 499 RMB per month*
8. *500 - 674 RMB per month*
9. *More than 675 RMB per month*

(to IN respondents) How much do you currently pay every month for all of your Apple Services?

1. *0 - 349 INR per month*
2. *350 - 699 INR per month*
3. *700 - 999 INR per month*
4. *1,000 - 1,499 INR per month*
5. *1,500 - 2,999 INR per month*
6. *3,000 - 3,499 INR per month*
7. *3,500 to 5,499 INR per month*
8. *5,500 to 7,000 INR per month*
9. *More than 7,000 INR per month*

If you plan to upgrade your Apple watch, which model do you think you will get?

1. *Apple Watch SE*
2. *Apple Watch Series 9*
3. *Apple Watch Ultra 2*
4. *I do not plan on upgrading my Apple watch*

Which brand of smartphone do you think you will get next?

1. *Apple*
2. *Blackberry*
3. *Google*
4. *HTC*
5. *Honor*
6. *Huawei*
7. *Lenovo*
8. *LG*
9. *Motorola*
10. *Oppo*
11. *Samsung*
12. *Vivo*
13. *Xiaomi*
14. *ZTE*
15. *Other brand*
16. *Don't know yet*



What model is your current iPhone?

1. *iPhone 15 Pro Max*
2. *iPhone 15 Pro*
3. *iPhone 15 Plus*
4. *iPhone 15*
5. *iPhone 14 Pro Max*
6. *iPhone 14 Pro*
7. *iPhone 14 Plus*
8. *iPhone 14*
9. *iPhone 13 Pro Max*
10. *iPhone 13 Pro*
11. *iPhone 13 mini*
12. *iPhone 13*
13. *iPhone 12 Pro Max*
14. *iPhone 12 Pro*
15. *iPhone 12 mini*
16. *iPhone 12*
17. *iPhone 11 Pro Max*
18. *iPhone 11 Pro*
19. *iPhone 11*
20. *iPhone SE (2020)*
21. *iPhone XS Max*
22. *iPhone XS*
23. *iPhone XR*
24. *iPhone X*
25. *iPhone 8 Plus*
26. *iPhone 8*
27. *iPhone 7 Plus*
28. *iPhone 7*
29. *iPhone SE*
30. *iPhone 6S plus*
31. *iPhone 6S*
32. *iPhone 6 Plus*
33. *iPhone 6*
34. *iPhone 5S*
35. *iPhone 5C*
36. *iPhone 5*
37. *iPhone 4S*
38. *iPhone 4*
39. *Older version*
40. *Not sure*

When do you plan on getting your next smartphone?

1. 2024
2. 2025
3. 2026
4. Not in the next 3 years
5. Don't know yet

How often do you typically upgrade your smartphone?

1. Every year
2. Every 2 years
3. Every 3 years
4. Every 4+ years

Do you plan on buying the Apple Vision Pro (Priced at \$3,499)

1. Yes
2. No, I am not interested
3. Unsure

(to US respondents) At what price point would you buy the Apple Vision Pro?

1. If the price range is \$1,000 - \$1,499
2. If the price range is \$1,500 - \$1,999
3. If the price range is \$2,000 - \$2,499
4. If the price range is \$2,500 - \$2,999
5. If the price range is \$3,000 - \$3,499
6. No, I am still not interested in the Apple Vision Pro
7. Unsure

(to UK respondents) At what price point would you buy the Apple Vision Pro?

1. If the price range is £800 - £1,199
2. If the price range is £1,200 - £1,599
3. If the price range is £1,600 - £1,999
4. If the price range is £2,000 - £2,499
5. If the price range is £2,500 - £2,800
6. No, I am still not interested in the Apple Vision Pro
7. Unsure

(to CN respondents) At what price point would you buy the Apple Vision Pro?

1. 7,000 - 10,999 RMB
2. 11,000 - 14,999 RMB
3. 15,000 - 19,999 RMB
4. 20,000 - 21,999 RMB
5. 22,000 - 25,000 RMB
6. No, I am still not interested in the Apple Vision Pro
7. Unsure

(to IN respondents) At what price point would you buy the Apple Vision Pro?

1. 80,000 – 119,999 INR
2. 120,000 – 169,999 INR
3. 170,000 – 199,999 INR
4. 200,000 – 249,999 INR
5. 250,000 – 290,000 INR
6. No, I am still not interested in the Apple Vision Pro
7. Unsure

(to US respondents) Approximately how much do you make every year? (before taxes)

1. Under \$20,000
2. \$20,000 - \$50,000
3. \$50,001 - \$75,000
4. \$75,001 - \$125,000
5. Over \$125,000

(to UK respondents) Approximately how much do you make every year? (before taxes)

1. Less than £10,000
2. £10,000 - £20,000
3. £20,001 - £30,000
4. £30,001 - £50,000
5. £50,001 - £75,000
6. Over £75,000

(to CN respondents) What is your monthly income?

1. Less than 1500 RMB
2. 1500 - 3000 RMB
3. 3001 - 5000 RMB
4. 5001 - 8000 RMB
5. More than 8000 RMB

(to IN respondents) Approximately what is your average monthly income?

1. Less than 1,000 INR
2. 1,000 - 5,000 INR
3. 5,001 - 10,000 INR
4. 10,001 - 100,000 INR
5. 100,001 - 1,00,000 INR
6. 1,00,001 INR to 2,00,000 INR
7. 2,00,001 INR to 3,00,000 INR
8. 3,00,001 INR to 4,00,000 INR
9. More than 4,00,000 INR

Which of these Apple services do you currently use? (Please select all that apply)

1. App store
2. iCloud
3. iTunes
4. Apple Music
5. Apple Pay
6. iBooks
7. Apple TV store
8. Apple Podcasts
9. Apple One
10. Apple Card
11. None of these

(to US respondents) Which Apple service bundle are you most interested in?

1. Individual \$14.95/month (Apple Music, Apple TV+, Apple Arcade, 50GB iCloud storage)
2. Family \$19.95/month (Apple Music, Apple TV+, Apple Arcade, 200GB iCloud storage, up to six family members)
3. Premier \$29.95/month (Apple Music, Apple TV+, Apple Arcade, Apple News+, Apple Fitness+, 2TB iCloud storage, up to six family members)
4. I am not interested in an Apple service bundle

(to UK respondents) Which Apple service bundle service are you most interested in?

1. Individual \$14.95/month (Apple Music, Apple TV+, Apple Arcade, 50GB iCloud storage)
2. Family \$19.95/month (Apple Music, Apple TV+, Apple Arcade, 200GB iCloud storage, up to six family members)
3. Premier \$29.95/month (Apple Music, Apple TV+, Apple Arcade, Apple News+, Apple Fitness+, 2TB iCloud storage, up to six family members)
4. I am not interested in an Apple service bundle

What is the highest level of education you have completed?

1. Less than high school
2. High school
3. Associate's degree / vocational training
4. Bachelor's degree
5. Master's degree or higher

Where do you live?

1. Large city
2. Suburb
3. Small town / village
4. Rural area / farm

Are you currently employed?

1. *Yes - Full Time*
2. *Yes - Part Time*
3. *No - I am looking for work*
4. *No - I am not looking for work*
5. *Retired*
6. *Student*

What is your marital status?

1. *Single, never married*
2. *Married or domestic partner*
3. *Divorced/separated*
4. *Widowed*

Price objective basis & risk

Apple Inc. (AAPL)

Our PO of \$225 is based on approximately 32x our C24E EPS. Our target multiple compares to the 5-year historical range of 16-34x (median 27x). We believe a multiple at the higher end of the historical range is justified given a large cash balance and opportunity to diversify into new end markets, increasing mix and diversity of services.

Downside risks are: a) weaker iPhone 15 cycle on consumer spending risk, b) weaker near-term services trajectory where App Store & Licensing can decelerate, c) gross profit dollars declining y/y next few quarters, d) iPads/Macs reverting to pre-COVID levels, and e) stronger dollar. Other risks are potential trade conflicts, tariffs, longer iPhone replacement cycles, commoditization in the smartphone market, intensifying competition in the tablet market, ability to manage beat and raise expectations for EPS estimates, and requirement to maintain pace of product innovation.

Upside risks are: a) stronger sales of Pro iPhone models which can help average selling price and help the mix of the business, b) est. revisions can be lower vs. peers, c) potential new products (AR/VR), and services (advertising). Other upside risks are stronger than expected iPhone cycle, gross margin upside from better mix of higher end iPhones, tailwinds from lower memory costs, and a faster than expected recovery in emerging markets.

Analyst Certification

I, Wamsi Mohan, 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.

US - IT Hardware and Technology Supply Chain Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	Amphenol	APH	APH US	Wamsi Mohan
	Apple Inc.	AAPL	AAPL US	Wamsi Mohan
	Corning Inc.	GLW	GLW US	Wamsi Mohan
	Dell Technologies Inc.	DELL	DELL US	Wamsi Mohan
	Flex Ltd.	FLEX	FLEX US	Ruplu Bhattacharya
	HP Inc.	HPQ	HPQ US	Wamsi Mohan
	International Business Machines Corp.	IBM	IBM US	Wamsi Mohan
	Jabil Inc.	JBL	JBL US	Ruplu Bhattacharya
	Nutanix Inc	NTNX	NTNX US	Wamsi Mohan
	Roku, Inc.	ROKU	ROKU US	Ruplu Bhattacharya
	Seagate Technology	STX	STX US	Wamsi Mohan
	Super Micro Computer Inc.	SMCI	SMCI US	Ruplu Bhattacharya
	TD Synnex Corp	SNX	SNX US	Ruplu Bhattacharya
	TE Connectivity Ltd.	TEL	TEL US	Wamsi Mohan
	Western Digital Corporation	WDC	WDC US	Wamsi Mohan
NEUTRAL				
	Arrow Electronics Inc.	ARW	ARW US	Ruplu Bhattacharya
	Avnet Inc.	AVT	AVT US	Ruplu Bhattacharya
	CDW Corp	CDW	CDW US	Ruplu Bhattacharya
	Concentrix Corporation	CNXC	CNXC US	Ruplu Bhattacharya
	Hewlett-Packard Enterprise	HPE	HPE US	Wamsi Mohan
	Pure Storage	PSTG	PSTG US	Wamsi Mohan
	Sensata Technologies Holdings Plc	ST	ST US	Wamsi Mohan
	Teradata Corporation	TDC	TDC US	Wamsi Mohan
UNDERPERFORM				
	DigitalOcean	DOCN	DOCN US	Wamsi Mohan



US - IT Hardware and Technology Supply Chain Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
	NetApp Inc.	NTAP	NTAP US	Wamsi Mohan
	Sanmina Corporation	SANM	SANM US	Ruplu Bhattacharya
	Vishay Intertechnology, Inc.	VSH	VSH US	Ruplu Bhattacharya

iQmethodSM Measures Definitions**Business Performance**

Return On Capital Employed

Return On Equity

Operating Margin

Earnings Growth

Free Cash Flow

Quality of Earnings

Cash Realization Ratio

Asset Replacement Ratio

Tax Rate

Net Debt-To-Equity Ratio

Interest Cover

Valuation Toolkit

Price / Earnings Ratio

Price / Book Value

Dividend Yield

Free Cash Flow Yield

Enterprise Value / Sales

EV / EBITDA

Numerator

NOPAT = (EBIT + Interest Income) × (1 – Tax Rate) + Goodwill Amortization

Net Income

Operating Profit

Expected 5 Year CAGR From Latest Actual

Cash Flow From Operations – Total Capex

Numerator

Cash Flow From Operations

Capex

Tax Charge

Net Debt = Total Debt – Cash & Equivalents

EBIT

Numerator

Current Share Price

Current Share Price

Annualised Declared Cash Dividend

Cash Flow From Operations – Total Capex

EV = Current Share Price × Current Shares + Minority Equity + Net Debt +

Other LT Liabilities

Enterprise Value

Denominator

Total Assets – Current Liabilities + ST Debt + Accumulated Goodwill

Amortization

Shareholders' Equity

Sales

N/A

N/A

Denominator

Net Income

Depreciation

Pre-Tax Income

Total Equity

Interest Expense

Denominator

Diluted Earnings Per Share (Basis As Specified)

Shareholders' Equity / Current Basic Shares

Current Share Price

Market Cap = Current Share Price × Current Basic Shares

Sales

Basic EBIT + Depreciation + Amortization

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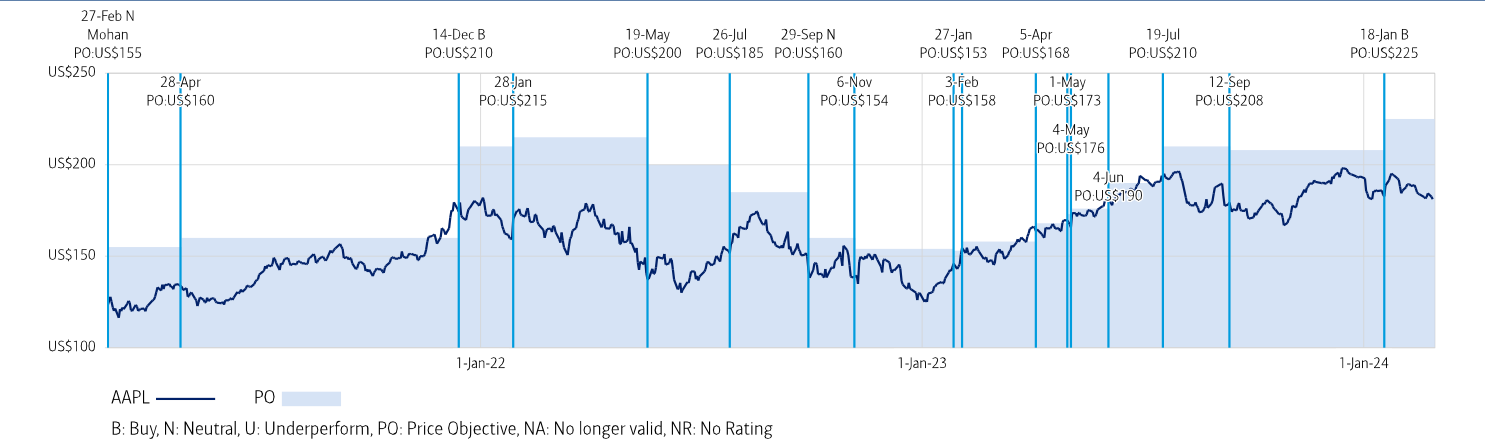
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Disclosures

Important Disclosures

Apple Inc. (AAPL) Price Chart



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Equity Investment Rating Distribution: Technology Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	215	53.09%	Buy	111	51.63%
Hold	97	23.95%	Hold	45	46.39%
Sell	93	22.96%	Sell	24	25.81%

Equity Investment Rating Distribution: Global Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	1895	53.62%	Buy	1083	57.15%
Hold	832	23.54%	Hold	454	54.57%
Sell	807	22.84%	Sell	383	47.46%

^{R1} 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 ^{R2}
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

^{R2} 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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