

Deutsche Bank Markets Research

Rating

Hold

North America

United States

Company

Apple Inc.

Date

29 January 2018

Company Update

TMT

IT Hardware and Supply Chain

Reuters

AAPL.OQ

Bloomberg

AAPL US

Exchange

NSM

Ticker

AAPL

Price at 29 Jan 2018 (USD)

Price target

52-week range

167.96

152.00

179.26 - 121.35

iPhone X demand not living up to high expectations

iPhone expectations are still too high for C1Q and C2Q

Apple reports C4Q/F1Q results on Feb 1. Recent datapoints on iPhone sales continue to point to weaker-than-expected demand for the new iPhone models (X, 8 and 8+). This is not a surprise to us. We have been arguing since last February ([note](https://research.db.com/Research/Document?rid=0900b8c08c835a03&amp;kid=RP0001&amp;documentType=R)), that iPhone demand expectations were too optimistic and that the higher price of new models would pressure unit demand. This appears to be playing out, with numerous Asian supply chain data points suggesting iPhone production plans are being cut. While we expect AAPL's Dec Q results will be roughly in line, we think Consensus numbers for the March and June quarters remain too high. Thus far, AAPL's shares have not reﬂected lower-than-expected iPhone demand, as the stock has been helped by the strong markets and passive investment strategies. However, we expect shares to re-rate modestly lower over the next few quarters as iPhone numbers disappoint. With support from strong markets oﬀset by weakening fundamentals, we see shares as fairly valued in the low-$150 range and maintain our Hold.

iPhone X demand not living up to expectations

The 10th anniversary iPhone was expected to drive a strong iPhone refresh this fall, with July 2017 Street expectations looking for iPhone units to be up 12% Y/ Y in FY-18. However, after initial tight supply due to component shortages, our checks of wait times for the iPhone X showed that the phone became more easily available by the end of November and improved through December. In addition, numerous Asian supply chain commentary from Digitimes, Taiwan Economic Daily, Reuters, and Nikkei have suggested that C1Q production build plans have been cut by up to 50% over the past month. Our Asian supply chain analyst Birdy Lu has remained more cautious on build plans, expecting 52M total iPhone units to be produced in C1Q-18, 25M which are expected to be iPhone X ([note](https://research.db.com/Research/Document?rid=0900b8c08ddd786a&amp;kid=RP0001&amp;documentType=R)). Recent comments from Nikkei are even lower, suggesting total C1Q-18 iPhone production could be only 50M with iPhone X accounting for 20M.

What happened to the super cycle?

We have not been convinced that Apple would see a "super cycle' in FY-18, and we've been more cautious than the Street on iPhone growth this year. Our argument has been that the phones were too expensive to drive massive adoption, consumers are keeping their phones longer because of their high cost, the market is now only a refresh market, and the iPhone X features weren't enough to drive non-early adopters to buy new phones. We believe these trends are now playing out, and we see risk to FY-18 Street numbers. Apple's stock saw impressive performance last year, which we attribute to both the "anticipation trade" for

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Price/price relative

200

150

100

50

Jul '16 Jan '17 Jul '17 Jan '18

**Apple Inc. S&P 500 INDEX (Rebased)**

Performance (%) 1m 3m 12m

Absolute 0.6 9.0 40.7

S&P 500 INDEX 7.2 12.2 25.1

*Source: Deutsche Bank*

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Apple Inc.

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iPhone X demand and the strength of overall markets, which drove passive and ETF purchases of Apple's stock. However, similar to past cycles when iPhone numbers were reset lower, we do not believe shares will be able to continue to outperform as Street numbers get adjusted down.

F1Q-18 probably okay, but F2Q and F3Q expectations should come down

We are leaving our below-Consensus estimates unchanged. We think Apple will likely be able to ship around 80M iPhones in the Dec Q, helped by typical seasonal holiday demand. However, we think Street numbers are still too high for F2Q-18 and F3Q-18. We assume Apple ships 57M iPhones and 42M in F2Q and F3Q, respectively, well below Street expectations for 60M and 47M. Our price target is based on shares trading at 16x our FY-19E EPS. Positive risks: stronger-than- expected smartphone sales and share gains, and signiﬁcantly higher margins. Negatives: slower smartphone sales, and market share losses.

# Interest in new phones is waning and refresh cycles are elongating

Over the 10 years since the ﬁrst iPhone was introduced, the form factor for smartphones has not substantially changed. Early on, the iPhone saw more signiﬁcant reductions in weight and thickness with each new iteration, as well as improvements in display, speed, battery life and memory. However, in recent years, these feature changes have been more modest and largely undetectable to most smartphone users, with the average consumer having a hard time distinguishing between an iPhone 6 and an iPhone 8. As a result, we believe smartphone buyers aren't as compelled to buy the latest phone when it comes out, because their current phone is generally about as good. In addition, the price of the iPhone and other high-end smartphones remains high, with Apple having an average selling price of roughly $650 over the past 2 years, making iPhones signiﬁcantly more expensive than most televisions and gaming consoles, and about as expensive as many home appliances and an average personal computer.

We believe this increasing lack of interest in new phone models is supported by Google trends data. As seen in the chart above, Google searches for each of the new iPhone models released after the iPhone 6 have been lower. The chart shows the relative amount of Google searches for each phone in relation to the iPhone 6, which saw the highest searches (September 2014=100). As seen above, the iPhone 6 had the highest search interest, while the iPhone 6s saw only limited interest when it was announced in September 2015. The iPhone 7 generated more interest, but the iPhone 8 and X both saw lower interest than both the iPhone 6 and the iPhone 7, based on worldwide search data. We believe this data conﬁrms recent Asian supply chain data points that suggest demand for the new iPhone X and the iPhone 8 models are below expectations and that build plans are being cut. Interestingly, recent January searches for iPhone X and iPhone 8 have fallen to only 6% and 7% of the peak levels of iPhone 6 searches, respectively,

which is the same as current search levels for iPhone 6 and iPhone 7. The search results are also lower than similar iPhone 6 searches post launch, with iPhone 6 seeing searches at 14% of peak levels 3 months post launch, while iPhone 8 and iPhone X are only seeing searches in the 6-7% of peak levels 3 months post launch. The Google data does not include China, which was a signiﬁcant driver of growth during the iPhone 6 cycle. However, an analysis of Weibo posts by Reuters suggests that iPhone X mentions in December were only 5M versus posts during the same period for iPhone 6, which were more than 11M. While the iPhone 6 was extremely popular in China, the data suggests that the iPhone X is less than half as popular both globally and in China.

Another proof point of the lack of interest in new phones is the increasing decline in upgrade rates at the top U.S. carriers. While the U.S. market accounts for only 11% of worldwide smartphone shipments, it's an important end market for Apple. The company has roughly 40% share in the U.S. market, and U.S. iPhone shipments account for more than 30% of iPhone mix. As seen above, all of the U.S. carriers have seen declining upgrade rates over the past few years, highlighting the fact that refresh cycles for new phones continue to elongate.

# Smartphone market is saturated

As we've noted in the past, the smartphone market is essentially saturated ([7/10/17 note](https://research.db.com/Research/Document?rid=0900b8c08d21e01d&amp;kid=RP0001&amp;documentType=R)). While there may be a small percentage of people in the world who don't have a mobile phone, the number of potential new customers remains small. When looking at mobile phone shipments, as seen in Figure 3, annual shipments have been close to two billion units for the past three years, which suggests the market has stagnated. Using rough numbers, there are about 7.4 billion people in the world and if every person keeps their phone for 3 years, the global installed base of mobile phones is roughly 6 billion. Given 26% of the world’s population is 14 years old or younger, or roughly 1.9 billion people, and assuming these

young children do not have a mobile phone, suggests the mobile phone market has reached saturation. Even reducing the average age of a phone to 2.7 years, which we believe is closer to current phone lifecycles, suggests an installed base of about 5.1 billion phones. Adding 1.9 billion children, gets you pretty close to the 7.4 billion people on the earth today.

Clearly there are geographic diﬀerences in mobile phone ownership. In the U.S., using an average lifecycle of 2.7 years suggests an installed base of roughly 512 million mobile phones, even though the U.S. reportedly had just 323 million people as of 2016. This suggests the U.S. phone market is already saturated, and that many people own more than one phone. The numbers are similar in Western Europe, where a 2.7 year lifecycle suggests an installed base of 450 million mobile phones, versus the roughly 420 million people as of 2016. In China, a 2.7 year lifecycle suggests a 1.3 billion smartphone installed base, versus the current population of roughly 1.38 billion people, suggesting China has also reached saturation. Given the installed base of phones in these main geographies is higher than or in line with the population suggests the markets that are not already saturated lie outside of the U.S., Western Europe, and China. In these other markets, price remains important, as highlighted by the 70%-plus share held by phones priced below $300 in these geographies.

In a market where everyone already has a mobile phone, the only way to grow is to gain share. So the question is, can Apple gain share over the next few years? Thus far, with the exception of the iPhone 6 cycle in 2015, Apple has not been able to gain share. From 2012 to 2017, as seen in Figure 4, Apple’s iPhone units grew less than the overall smartphone market, except during the iPhone 6 cycle. Overall, Apple’s market share has seen a modest decline over the past two years, as market share declines in China and the Rest of the World (which includes Japan) oﬀset modest share gains in Western Europe and stable share in the U.S. and Asia-Paciﬁc excluding China and Japan. In a saturated market, with limited growth, ﬂat to modestly declining share does not point to strong future growth.

# Apple's stock has beneﬁted from passive trading and ETF shift

Apple's stock clearly beneﬁtted in 2017 from what we have called the "anticipation trade" into the launch of the iPhone X. In general, Apple's shares trade up into new iPhone launches that are expected to be more positive, as seen in the chart below. Shares traded up into the introduction of the iPhone 5, iPhone 6, and iPhone X/8 models, with shares generally trading lower post these successful launches. The one exception is the iPhone 6, which massively outperformed expectations, as we noted in our July 2017 note ([link](https://research.db.com/Research/Document?rid=0900b8c08d21e01d&amp;kid=RP0001&amp;documentType=R)). Unlike the iPhone 6, data points on the iPhone X/8 suggest demand will not carry into the March quarter, which we believe points to stock underperformance this year.

Apple's shares were up 46% in 2017, signiﬁcantly outperforming the markets. We believe some of this performance came from the iPhone X/8 anticipation trade. Most of this upside came early in the year as investors got excited about the new iPhone X. As seen in the ﬁgure below, Apple's shares were up 11% year- to-date by February 10, signiﬁcantly outperforming the markets. While Apple's shares continued to climb further throughout 2017, they more closely tracked the markets until the end of October.

Figure 6: Apple stock price versus major U.S. indices

We believe the other driver of Apple's strong performance in 2017 was the market's strong performance. The S&P 500 was up 19% in 2017, while the NASDAQ was up 28%. Apple accounts for 4% of the S&P 500, which means that passive investors need to own a decent-sized portion of Apple shares in order to perform in line with the market. As seen below, passive funds continue to account

for a larger share of mutual funds and ETFs, which means that more funds are buying Apple when the markets go up. In addition to this growth in passive funds, the performance of many active funds is judged based on an index like the S&P 500 or the NASDAQ, which means these funds will try to match these indexes to some extend. We believe the fact that markets saw strong performance in 2017 helped drive roughly half of the upside in Apple's shares in 2017.

In addition to the beneﬁt of strong market performance, we believe Apple's shares are also beneﬁtting from the shift to ETFs. Many managed funds have limits on how much they can own of any one stock, which means that some passive funds, even ones that track the markets, can't hold Apple at its full market weighting. However, ETFs don't make this distinction, and ETFs that track certain indexes are fully weighted to the stocks in that index. As seen in the ﬁgure below, ETFs now account for 23% of passive investments, up 2ppts Y/Y and up 13ppts over the past 10 years. Given ETFs hold stocks at their market weight, this shift to ETF trading strategies has been a positive for Apple's shares.

# Valuation

Apple has traded at an average forward P/E of 13x since 2010 with a range of 9x to 16x. We believe shares should trade in line with these historical multiples and, because of its large market cap (3-4% of the S&P 500), should trade at a modest discount to the market. Our price target is based on shares trading at 16x our FY-19E EPS.

# Risk

Company-speciﬁc positive risks to Apple include stronger-than-expected smartphone sales and share gains, signiﬁcantly higher margins, and a faster ramp of new product categories including Watch and Apple Pay. Negative risks include slower smartphone sales, market share losses in smartphones, and weaker growth in Services sales.

Figure 9: Apple income statement

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