**Opinion Change** 

U.S. Equity Research

June 11, 2017

# Apple Inc.

# Limited Upside to Stock Despite Potentially Strong iPhone Cycle: Downgrading to Neutral

### **Summary**

We are downgrading Apple to Neutral from Buy while adjusting our PT to \$150 from \$160. The stock has meaningfully outperformed on a YTD basis and we believe enthusiasm around the upcoming product cycle is fully captured at current levels, with limited upside to estimates from here on out. Our sensitivity work indicates bull case EPS of around \$11 which, along with a cycle-peak multiple, indicates limited upside to the stock. Our LTVC work suggests more muted gains as well. As such, we move to the sidelines despite our expectations of a strong iPhone 8 cycle.

### **Key Points**

Still expect strong iPhone 8 cycle. We concur that the upcoming product cycle is likely to drive a strong holiday season following into early next year; however, we believe strength is anticipated and see very limited upside to estimates from here. A few things make us cautious on consensus FY18 numbers: 1) potential pull-in of demand creating tough comps in the following year; 2) growth driven primarily by replacements vs. net new customers, limiting expansion of installed base; 3) initial supply constraints due to complexities around product ramp; 4) potentially higher ASPs for high-end SKU driving demand elasticity; 5) risk to out-year gross margins.

**Sensitivity analysis and supply chain checks indicate limited upside to FY18.** Current consensus for iPhone shipments, iPhone ASP, consolidated margins and EPS are at 242mm (up 12% Y/Y), \$680 (up 3%), ~27% and \$10.43, respectively. We think consensus expectations for FY18 do not leave much room for upside, rather, based on our current checks, we see potential downside risk to current forecasts. Our most bullish case yields earnings of about \$11 for FY18, which is only ~\$0.50 above consensus.

Other areas' contribution unlikely to drive significant growth uptick. China is likely to remain weak in the n-t. We find that recent developments in India are a step in the right direction; however, affordability continues to be constrained limiting n-t contribution from the country. On services, while we acknowledge the company's intent to double the line-item by 2020, we believe ongoing penetration of developing countries (where attach is lower) could weigh on meaningful expansion from current levels. Additionally, consensus is expecting 30% growth in services revenue/user over the next 2 years, which seems high.

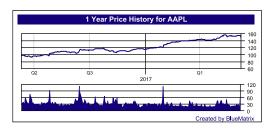
**Downgrading to Neutral from Buy; adjusting PT to \$150 from \$160.** At 15x and 11x NTM EPS and FCF, the stock is trading near the upper-end of its recent valuation range and we believe it is tough to expect the multiple to expand. With limited upside to EPS or FCF estimates, we think the stock is fully valued.

Rating Previous Rating	<b>Neutral</b> Buy
Price (6/09)	\$148.98
Price Target	\$150.00
Previous Price Target	\$160.00

Key Data	
Symbol	AAPL (NASDAQ)
52-Week Range	\$156.65 - \$91.50
Market Cap (\$mm)	\$776,758
Shares Outstanding (mm)	5,213.8
Float	4,768.0
Average Daily Volume	24,684,262
Dividend/Yield	\$2.18/1.5%

#### Fiscal Year-End: Sep 30

	2016A	201	7E	2018E				
_		Prior	Curr	Prior	Curr			
Revei	nue (\$bn)							
1Q	75.8A	-	78.4A	-	81.7E			
2Q	50.5A	-	52.9A	_	55.6E			
3Q	42.4A	-	44.7E	_	47.5E			
4Q	46.9A	_	49.6E	_	52.3E			
Yr	215.6A	_	225.6E	-	237.2E			
P/Reve	enue3.6x	_	3.4x	_	3.3x			
Earni	ngs per S	hare (\$)						
1Q	3.28A	_	3.36A	_	3.60E			
2Q	1.90A	_	2.10A	_	2.13E			
3Q	1.42A	_	1.55E	_	1.59E			
4Q	1.67A	_	1.78E	_	1.84E			
Yr	8.28A	_	8.79E	_	9.16E			
P/E	18.0x	_	16.9x	-	16.3x			



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# An Integrated Thesis: Downgrading AAPL to Neutral

We are downgrading Apple to Neutral from Buy while adjusting our 12-month price target to \$150 from \$160. The stock has recently delivered strong gains on the back of a modest uptick in estimates going into the upcoming iPhone product cycle, coupled with meaningful multiple expansion. In-line with most investors, we expect a very robust product cycle in the upcoming holiday season continuing into the early part of next year. Our conversations with our Japan team (headed by Yasuo Nakane) and recent checks with the supply chain in Taiwan indicate significant optimism among supply chain vendors with respect to the product launch later this year, especially since it will be the tenth anniversary of iPhone. In addition to refreshing the current line-up, investors expect Apple to launch a new SKU at the upper-end of its portfolio. While it has become common for speculation to build around the feature set of new product launches, it is unlikely that precise details become available prior to the launch itself (potentially around late-September). Also, similar to prior major launches, we expect the new device to be supply constrained initially. In fact, our supply chain checks indicate that current estimates might end up being a bit optimistic; there appears to be risk to production volumes given complexities with new features (OLED display and 3D sensors). In addition, we expect Apple to charge a premium for the OLED SKU given a higher bill-of-materials relative to the current line-up. A higher ASP could impact demand for the device but will likely aid in supporting the company's profitability.

Our recent checks in Asia and Japan noted a relatively steady procurement environment. Our Japan team had raised its full-year estimates in February. Since then, media reports have indicated that the high-end SKU could see production delays of about a month as a result of challenges in integrating the touch ID sensor underneath the OLED panel (in the absence of a home button) as well as difficulties around the potential inclusion of 3D facial recognition technology. Our Japan team's work leads it to believe that a few weeks' production delay on the OLED model may not be unreasonable. It is likely that Apple still announces the model alongside the likely 4.7" and 5.5" refreshes in late-September; however, supplies could be severely limited initially, impacting the availability of the OLED phone. This is similar to the iPhone 6+ launch in 2014 and the iPhone 7+ Jet Black SKU last year, both of which saw limited availability in the weeks following launch when pre-orders opened, and achieved supply-demand balance a few months later. We expect consumer demand to remain robust given the company's very strong brand loyalty; investors are likely to look past a potential delay of a few weeks as well. That said, at this point, we do not see material upside to estimates. Rather, there is potentially some risk associated with estimates, as expectations might have gotten ahead of reality.

In our view, enthusiasm around the new product is largely baked into the stock at current levels. As we have seen in past product cycles, the stock remains vulnerable to a 'sell-the-news' type of reaction once data points start coming in. Apple has materially outperformed the market on a year-to-date basis (up 28% year-to-date versus a gain of 9% on the S&P500) and we believe the stock has reached a point where there is limited room for further multiple expansion as valuation is already towards the upper end of its recent range. In our view, upside to estimates will likely be muted due to supply constraints for the new line-up as well as limited potential for installed base expansion. We think the expected double-digit FY18 (ending September 2018) iPhone unit growth is largely a result of movement of shipments from current quarters to the periods immediately following the launch.

In our view, the fundamental value of Apple should not change much if shipments in the upcoming cycle are driven by replacement purchases. We continue to evaluate the company using our lifetime value of customer framework. Further gains on the stock could be limited until there is more meaningful expansion in the installed base, higher recurring revenue growth from existing users or deeper penetration of the installed base via new product categories. We do not expect the new iPhone to turn any of these levers in the near-term. In addition, we think recent announcements of HomePod and product refresh will only have a marginal impact on the company's earnings potential in the near-term. As such, we recommend moving to the sidelines on the stock for now.

## iPhone 8 Likely to be a Strong Product Cycle

To be clear, our downgrade of the stock is not predicated on a pessimistic view of the upcoming iPhone 8 product cycle. We continue to expect strong uptake of the new device. However, we think sales of the new device will predominantly be to existing users replacing older generation phones, which, in our view, should not alter the fundamental value of Apple as a company. Based on various media articles and conversations with our Japan team, new features potentially built into the high-end SKU include an edge-to-edge OLED display panel, a touch ID fingerprint scanner directly on display (replacing the stand-alone home button), 3D facial recognition capability for the front-facing camera, wireless charging and upgraded materials for the body of the device. In addition, we note that unit shipments decelerated earlier, this year (versus prior trends), potentially creating greater pent-up demand for the upcoming product cycle. Taken together, we expect new device shipments to be primarily associated with replacement demand from the existing installed base (as a result of aging devices) instead of expansion of the installed base. Further, strong shipments of the new device could pull forward demand from future quarters, which can create tough compares and potential for a year-over-year shipment decline in C2H18 or early 2019. In the following chart, we illustrate the company's iPhone sell-in unit shipments over the last few years and lay out consensus estimates through FY19. Based on the strong shipments in the last few years and assuming 2-3 year life of the device,



we think about 250 million phones could be eligible for upgrade, which could drive unit volumes over the few quarters post the upcoming launch.

**Exhibit 1: iPhone Shipments** 



Source: FactSet, Company data and Mizuho Securities USA estimates

# Supply Chain Checks Indicate Expansion of OLED SKUs Next Year That Can Impact Product Cycle

As mentioned above, our checks indicate that there could be supply constraints initially for the new device immediately following the launch. In addition, our Japan research team believes that there could be broader adoption of OLED-based screens, thereby, leading to lower-end SKUs also potentially sporting the new panel at some point next year. As such, we think adoption of the new devices could potentially become more prolonged as customers are likely to wait for future launches that could offer further advances in technology at lower price points. In our view, Apple's pricing is likely to become the main hurdle to meaningful expansion of its installed base. While some near-term upgrade activity may be associated with failing hardware of aged devices, customers with the flexibility to extend the life of their devices may choose to do so until OLED panel and incremental functionality are more widely available. As a result, the product cycle could end up being more prolonged this time around versus prior launches.

Our conversations with supply chain vendors in Taiwan indicate that production ramp up seems to be starting on time for the refresh of existing devices. OLED phones are likely running about a month behind, which supports our view that there will likely be limited supply of the higher-end device, which could also allow Apple to charge a higher price for the device.



## **Upside Potential to FY18 Estimates Seems Limited**

Based on our conversations around the supply chain capacity build-out, we think FY18 shipments could end up in a range of 235-240 million units (or up 8-10% year-over-year), which compares with current consensus of 241 million. Admittedly, there is a lot of uncertainty associated with next year's shipments at this point and actual numbers could be very different from current estimates. However, we think it is tough to be more optimistic until we get some level of clarity around new feature functionality and customer reception. Even if the shipments were to end up toward the upper-end of our forecast, we remain wary of extrapolating that growth (and, thereby, Apple's fundamental value) to subsequent years unless a meaningful contributor of that growth were to be expansion of the installed base, with potential further profitable monetization over time.

On margins, the company is likely to benefit from higher ASPs given our view that the high-end SKU could be priced at a premium to the current line-up. That said, with reports suggesting potential pricing in excess of \$1,000 for the OLED model, we think that there may be material demand elasticity if prices were to increase much further. Apple will have to either settle for lower gross margins to potentially generate unit growth, or protect its profitability. Based on past behavior, we think that it is more likely that the company settles for lower volumes while prioritizing margins. However, stepping back, we think going down either path will likely be negative for the stock since investors are unlikely to react positively to a material decline in gross margins or to a decelerating top-line.

Below, we lay out our scenario analysis for FY18; we note that current consensus estimates for iPhone shipments, iPhone ASP, operating margins and EPS are at 242 million, \$680, 27% and \$10.43, respectively. As illustrated in the table below, even our most bullish case (i.e. assuming the company ships 252 million units at \$700 ASP) yields EPS of about \$11. Applying a 15x multiple to that indicates stock value in the mid \$160s, implying limited upside from current levels. Similarly, looking at it from an enterprise value basis, assuming a free cash flow margin of 25% for FY18 (consensus estimates are at 24%) on sales growth of 12% (in-line with consensus) along with a EV/FCF multiple of 11x (in-line with the peak multiple leading up to the iPhone 6 cycle), we come up with a stock value in the mid \$160s as well.



<b>Exhibit</b>	2. FY1	8 Sce	nario A	∆nalı	veie
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Y/Y g	rowth		7%	9%	12%	14%	16%
				iPhone	Shipmen	ts (mm)	
			232	237	242	247	252
0%		\$660	\$9.97	\$10.10	\$10.24	\$10.37	\$10.51
2%		\$670	\$10.06	\$10.20	\$10.33	\$10.47	\$10.61
3%	ASP	\$680	\$10.16	\$10.29	\$10.43	\$10.57	\$10.71
5%		\$690	\$10.25	\$10.39	\$10.53	\$10.67	\$10.81
6%		\$700	\$10.35	\$10.49	\$10.63	\$10.77	\$10.92

Source: FactSet, Company data and Mizuho Securities USA estimates Current Consensus calls for 242mm iPhones at ASP of \$680 and EPS of \$10.43

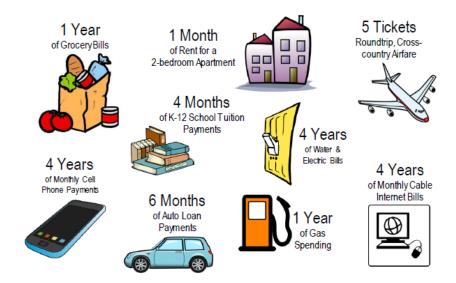
## India Opportunity Unlikely to Move the Needle Near-Term

Management has signaled plans to aggressively pursue the iPhone opportunity in India and has even started manufacturing low-end devices in the country in order to satisfy regulatory requirements and avoid import tariffs. Although we expect strong growth in the region for the company, recall that pricing was the primary pushback to iPhone adoption in India that we called out in our extensive report last year (A Global Analysis of the Apple Ecosystem: India's Not China, But AAPL's Still Tasty - Buy on June 8, 2016). Based on recent conversations with various channel partners in India, we find that affordability of the company's devices remains stretched, especially as China-based OEMs (Huawei, Xiaomi, Vivo etc.) compete aggressively on price with their Android smartphone offerings. Other key takeaways with respect to potential adoption of the iPhone in the region include: 1) a lag of about 7-10 years when comparing India's smartphone penetration journey relative to China; 2) idiosyncratic factors that led to China's extremely rapid adoption of large-screen iPhones that may not be applicable to India; and, 3) limited near-term contribution to Apple's top-line from the region. However, the long-term potential exists given a young demographic that can expand its wealth over time.

In the exhibit below, we provide added perspective by evaluating the opportunity cost of buying an iPhone in India based on an average smartphone user's living expenses. For instance, the amount spent on iPhone 6S could allow a consumer to purchase five round-trip cross-country air tickets or pay for one month's rent for a two-bedroom apartment in a large, metropolitan city. Similarly a consumer can pay for one year's worth of groceries, or four years' worth of cell phone payments with the same amount. In contrast, in the US, smartphone users finance their phones with only \$200-300 paid up-front.

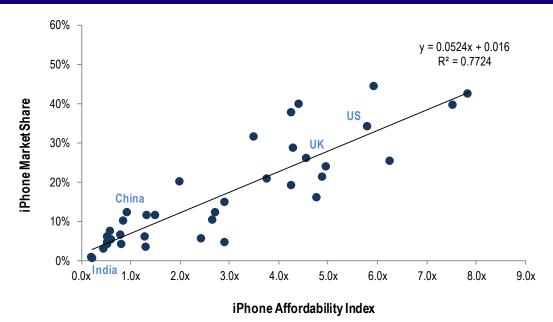


## Exhibit 3: Opportunity Cost of an iPhone 6S in India



Source: Gartner, Clipartpanda.com, Mizuho Securities USA estimates

The price points for smartphones in India are much lower – based on Gartner data, we find that about 75% of the phones shipped in India sell for less than \$250 and 95% of the phones sell for less than \$500. Stepping back, in order to better analyze Apple's appeal among various geographies, we defined the affordability index as average monthly wage divided by the local price of an iPhone 6S (converted to USD at the spot exchange rate); the higher the affordability index, the higher the potential for Apple to gain meaningful share. As shown in the exhibit below, the company commands greater than 10% market share in regions where the affordability index is around 1.5x or higher. In other words, Apple has gained meaningful market share in markets where cost of an iPhone is up to twothirds of monthly average income. The company has achieved reasonable success in China where the affordability index measures around 1x, though, we point out that there have been some unique characteristics like the need to jumpstart its 4G network, high wage disparity and aggressive initial subsidies upon launch of the iPhone that allowed Apple to command share greater than the level indicated by the trend-line. India, on the other hand, has an affordability index of less than 0.25x, implying that average consumer will have to spend over four months' salary to purchase an iPhone. While it is the largest single region after China where Apple can try to target over a billion people, the country clearly does not meet the affordability criteria for iPhones. Moreover, we think India presents some very unique challenges to Apple that we have covered in our detailed report. At a high level, India has the numbers that could get Apple excited about the market, but the company's price points will make it extremely difficult for it to gain significant share in the market based on our analysis.



**Exhibit 4: Correlation Between iPhone Affordability & Market Share** 

Source: ILO, Gartner, Mizuho Securities USA estimates

Over time, we think Apple can push its penetration slightly above the trend-line due to its extensive efforts in the region. We used expected GDP growth rate as a proxy for annual wage increases in the region. Additionally, we assumed a Mac attach rate of 10% for the region and iPad or Watch attach rate of 25% in our calculations. As the exhibit below illustrates, we believe India could contribute around \$3-4 billion in 2017 rising to around \$9-10 billion by 2020 (CAGR of about 35-40%). We note that we did not include services revenue in the analysis below as we do not expect significant attach rate of services in the region. To put this in context, revenues from India would represent about 4-5% of Apple's total revenues over the next few years through 2020. In absolute terms, these revenue numbers from India represent strong growth; however, the contribution is unlikely to have a material impact on the company as a whole.



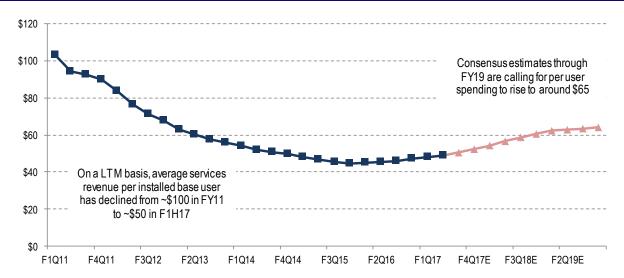
Exhibit 5: India's Potential Contribution to Apple's Top-Line

	2016E	2017E	2018E	2019E	2020E
Monthly Wage	\$146	\$156	\$166	\$178	\$190
iPhone Affordability Index	0.2x	0.3x	0.3x	0.3x	0.3x
iPhone Market Share	2.2%	2.8%	3.2%	3.5%	4.0%
iPhone Shipments (mm)	3.1	5.0	6.7	8.8	11.3
YoY growth	64%	60%	35%	30%	29%
iPhone ASP	\$615	\$609	\$603	\$597	\$591
iPhone Revenue (mm)	\$1,914	\$3,033	\$4,052	\$5,234	\$6,662
Mac Shipments (mm) @ 10% Attach	0.3	0.5	0.7	0.9	1.1
Mac Revenue (mm)	\$389	\$623	\$840	\$1,096	\$1,409
iPad / Watch Shipments (mm) @ 25% Attach	0.8	1.2	1.7	2.2	2.8
iPad / Watch Revenue (mm)	\$350	\$560	\$756	\$987	\$1,268
Total India Revenue (mm)	\$2,655	\$4,218	\$5,651	\$7,320	\$9,344
Y/Y Growth		59%	34%	30%	28%
% of Apple's Total Revenue	1%	2%	3%	3%	4%

Source: Company data and Mizuho Securities USA estimates

## Services Offer Potential, but Unlikely to Impact Overall Performance; Near-Term Estimates Could be at Risk

Management has been talking about its focus on expanding services segment revenues in the near-term. In recent earnings calls, Tim Cook indicated that he expects services revenues to double by 2020, which implies a CAGR of about 20% from FY16 versus expected growth of 18% and 16% in FY17 and FY18, respectively, based on consensus estimates. Given our view of more muted growth in iPhones and other products, services can likely grow from 11% of sales in FY16 to about 20% of sales by FY20. Although management has not provided details of its services segment breakdown, we are disinclined to believe that all services are created equal. Music and App Store sales are likely to be more profitable for Apple while iCloud revenues might generate materially lower profitability, in our view. Within the segment, App Store seems to be the largest contributor and is growing at the fastest rate, which is a net positive as the revenue base is very profitable for Apple. Overall, although services likely offer better relative profitability (versus other categories) and have the potential to become a bigger part of the revenue mix over time, we think it is too early to give the company credit for its goals, especially given the varying profitability mix among the different services in the portfolio.



**Exhibit 6: Trends in Services Consumption per Installed Base User** 

Source: Company data and Mizuho Securities USA estimates

Notably, as the exhibit above illustrates, the average services revenue per installed base iPhone user declined meaningfully from FY11 to FY16, after which, the metric has begun to stabilize (with consensus calling for growth through FY19). In our view, the initial downward trend was likely the result of rapid uptake of the iPhone in geographies outside of the US, UK and other developed economies where we believe services attach per iPhone is lower. Additionally, the incremental users in the developed countries are also spending less on services versus the initial adopters. As indicated by the above exhibit, consensus seems to be modeling about 30% growth on average services revenue per user over the next two years, which might turn out to be aggressive, in our view. While we agree that the metric can grow from the current level due to Apple's strong focus on the segment, we think the amount of growth could be more muted as incremental expansion of users is happening in regions where attach rate of services is low. At the very least, we think there is limited upside to revenue estimates from the segment.

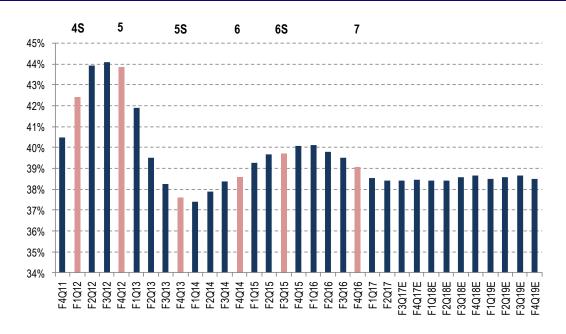
# Potential Downside to Consensus Gross Margins over the Next Couple of Years

In the chart below, we illustrate Apple's LTM gross margins over the past 5 years in addition to consensus expectations over the next couple of years. After peaking in FY12 at around 44%, the metric found a bottom in FY14 at just over 37%. This compression was likely the result of expansion of the product line-up toward the lower-end of the range in addition to higher penetration in emerging markets (thereby, impacting the product mix). Margins recovered from late-FY15 to early-FY16 as the company introduced high-end 'S' and larger-screen variants with higher ASPs; however, also in FY16, the company introduced the iPhone SE with



the intention of driving adoption in lower-income geographies. As such, gross margins have declined from a local peak in FY16 of around 40% to F2Q17 LTM levels of around 38%. Notably, looking over the next couple of years, we find that consensus sees gross margins largely flat at around 38% - in our view, there may be downside to expectations as the company continues to penetrate emerging markets given high levels of smartphone saturation in the developed world. We acknowledge the potential ASP uplift from forthcoming high-end SKUs; however, we believe unit volume mix may be skewed to the lower-end creating incremental pressure on gross margins. Additionally, greater expansion of OLED screens in lower-end devices next year could impact gross margins.

**Exhibit 7: LTM Gross Margin Trends (Colored Bars Represent New Launch)** 





## Lifetime Value of Customer Analysis Suggests Limited Upside from Current Levels

We remain of the view that Apple maintains a very strong franchise and could continue to gain incremental share of the smartphone market; however, the pace of share gains will likely meaningfully moderate as the market becomes more saturated. As such, we assume growth of about 4% in the company's installed base over the next 10 years, which would also imply normalized shipment growth in the low-single-digits during the period. We note that the company's annual iPhone shipment growth rates can vary based on market conditions, timing of product launches or the competitive environment. However, a normalized growth rate in the low-to-mid single digits seems reasonable to us.

Next, we recognize that the company has over \$170 billion in net cash on its balance sheet. However, most of the cash (over 90%) is overseas and the company would be taxed, incrementally, if it were to repatriate the cash back to the US. As such, we adjust the balance by assuming 25% incremental tax on overseas cash. While reports continue to indicate potential policy moves to allow a cash repatriation holiday as part of the administration's agenda, we remain conservative and do not assume any such holiday for the time being. Based on these assumptions, we estimate Apple's stock's fair value to be about \$150-160 per share.



Lifetime value of the customer (LTVC)

Exhibit 8: LTV	C Framework 8	& Estimates
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	Year:	1	2	3	4	5	6	7	8	9	10
Revenue											
iPhone (assuming ASP growth of -1%)		645	0	639	0	632	0	626	0	620	0
Services (assuming YoY growth of 1%)		50	51	51	52	52	53	53	54	54	55
Macs ASP		1,235	0	0	1,235	0	0	1,235	0	0	1,235
10% attach rate		124	0	0	124	0	0	124	0	0	124
iPad/Watch (ASP)		400	0	0	400	0	0	400	0	0	400
20% attach rate		80	0	0	80	0	0	80	0	0	80
Total Revenue		\$899	\$51	\$690	\$255	\$684	\$53	\$882	\$54	\$674	\$258
Gross Profit											
iPhone @ 44% GM		284	0	281	0	278	0	275	0	273	0
Services @ 80% GM		40	40	41	41	42	42	42	43	43	44
Macs @ 20% GM		25	0	0	25	0	0	25	0	0	25
iPad/Watch @ 35% GM		28	0	0	28	0	0	28	0	0	28
Total Gross Profit		\$377	\$40	\$322	\$94	\$320	\$42	\$371	\$43	\$316	\$96
SG&A @ 30% of Gross Profit		113	12	97	28	96	13	111	13	95	29
Operating Income		264	28	225	66	224	29	259	30	221	68
Tax Rate		26%	26%	26%	26%	26%	26%	26%	26%	26%	26%
Net Income		\$195	\$21	\$167	\$49	\$166	\$22	\$192	\$22	\$164	\$50

\$1,010

Year:	1	2	3	4	5	6	7	8	9	10
iPhone Installed Base (millions)	575	598	622	647	673	700	728	757	787	818
New Customers assuming YoY growth of 4%		23	24	25	26	27	28	29	30	31
Value of New Customers		\$23,221	\$24,149	\$25,115	\$26,120	\$27,165	\$28,251	\$29,381	\$30,557	\$31,779
Discounted Value (millions) @ 10% discount rate		\$21,110	\$19,958	\$18,870	\$17,840	\$16,867	\$15,947	\$15,077	\$14,255	\$13,477
Value of existing installed base	\$580,514									
PV of potential new customers	\$153,401									
Total Enterprise Value	\$733,915	- -								
Cash on Balance Sheet	\$256,841									
Less Long Term Debt	(\$84,531)									
Potential Tax Liability for Repatriating Cash	(\$69,347)									
Net Cash on Balance Sheet	\$102,963	- -								
Market Cap	\$836,878									
Stock Price	\$159.05									

Source: Company data and Mizuho Securities USA estimates

We recognize that our valuation analysis is based on a number of assumptions that could, in reality, end up being different from the values used in our analysis. As such, in order to better understand the sensitivity of Apple's fundamental value to these variables, we perform a sensitivity analysis around our assumptions. Understandably, the company's value is the most sensitive to its ability to expand its installed base. Each incremental point of installed base growth potentially enhances the stock price by around \$7-8. We feel comfortable with our assumption of low-single-digit growth in the company's installed base on the back of incremental share gains and penetrating in emerging market. On the profitability front, we assume iPhone ASP declines of around 1% per model as traction at the lower-end of the market offsets contribution from high-end SKUs. In the exhibit below, we find that the stock's fundamental value is in the

\$145-165 range depending on incremental upside/downside to our initial assumptions around installed base and ASP growth. Another metric to be wary of is the ongoing elongation of iPhone upgrade activity as innovation becomes more incremental in nature; although we do not expect the cycle to extend beyond 3 years; incremental changes are likely to impact the LTVC value.

## **Exhibit 9: LTVC Sensitivity Analysis**

YoY Installed Base Growth 2% 1% 3% 4% 5% \$132 \$138 \$146 \$153 \$161 -4% Phone ASP -2% \$135 \$142 \$149 \$157 \$166 0% \$138 \$145 \$170 \$153 \$161 2% \$142 \$149 \$157 \$165 \$174 4% \$145 \$153 \$161 \$170 \$179

Source: Company data and Mizuho Securities USA estimates

## Incremental Cash Return Likely via Buybacks & Dividends; However, Limited Visibility on Cash Repatriation

As of F2Q17, Apple had just over \$256 billion in cash and cash equivalents, 90% of which is held off-shore. Adjusting for debt, the company's net cash position as of the latest quarter is around \$170 billion. On the capital return front, the company authorized an additional \$50 billion of incremental returns to shareholders via buybacks and dividends, which it announced as part of second quarter results. Cumulatively, the capital return program amounts to \$300 billion by March 2019. The company generated strong free cash flow of around \$53 billion in FY16, with consensus calling for 5% and 13% growth in FY17 and FY18, respectively. We expect the company to continue returning a material portion of cash flow to investors over the next few years. Incrementally, investors have considered the potential for a tax holiday on overseas cash as part of the new administration's pro-growth agenda in the US. While still a possibility, we assign a relatively low probability to such an event in the very near-term. At the very least, we think it is too early to give the company benefit. If it were to occur we believe the tax shield would be worth at the most \$10-15 of value to the stock.

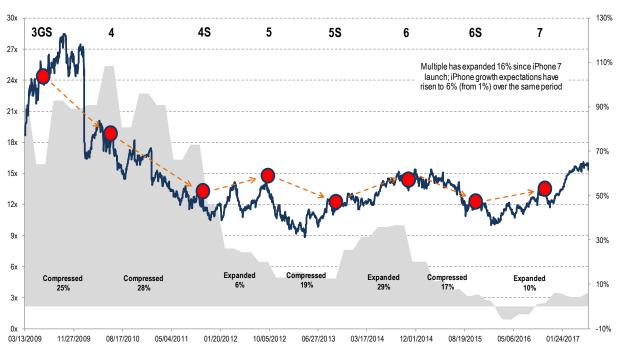
# Current Valuation Appears to Capture Demand Contribution from Near-Term Product Cycle

On the valuation front, we believe the stock is currently pricing in robust levels of optimism around the upcoming product cycle and its potential to drive incremental iPhone shipment growth over the next 12-18 months. Since the launch of the iPhone 7 in September of 2016, the NTM earnings multiple has expanded around 19%, which compares with prior product cycles of 29% (5S to 6) and 6% (4S to 5). In our view, the multiple expanded materially higher on the iPhone 6 cycle as a result of the introduction of the larger form factor and rapid acceleration in China shipments. While the first of those drivers could apply to



the upcoming iPhone 8 cycle, we note that, although compares are getting easier, mainland China continues to weigh on results and we expect that trend to continue. In the exhibit below, we also lay out iPhone shipment growth expectations against the trend in the multiple. After negative mid-single-digit NTM shipment growth expectations in mid-2016, consensus has now turned positive and is calling for mid-to-high single-digit shipment growth over the next twelve months. Specifically, as the multiple expanded 20% since the iPhone 7 launch, growth expectations have risen from 1% to around 7% today. While there may be incremental upside to shipment growth as a result of the product cycle, we think the current multiple fully captures potential upside. At the very least, we do not expect multiple expansion to be a driver for the stock performance and as indicated previously, we see limited upside to estimates, which can cause the stock to move sideways in the near-term.

## Exhibit 10: Price to Earnings Multiple Trend Over Past Product Cycles



\* LHS: multiple; RHS: iPhone Y/Y unit growth (%) 1m rolling average

Source: Company data and Mizuho Securities USA estimates

Looking at it another way, below we illustrate the trend in valuation multiples over the past few cycles and assess stock returns leading up to major product launches. On average, we point out that over the last six years (prior to the recent strength in the stock price), peak NTM earnings and EV/FCF multiples were around 15x and 11x, respectively. By comparison, Apple's current multiples are 15x and 11x, respectively. In terms of returns, the stock has gained 17% and 22%, on average, on a 3-month and 6-month basis leading up peak multiples during prior product cycles. By comparison, the stock has gained 9% over the past 3-



months and 34% over the past 6-months. We believe recent levels capture the anticipation going into the iPhone 8 cycle. At the current price, we think risk-reward is relatively well balanced with upside being in the \$160-165 range (assuming upside to current estimates and peak multiples to hold) and downside in the \$135-140 range (assuming current estimates are reasonable and multiple reverts to the recent average level).

**Exhibit 11: Returns Leading Up To Prior Product Launches** 

		Peak		Returns	to Peak
	Price	P/E	EV/FCF	-3m	-6m
iPhone 4	\$38.69	19.8x	14.1x	37%	34%
iPhone 4S	\$58.35	12.9x	9.7x	12%	25%
iPhone 5	\$100.27	14.1x	11.2x	20%	17%
iPhone 5S	\$72.53	12.5x	9.6x	15%	13%
iPhone 6	\$103.30	15.1x	11.2x	12%	36%
iPhone 6S	\$132.07	14.2x	10.6x	4%	21%
iPhone 7	\$115.57	13.3x	9.5x	21%	9%
Average		14.6x	10.8x	17%	22%
Current	\$148.98	15.4x	10.8x	9%	34%



Exhibit 12: Revenue Detail (\$ in millions, except per share data

Apple Revenue Detail			FY16A					FY17E					FY18E		
	1QA	2QA	3QA	4QA	Total	1QA	2QA	3QE	4QE	Total	1QE	2QE	3QE	4QE	Total
	Dec 15	Mar 16	Jun 16	Sep 16	FY16A	Dec 16	Mar 17	Jun 17	Sep 17	FY17E	Dec 17	Mar 18	Jun 18	Sep 18	FY18E
Mac	5,312	4,034	4,252	4,886	18,484	5,374	4,199	4,420	5,167	19,160	5,194	4,105	4,385	5,202	18,886
q/q growth	-7.0%	-24.1%	5.4%	14.9%		10.0%	-21.9%	5.3%	16.9%		0.5%	-21.0%	6.8%	18.6%	
y/y growth	-3.8%	-11.6%	-11.3%	-14.4%	-10.2%	1.2%	4.1%	3.9%	5.8%	3.7%	-3.4%	-2.2%	-0.8%	0.7%	-1.4%
ASP	\$1,270	\$1,266	\$1,232	\$1,175	\$1,235	\$1,348	\$1,392	\$1,305	\$1,242	\$1,319	\$1,367	\$1,387	\$1,325	\$1,279	\$1,338
q/q growth	5.3%	-0.3%	-2.7%	-4.7%		14.8%	3.2%	-6.3%	-4.8%		10.1%	1.5%	-4.5%	-3.5%	
y/y growth	0.9%	2.9%	-2.0%	-2.6%	-0.2%	6.1%	9.9%	5.9%	5.8%	6.8%	1.4%	-0.3%	1.6%	2.9%	1.4%
Mac Revenue	\$6,746	\$5,107	\$5,239	\$5,739	\$22,831	\$7,244	\$5,844	\$5,767	\$6,419	\$25,273	\$7,101	\$5,695	\$5,812	\$6,653	\$25,261
% of revenue	8.9%	10.1%	12.4%	12.2%	10.6%	9.2%	11.0%	12.9%	12.9%	11.2%	8.7%	10.2%	12.2%	12.7%	10.7%
q/q growth	-2.0%	-24.3%	2.6%	9.5%		26.2%	-19.3%	-1.3%	11.3%		10.6%	-19.8%	2.1%	14.5%	
y/y growth	-2.9%	-9.0%	-13.1%	-16.6%	-10.4%	7.4%	14.4%	10.1%	11.8%	10.7%	-2.0%	-2.6%	0.8%	3.6%	-0.1%
iTunes/Software/Services	\$6,056	\$5,991	\$5,976	\$6,325	\$24,348	\$7,172	\$7,041	\$7,065	\$7,243	\$28,521	\$8,237	\$7,912	\$7,876	\$7,962	\$31,987
% of revenue	8.0%	11.8%	14.1%	13.5%	11.3%	9.2%	13.3%	15.8%	14.6%	12.6%	10.1%	14.2%	16.6%	15.2%	13.5%
q/q growth	19.1%	-1.1%	-0.3%	5.8%		13.4%	-1.8%	0.3%	2.5%		13.7%	-3.9%	-0.5%	1.1%	
y/y growth	26.2%	19.9%	18.9%	24.4%	22.3%	18.4%	17.5%	18.2%	14.5%	17.1%	14.9%	12.4%	11.5%	9.9%	12.2%
iPhone Units (K)	74,779	51,193	40,399	45,513	211,884	78,290	50,763	40,642	46,559	216,253	80,932	54,750	44,067	49,398	229,148
q/q growth	55.6%	-31.5%	-21.1%	12.7%		72.0%	-35.2%	-19.9%	14.6%		73.8%	-32.4%	-19.5%	12.1%	
y/y growth	0.4%	-16.3%	-15.0%	-5.3%	-8.4%	4.7%	-0.8%	0.6%	2.3%	2.1%	3.4%	7.9%	8.4%	6.1%	6.0%
Implied ASP	\$691	\$642	\$595	\$619	\$645	\$695	\$655	\$614	\$627	\$656	\$692	\$648	\$616	\$627	\$653
q/q growth	3.0%	-7.0%	-7.3%	3.9%		12.3%	-5.7%	-6.3%	2.2%		10.3%	-6.3%	-5.0%	1.9%	
y/y growth	0.5%	-2.5%	-9.8%	-7.7%	-3.8%	0.6%	2.1%	3.1%	1.4%	1.6%	-0.4%	-1.0%	0.4%	0.0%	-0.4%
iPhone Revenue	\$51,635	\$32,857	\$24,048		\$136,700	\$54,378	\$33,249	\$24,940		\$141,776	\$55,981	\$35,486	\$27,148		\$149,610
% of revenue	68.1%	65.0%	56.8%	60.1%	63.4%	69.4%	62.9%	55.8%	58.8%	62.8%	68.5%	63.8%	57.2%	59.3%	63.1%
q/q growth	60.3%	-36.4%	-26.8%	17.1%		93.1%	-38.9%	-25.0%	17.1%		91.6%	-36.6%	-23.5%	14.2%	
y/y growth	0.9%	-18.4%	-23.3%	-12.6%	-11.8%	5.3%	1.2%	3.7%	3.7%	3.7%	2.9%	6.7%	8.9%	6.1%	5.5%
Accessories	\$4,351	\$2,189	\$2,219	\$2,373	\$11,132	\$4,024	\$2,873	\$3,271	\$3,288	\$13,456	\$5,134	\$2,868	\$3,086	\$3,357	\$14,445
% of revenue	5.7%	4.3%	5.2%	5.1%	5.2%	5.1%	5.4%	7.3%	6.6%	6.0%	6.3%	5.2%	6.5%	6.4%	6.1%
q/q growth	42.7%	-49.7%	1.4%	6.9%		69.6%	-28.6%	13.9%	0.5%		56.2%	-44.1%	7.6%	8.8%	
y/y growth	61.8%	29.6%	-16.0%	-22.1%	10.6%	-7.5%	31.2%	47.4%	38.6%	20.9%	27.6%	-0.2%	-5.7%	2.1%	7.3%
iPad Units (K)	16,122	10,251	9,950	9,267	45,590	13,081	8,922	8,728	8,488	39,219	12,659	8,342	8,129	7,725	36,855
q/q growth	63.1%	-36.4%	-2.9%	-6.9%		41.2%	-31.8%	-2.2%	-2.8%		49.1%	-34.1%	-2.6%	-5.0%	
y/y growth	-24.7%	-18.8%	-9.0%	-6.2%	-16.9%	-18.9%	-13.0%	-12.3%	-8.4%	-14.0%	-3.2%	-6.5%	-6.9%	-9.0%	-6.0%
Implied ASP	\$439	\$430	\$490	\$459	\$452	\$423	\$436	\$418	\$411	\$422	\$417	\$442	\$439	\$431	\$430
q/q growth	1.6%	-2.0%	13.8%	-6.3%		-7.9%	3.1%	-4.0%	-1.8%		1.5%	6.1%	-0.8%	-1.8%	
y/y growth	4.7%	0.1%	18.0%	6.1%	6.9%	-3.7%	1.3%	-14.6%	-10.5%	-6.7%	-1.4%	1.5%	4.9%	4.9%	1.9%
Total iPad Revenue	\$7,084	\$4,413	\$4,876	\$4,255	\$20,628	\$5,533	\$3,889	\$3,652	\$3,487	\$16,561	\$5,278	\$3,690	\$3,567	\$3,328	\$15,864
% of revenue	9.3%	8.7%	11.5%	9.1%	9.6%	7.1%	7.4%	8.2%	7.0%	7.3%	6.5%	6.6%	7.5%	6.4%	6.7%
q/q growth	65.7%	-37.7%	10.5%	-12.7%		30.0%	-29.7%	-6.1%	-4.5%		51.4%	-30.1%	-3.3%	-6.7%	
y/y growth	-21.2%	-18.7%	7.4%	-0.5%	-11.2%	-21.9%	-11.9%	-25.1%	-18.1%	-19.7%	-4.6%	-5.1%	-2.3%	-4.5%	-4.2%
Net Sales	\$75,872		\$42,358		\$215,639	\$78,351	\$52,896	\$44,695		\$225,588	\$81,731	\$55,651	\$47,490		\$237,166
q/q growth	47.3%	-33.4%	-16.2%	10.6%		67.2%	-32.5%	-15.5%	11.1%		64.6%	-31.9%	-14.7%	10.1%	
y/y growth	1.7%	-12.8%	-14.6%	-9.0%	-7.7%	3.3%	4.6%	5.5%	6.0%	4.6%	4.3%	5.2%	6.3%	5.3%	5.1%



## Exhibit 13: Income Statement (\$ in millions, except per share data)

			FY16A					FY17E					FY18E		
	1QA	2QA	3QA	4QA	Total	1QA	2QA	3QE	4QE	Total	1QE	2QE	3QE	4QE	Total
	Dec 15	Mar 16	Jun 16	Sep 16	FY16A	Dec 16	Mar 17	Jun 17	Sep 17	FY17E	Dec 17	Mar 18	Jun 18	Sep 18	FY18E
Net Sales	\$75,872	\$50,557	\$42,358	\$46,852	215,639	\$78,351	\$52,896	\$44,695	\$49,646	225,588	\$81,731	\$55,651	\$47,490	\$52,295	237,166
% growth q/q	47.3%	-33.4%	-16.2%	10.6%		67.2%	-32.5%	-15.5%	11.1%		64.6%	-31.9%	-14.7%	10.1%	
% growth y/y	1.7%	-12.8%	-14.6%	-9.0%	-7.7%	3.3%	4.6%	5.5%	6.0%	4.6%	4.3%	5.2%	6.3%	5.3%	5.1%
Cost of Sales	\$45,449	\$30,636	\$26,252	\$29,039	\$131,376	\$48,175	\$32,305	\$27,608	\$30,792	\$138,880	\$49,917	\$34,310	\$29,741	\$32,698	\$146,666
% of revenue	59.9%	60.6%	62.0%	62.0%	60.9%	61.5%	61.1%	61.8%	62.0%	61.6%	61.1%	61.7%	62.6%	62.5%	61.8%
% growth q/q	46.8%	-32.6%	-14.3%	10.6%		65.9%	-32.9%	-14.5%	11.5%		62.1%	-31.3%	-13.3%	9.9%	
% growth y/y	1.3%	-10.8%	-12.3%	-6.2%	-6.2%	6.0%	5.4%	5.2%	6.0%	5.7%	3.6%	6.2%	7.7%	6.2%	5.6%
Gross Margin	\$30,423	\$19,921	\$16,106	\$17,813	\$84,263	\$30,176	\$20,591	\$17,087	\$18,854	\$86,708	\$31,814	\$21,341	\$17,749	\$19,597	\$90,500
Gross Margin %	40.1%	39.4%	38.0%	38.0%	39.1%	38.5%	38.9%	38.2%	38.0%	38.4%	38.9%	38.3%	37.4%	37.5%	38.2%
Research and development	\$2,404	\$2,511	\$2,560	\$2,570	\$10,045	\$2,871	\$2,776	\$2,858	\$2,922	\$11,427	\$3,199	\$3,254	\$3,440	\$3,575	\$13,468
% of revenue	3.2%	5.0%	6.0%	5.5%	4.7%	3.7%	5.2%	6.4%	5.9%	5.1%	3.9%	5.8%	7.2%	6.8%	5.7%
% growth q/q	8.3%	4.5%	2.0%	0.4%		11.7%	-3.3%	2.9%	2.2%		9.5%	1.7%	5.7%	3.9%	
% growth y/y	26.9%	30.9%	25.9%	15.8%	24.5%	19.4%	10.6%	11.6%	13.7%	13.8%	11.4%	17.2%	20.4%	22.3%	17.9%
SG&A	\$3,848	\$3,423	\$3,441	\$3,482	\$14,194	\$3,946	\$3,718	\$3,810	\$3,938	\$15,412	\$4,116	\$3,912	\$3,905	\$3,991	\$15,924
% of revenue	5.1%	6.8%	8.1%	7.4%	6.6%	5.0%	7.0%	8.5%	7.9%	6.8%	5.0%	7.0%	8.2%	7.6%	6.7%
% growth q/q	3.9%	-11.0%	0.5%	1.2%		13.3%	-5.8%	2.5%	3.4%		4.5%	-5.0%	-0.2%	2.2%	
% growth y/y	6.9%	-1.1%	-3.5%	-6.0%	-0.9%	2.5%	8.6%	10.7%	13.1%	8.6%	4.3%	5.2%	2.5%	1.4%	3.3%
Total operating expenses	\$6,252	\$5,934	\$6,001	\$6,052	\$24,239	\$6,817	\$6,494	\$6,667	\$6,860	\$26,838	\$7,315	\$7,166	\$7,345	\$7,566	\$29,393
% of revenue	8.2%	11.7%	14.2%	12.9%	11.2%	8.7%	12.3%	14.9%	13.8%	11.9%	9.0%	12.9%	15.5%	14.5%	12.4%
% growth q/q	5.5%	-5.1%	1.1%	0.8%		12.6%	-4.7%	2.7%	2.9%		6.6%	-2.0%	2.5%	3.0%	
% growth y/y	13.8%	10.3%	7.2%	2.1%	8.2%	9.0%	9.4%	11.1%	13.3%	10.7%	7.3%	10.3%	10.2%	10.3%	9.5%
Operating Income	\$24,171	\$13,987	\$10,105	\$11,761	\$60,024	\$23,359	\$14,097	\$10,420	\$11,994	\$59,870	\$24,499	\$14,174	\$10,404	\$12,031	\$61,108
Operating Margin %	31.9%	27.7%	23.9%	25.1%	27.8%	29.8%	26.7%	23.3%	24.2%	26.5%	30.0%	25.5%	21.9%	23.0%	25.8%
% growth q/q	12.2%	-13.2%	-13.8%	5.2%		18.8%	-10.6%	-12.5%	3.6%		24.1%	-15.0%	-14.0%	5.0%	
% growth y/y	-0.3%	-23.5%	-28.2%	-19.6%	-15.7%	-3.4%	0.8%	3.1%	2.0%	-0.3%	4.9%	0.5%	-0.2%	0.3%	2.1%
Interest and other income	\$402	\$155	\$364	\$427	\$1,348	\$821	\$587	\$448	\$441	\$2,297	\$446	\$479	\$477	\$469	\$1,871
Income before taxes	\$24,573	\$14,142	\$10,469	\$12,188	\$61,372	\$24,180	\$14,684	\$10,868	\$12,435	\$62,167	\$24,945	\$14,653	\$10,881	\$12,501	\$62,979
Provision for income taxes (Benefit		\$3,626	\$2,673	\$3,174	\$15,685	\$6,289	\$3,655	\$2,770	\$3,170	\$15,884	\$6,359	\$3,735	\$2,774	\$3,187	\$16,054
Effective tax rate	25.3%	25.6%	25.5%	26.0%	25.6%	26.0%	24.9%	25.5%	25.5%	25.6%	25.5%	25.5%	25.5%	25.5%	25.5%
Net Earnings	\$18,361	\$10,516	\$7,796	\$9,014	\$45,687	\$17,891	\$11,029	\$8,098	\$9,266	\$46,283	\$18,586	\$10,918	\$8,107	\$9,314	\$46,925
Net income (w ESO exp)	\$18,361	\$10,516	\$7,796	\$9,014	\$45,687		\$11,029	\$8,098	\$9,266	\$46,283	\$18,586	\$10,918	\$8,107	\$9,314	\$46,925
Net Margin %	24.2%	20.8%	18.4%	19.2%	21.2%	22.8%	20.9%	18.1%	18.7%	20.5%	22.7%	19.6%	17.1%	17.8%	19.8%
Basic shares outstanding	5,558.9	5,514.4	5,443.1	5,366.9	5,470.8	5,298.7	5,225.8	5,223	5,189	5,234.2	5,157	5,125	5,093	5,060	5,108.8
Basic EPS (w ESO exp)	\$3.45	\$2.05	\$1.58	\$1.82	\$8.92	\$3.55	\$2.29	\$1.71	\$1.94	\$9.51	\$3.79	\$2.32	\$1.76	\$2.01	\$9.90
% growth y/y	0.2%	-11.1%	-14.5%	-10.9%	-8.1%	-5.6%	0.2%	-1.6%	-3.0%	6.5%	-0.4%	-5.9%	-5.8%	-4.6%	4.1%
Diluted shares outstanding	5,594.1	5,540.9	5,472.8	5,393.3	5500.3	5,328.0	5,261.7	5228.1	5194.4	5253.0	5162.2	5130.0	5097.6	5065.2	5113.8
Diluted EPS (w ESO exp)	\$3.28	\$1.90	\$1.42	\$1.67	\$8.28	\$3.36	\$2.10	\$1.55	\$1.78	\$8.79	\$3.60	\$2.13	\$1.59	\$1.84	\$9.16
% growth y/y	7.1%	-18.4%	-23.0%	-14.6%	-10.0%	2.3%	10.4%	8.7%	6.7%	6.2%	7.2%	1.5%	2.7%	3.1%	4.2%



## **Exhibit 14: Cash Flow Statement (\$ in millions)**

			FY16					FY17					FY18		
	1QA	2QA	3QA	4QA	Total	1QA	2QA	3QE	4QE	Total	1QE	2QE	3QE	4QE	Total
	Dec 15	Mar 16	Jun 16	Sep 16	FY16	Dec 16	Mar 17	Jun 17	Sep 17	FY17	Dec 17	Mar 18	Jun 18	Sep 18	FY18
Operating Activities															
Net Income	\$18,361	\$10,516	\$7,796	\$9,014	\$45,687	\$17,891	\$11,029	\$8,098	\$9,266	\$46,283	\$18,586	\$10,918	\$8,107	\$9,314	\$46,925
Adjustments to reconcile net income to net cash															
Depreciation and Amortization	2,954	2,477	2,526	2,548	10,505	2,987	2,332	1,970	2,189	9,478	3,603	2,453	2,094	2,305	10,456
Stock compensation expense	1,078	1,048	1,054	1,030	4,210	1,256	1,217	1,107	1,082	4,661	1,319	1,278	1,162	1,136	4,894
Deferred income taxes	1,592	1,500	2,099	(253)	4,938	1,452	1,370			2,822					0
Loss on Sale of PP&E	0	0	0	0	0	0	0			0					0
Tax benefit from employee stock option plans	0	0	0	0	0	0	0			0					0
Non-Cash Restructuring	0	0	0	0	0	0	0			0					0
Cumulative effects fo accounting changes, net o	0	0	0	0	0	0	0			0					0
Other non-cash items	0	0	0	0	0	(274)	65			(209)					0
Changes in operating assets and liabilities:						,			/F ====	/	/= ::			/F =	
Accounts receivable	3,896	724	515	(4,040)	1,095	1,697	2,486	1,150	(5,568)	(235)	(3,074)	7,940	(478)	(5,242)	(853)
Inventories	(102)	170	450	(301)	217	(580)	(198)	1,069	(896)	(605)	(591)	1,422	(407)	(593)	(169)
Other current assets	1,826	4,073	(4,756)	(1,194)	(51)	(375)	4,887	815	(3,239)	2,088	5,539	(459)	1,741	(2,969)	3,851
Other assets	(893)	1,193	5,866	(5,076)	1,090	(1,446)	550	2,456	(1,704)	(144)	1,100	(310)	2,219	(1,802)	1,206
Accounts payable	(852)	(8,623)	(147)	11,413	1,791	2,460	(9,322)	(3,057)	14,499	4,580	(4,047)	(5,424)	(2,936)	9,971	(2,436)
Other liabilities	(368)	(1,725)	(3,402)	3,391	(2,104)	1,946	(1,630)	(1,874)	1,622	64	6,568	(4,490)	872	6,112	9,063
Deferred revenue	(29)	248	(1,367)	(406)	(1,554)	42	(263)	(474)	247	(448)	(340)	(165)	(753)	303	(954)
Net Cash from Operations	\$27,463	\$11,601	\$10,634	\$16,126	\$65,824	\$27,056	\$12,523	\$11,261	\$17,496	\$68,335	\$28,663	\$13,164	\$11,621	\$18,534	\$71,982
Year over Year Growth	-19%	-39%	-29%	20%	-19%	-1%	8%	6%	8%	4%	6%	5%	3%	6%	5%
Net Income Growth	3%	-20%	-24%	-17%	-13%	-2%	6%	4%	3%	2%	4%	-1%	1%	1%	2%
Investing Activities															
Purchase of marketable securities	(47,836)	(38,406)	(25,826)	(30,360)	(142,428)	(54,272)	(45,549)			(99,821)					0
Proceeds from maturity of marketable securities	3,514	5,634	5,767	6,343	21,258	6,525	5,904			12,429					0
Proceeds from sales of marketable securities	28,262	21,789	19,875	20,610	90,536	32,166	28,288			60,454					0
Purchases of other long-term investments					0					0					0
Payments for business acquisitions, net of cash	(86)	(54)	(6)	(151)	(297)	(17)	(50)			(67)					0
Acquisitions of property and equipment	(3,612)	(2,336)	(2,809)	(3,977)	(12,734)	(3,334)	(2,975)	(3,652)	(5,170)	(15,131)	(3,834)	(3,421)	(4,199)	(5,946)	(17,400)
Acquisition of intangible assets	(394)	(263)	(96)	(61)	(814)	(86)	(40)								
Other	(298)	(24)	(1,375)	199	(1,498)	(104)	220			116					0
Net Cash from Investing	(\$20,450)	(\$13,660)	(\$4,470)	(\$7,397)	(\$45,977)	(\$19,122)	(\$14,202)	(\$3,652)	(\$5,170)	(\$42,020)	(\$3,834)	(\$3,421)	(\$4,199)	(\$5,946)	(\$17,400)
Financing Activities															
Proceeds from issuance of common stock	1	246	0	248	495	0	273			273					0
Excess tax benefits from stock-based comp	224	40	127	16	407	178	47			225					0
Cash used to net share settle equity awards	(597)	(154)	(610)	(209)	(1,570)	(629)	(159)			(788)					0
Proceeds from Issuance of Long-Term and Other	0	0	0	0	0	0	10,975			10,975					0
Repurchase of common stock	(6,863)	(6,667)	(10,166)	(6,026)	(29,722)	(10,851)	(7,161)	(7,161)	(7,161)	,	(7,161)	(7,161)	(7,161)	(7,161)	(28,644)
Proceeds from issuance of long term debt ,net	0,003)	15,584	2,400	6,970	24,954	(10,031)	(,,101)	(,,131)	(,,131)	(32,334)	(,,101)	(,,101)	(,,101)	(,,101)	(20,011)
Repayments of commercial paper ,net	(1,240)	737	1,995	(4,389)	(2,897)	2,385	(506)								
Dividend	(2,969)	(2,902)	(3,187)	(3,092)	(12,150)	(3.130)	(3,004)	(3,294)	(3,272)	(12,700)	(3,252)	(3,232)	(3.212)	(3.191)	(12,887)
Net Cash from Financing	(\$11,444)	\$6,884	(\$9,441)	(\$6,482)	(\$20,483)	(\$12,047)		(\$10,455)	(\$10,433)			(\$10,393)		(\$10,352)	(\$41,531)
-							·								
Net Change in Cash	(\$4,431)	\$4,825	(\$3,277)	\$2,247	(\$636)	(\$4,113)	(\$1,214)	(\$2,846)	\$1,892	(\$8,034)	\$14,416	(\$650)		\$2,237	\$13,051
Beginning Cash Balance	21,120	16,689	21,514	18,237	21,120	20,484	16,371	15,157	12,311	20,484	12,450	26,866	26,216	23,265	12,450
Ending Cash Balance	\$16,689	\$21,514	\$18,237	\$20,484	\$20,484	\$16,371	\$15,157	\$12,311	\$14,203	\$12,450	\$26,866	\$26,216	\$23,265	\$25,501	\$25,501



## Exhibit 15: Balance Sheet (\$ in millions)

Balance Sheet			FY16					FY17					FY18		
(in millions, except share amounts)	1QA	2QA	3QA	4QA	Total	1QA	2QA	3QE	4QE	Total	1QE	2QE	3QE	4QE	Total
	Dec 15	Mar 16	Jun 16	Sep 16	FY16	Dec 16	Mar 17	Jun 17	Sep 17	FY17	Dec 17	Mar 18	Jun 18	Sep 18	FY18
Assets															
Cash and cash equivalents	16,689	21,514	18,237	20,484	20,484	16,371	15,157	12,311	14,203	12,450	26,866	26,216	23,265	25,501	25,501
Short-term Investments	21,385	33,769	43,519	46,671	46,671	44,081	51,944	51,944	51,944	51,944	51,944	51,944	51,944	51,944	51,944
Cash and short-term investments	\$38,074	\$55,283	\$61,756	\$67,155	\$67,155	\$60,452	\$67,101	\$64,255	\$66,147	\$64,394	\$78,810	\$78,160	\$75,209	\$77,445	\$77,445
Receivables	13,039	12,315	11,769	15,807	15,807	14,110	11,632	10,482	16,050	16,050	19,124	11,183	11,662	16,903	16,903
Allowance for doubtful accounts	86	86	55	53	53	53	53	53	53	53	53	53	53	53	53
Receivables, net	12,953	12,229	11,714	15,754	15,754	14,057	11,579	10,429	15,997	15,997	19,071	11,130	11,609	16,850	16,850
Inventories	2,451	2,281	1,831	2,132	2,132	2,712	2,910	1,841	2,737	2,737	3,328	1,906	2,313	2,906	2,906
Deferred Income Taxes , current	0	7,595	0	0	0	0	0	916	1,680	1,680	409	3,067	2,861	1,931	1,931
Other Current Assets	22,741	10,204	18,460	21,828	21,828	26,111	20,400	18,669	21,144	21,144	16,877	14,678	13,143	17,042	17,042
Total Current Assets	\$76,219	\$87,592	\$93,761	\$106,869	\$106,869	\$103,332	\$101,990	\$96,110	\$107,706	\$105,953	\$118,494	\$108,941	\$105,134	\$116,176	\$116,176
Long-Term Marketable Securities	177,665	177,645	169,794	170,430	170,430	185,638	189,740	189,740	189,740	189,740	189,740	189,740	189,740	189,740	189,740
Property and equipment, net	22,300	23,203	25,448	27,010	27,010	26,510	27,163	28,844	31,826	31,826	32,056	33,024	35,130	38,770	38,770
Goodwill	5,202	5,249	5,261	5,414	5,414	5,423	5,473	5,473	5,473	5,473	5,473	5,473	5,473	5,473	5,473
Aquired intangible assets, net	3,924	3,843	3,506	3,206	3,206	2,848	2,617	2,617	2,617	2,617	2,617	2,617	2,617	2,617	2,617
Other Long-Term Assets	7,974	7,745	7,862	8,757	8,757	7,390	7,549	5,093	6,797	6,797	5,697	6,008	3,788	5,591	5,591
Total Long-term Assets	\$217,065			\$214,817	\$214,817	\$227,809	\$232,542	\$231,767	\$236,453	\$236,453	\$235,584	\$236,862	\$236,749	\$242,191	\$242,191
Total Assets	\$293,284	\$305,277	\$305,632	\$321,686	\$321,686	\$331,141	\$334,532	\$327,876	\$344,158	\$342,405	\$354,078	\$345,803	\$341,883	\$358,367	\$358,367
Liabilities and Equity															
Short-Term Debt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Accounts payable	33,312	25,098	26,318	37,294	37,294	38,510	28,573	25,516	40,015	40,015	35,969	30,545	27,609	37,579	37,579
Accrued expenses	24,032	23,208	20,820	22,027	22,027	23,739	23,096	21,222	22,844	22,844	29,412	24,923	25,795	31,907	31,907
Deferred revenue, current	8,989	9,461	8,352	8,080	8,080	7,889	7,682	7,370	7,264	7,264	7,126	7,148	6,584	6,561	6,561
Other Current Liabilities	9,759	10,498	15.996	11.605	11.605	13.992	13.991	13,380	17,904	17,904	12,554	13,138	16,075	19,567	19,567
Total Current Liabilities	\$76,092	\$68,265	\$71,486	\$79,006	\$79,006	\$84,130	\$73,342	\$67,489	\$88,028	\$88,028	\$85,060	\$75,753	\$76,063	\$95,614	\$95,614
	\$70,032	400,203	ψ, 1,400	475,000	473,000	40-1/150	475,542	407,403	400,020	400,020	\$65,666	ψ, 5,, 55	ψ7 <b>0</b> / <b>0</b> 0 5	455,014	\$55,014
Long-Term Debt	53,204	69,374	68,939	75,427	75,427	73,557	84,531	84,531	84,531	84,531	84,531	84,531	84,531	84,531	84,531
Deferred Revenue, non-current	3,546	3,322	3,064	2,930	2,930	3,163	3,107	2,944	3,297	3,297	3,096		2,720	3,046	3,046
Other Long-term liabilities	32,175	33,859	35,572	36,074	36,074	37,901	39,470	39,470	39,470	39,470	39,470	39,470	39,470	39,470	39,470
Total Liabilities	\$165,017	\$174,820	\$179,061		\$193,437	\$198,751	\$200,450	\$194,434		\$215,326	\$212,158	\$202,663	\$202,784	\$222,661	\$222,661
	, ,										, ,				1 1
Common & Pfd. Stock & Add'l Paid-in Ca	28,253	29,484	30,106	31,251	31,251	32,144	33,579	33,579	33,579	33,579	33,579	33,579	33,579	33,579	33,579
Retained Earnings	101,494	102,021	96,542	96,364	96,364	100,001	100,925	110,129	120,476	120,476	140,381	152,577	161,846	172,296	172,296
Accumulated Other Comprehensive Inco		(1,048)	(107)		634	245	(422)	(10,266)		(25,223)	(32,040)	(43,016)	(56,326)	(70,170)	(70,170)
Total Shareholders' Equity	\$128,267		\$126,541		\$128,249	\$132,390	\$134,082	\$133,442	. , ,	\$128,832	\$141,921	\$143,140	. , ,	\$135,705	\$135,705
<b>Total Liabilities and Equity</b>	\$293,284	\$305,277	\$305,602	\$321,686	\$321,686	\$331,141	\$334,532	\$327,876	\$344,158	\$344,158	\$354,078	\$345,803	\$341,883	\$358,367	\$358,367



## **Price Target Calculation and Key Risks**

Our price target is derived using an equally weighted three-pronged valuation approach, which includes a DCF, Enterprise Value (EV) to FCF, and EV to operating earnings analysis. Our assumptions are based on comparables in the information technology hardware universe. Given these inputs, we reach our 12-month price target of \$150.

On the downside, the biggest risk to Apple's stock could result from the company's inability to keep innovating. The current management team is very capable of delivering on Steve Jobs's vision, however, the stock could be materially impacted if the company were to lose some key executives. Additionally, more than expected slowdown in iPhone sales could push the stock materially lower. On the upside, a very strong iPhone 8 cycle combined with greater attach of services can drive materially higher upside to estimates, which can also help further expand the multiple.



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Investment Risks and Valuation Methods can be located in the following section of this research report - Price Target Calculation and Key Risks.

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**Buy:** Stocks for which the anticipated share price appreciation exceeds 10%.

**Neutral:** Stocks for which the anticipated share price appreciation is within 10% of the share price.

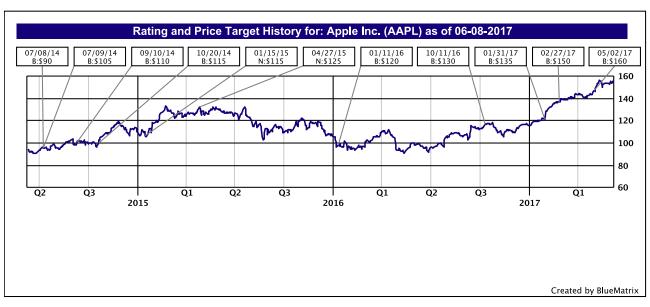
Underperform: Stocks for which the anticipated share price falls by 10% or more. RS: Rating Suspended - rating and price objective temporarily suspended.

**NR:** No Rating - not covered, and therefore not assigned a rating.

#### **Rating Distribution**

(As of 6/09)	% of coverage	IB service past 12 mo
Buy (Buy)	44.24%	51.26%
Hold (Neutral)	52.04%	37.14%
Sell (Underperform)	3.72%	50.00%

For disclosure purposes only (NYSE and FINRA ratings distribution requirements), our Buy, Neutral and Underperform ratings are displayed as Buy, Hold and Sell, respectively.





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