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**Apple Inc. (AAPL-US)**

Technology Hardware, Storage &amp; Peripherals

- We reiterate our Strong Buy rating on AAPL as it continues to benefit from strong iPhone demand at higher average selling prices and increasing Services revenue and profitability.
- Business Performance continues to accelerate driven by strong iPhone demand at higher average selling prices and significant gains in revenue growth and profitability for Apple Services.
- The iPhone continues to drive AAPL's growth and the expansion of its highly profitable Services business.
- AAPL will introduce its latest lineup of new products at its upcoming event on September 12.
- AAPL continues to develop new AI technologies and AR/VR capabilities for use in existing and future products.
- AAPL plans on being a major provider of autonomous and connected vehicle technology.
- AAPL will continue to target emerging markets, specifically China and India for new growth opportunities.
- AAPL's strong balance sheet and cash flow will continue to fund growth along with enhancing shareholder returns through increasing dividends and share repurchases.
- AAPL is on our Research Focus List and in our Focus Opportunity Portfolio.

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**Company Note**
**Apple Inc. (AAPL-US)**

Technology Hardware, Storage &amp; Peripherals

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**Research Action:**

Reiterate rating

**Rating:** Strong Buy

**Prior Rating:** Strong Buy

**Price 08/29/2018:** \$222.98

**52 Week High /** \$223.49

**Low:** \$149.16

**Key Data: (TTM as of Jun-18)**
**Excess Cash per Share:** \$47.31

**Annual Dividend:** \$2.92

**Dividend Yield:** 1.31%

**Avg. Volume (30 Day):** 28.9M

**Shares Outstanding:** 4,829.9M

**Float:** 4,823.2M

**Short Interest:** 42.2M

**SI % / Float** 0.87%

**Equity MV:** \$1,076,977.8M

**Sales TTM:** \$255,702.0M

**Beta:** 1.02

**EBITDAR:** \$99,783.6M

**NOPAT:** \$59,443.1M

**Total Invested Capital:** \$237,205.2M

**Return on Capital:** 23.08%

**Cost of Capital:** 7.06%

**Economic Profit:** \$41,261.4M

**Market Value Added:** \$962,519.8M

**Current Operations Value:** \$841,920.5M

**Future Growth Value:** \$357,804.5M

- We reiterate our Strong Buy rating on AAPL as it continues to benefit from strong iPhone demand at higher average selling prices and increasing Services revenue and profitability.** AAPL's Services business segment continues to emerge as one of the company's future drivers of growth and profitability, along with its ongoing development of new and fast-growing technologies including autonomous vehicle capabilities, artificial intelligence (AI) applications and artificial reality (AR)/virtual reality (VR) functionality and products. The ongoing expansion of AAPL's ecosystem along with the global growth of iPhone demand, especially in emerging markets with AAPL's ongoing focus of increasing its penetration in India, will continue to drive strong Business Performance trends. AAPL is also committed to completing over \$260 billion in share repurchases by the end of the year which requires an additional open market purchase of \$128 billion. We believe significant upside in the shares exists from current levels and continue to recommend purchase.
- Business Performance continues to accelerate driven by strong iPhone demand at higher average selling prices and significant gains in revenue growth and profitability for Apple Services.** For the 12 months ending June 2018, Net Sales Revenue increased 14.78% Y/Y from \$222.78 billion to a record \$255.70 billion. We forecast a further increase of 7% to \$273.46 billion over the NTM. Economic Operating Cash Flow (EBITDAR) increased 15.6% from \$86.3 billion to \$99.78 billion over the LTM. We forecast a further increase of 7% to \$106.49 billion over the NTM. Net Operating Profit After Tax (NOPAT) increased 24.2% Y/Y from \$47.87 billion to \$59.44 billion over the LTM. We forecast a further increase of 5.5% to \$62.7 billion over the NTM. Return on Capital (ROC) increased from 18.41% to 23.08% over the LTM. We forecast a further increase of 25.41% over the NTM. Economic Profit increased 30.60% from \$31.6 billion to \$41.26 billion over the LTM. We forecast a further increase of 10% to \$45.42 billion over the NTM. AAPL's consistent ability to increase Return on Capital and Economic Profit will continue to drive further shareholder value creation.

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- **The iPhone continues to drive AAPL's growth and the expansion of its highly profitable Services business.** AAPL reported better-than-expected Q3 revenue and earnings growth driven by strong gains in iPhone sales at higher-than-expected average selling prices. AAPL reported the sale of 41.3 million iPhones in the quarter which was just below the 41.6 million units expected. However, the biggest surprise came from the gain in average selling price (ASP) of \$724 which was above the \$694 expected. The gain in the iPhone's ASP was important because there were expectations for a decline in the ASP as AAPL continues to raise the retail selling price and bump up against competition from cheaper smartphone offerings. The iPhone's gain in ASP continues to illustrate the strength in pricing power and the strong consumer reception for its products that AAPL receives. Sales of the iPhone X were slow at the beginning of its introduction at the end of last year, but AAPL continued to experience growing demand for the larger screen and increased functionality and features of its flagship and most expensive phone. AAPL also reported another strong quarter for its Services (App Store, Apple Music, Apple Pay, AppleCare, iTunes, and other services) which grew 28% to \$9.34 billion. Services is now expected to exceed a \$40 billion annualized run rate in the next quarter.
- **AAPL will introduce its latest lineup of new products at its upcoming event on September 12.** This year's new product introduction event is expected to be one AAPL's biggest yet. Expectations are for upgrades to nearly every Apple product line including three new iPhones, a new MacBook air, an updated Mac mini and iPad, and a new Apple Watch. AAPL is expected to announce the launch of three new iPhone models incorporating the edge-to-edge screen design of the current leading iPhone X. The new iPhone models will have a wider range of prices, features and sizes to offer wider appeal. In 2016, Apple reached the milestone of one billion active devices. Currently, that number has grown to 1.3 billion. Expectations are for a new high-end iPhone with a 6.5 inch diagonal display making it the largest iPhone to date. It is also expected to have the ability to view side-by-side content in apps like Mail and Calendar. It is also expected to have a higher resolution OLED display. It is also expected that the new iPhone models will no longer have a home button but will use gesture controls and its Face ID facial recognition to unlock the phone. AAPL is also expected to upgrade its iPad Pro models with higher resolution screens similar to the iPhone X, also incorporating Face ID and gesture controls. AAPL continues to produce a strong cadence of new product introductions and upgrades that drive the steady growth of product sales that further drive the expansion of its ecosystem, and the growth of higher-margin and highly profitable Services content.

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- **AAPL continues to develop new AI technologies and AR/VR capabilities for use in existing and future products.** AI and AR/VR technologies continue to improve features and capabilities of many of AAPL's products along with the ability to increase security and efficiency and predictive capabilities. Combined with internal development efforts, AAPL continues to make strategic acquisitions of companies with expertise in AI and VR/AR hardware along with 3D gaming and virtual reality software. AAPL introduced its third-party developer ARKit to create AR experiences on its iOS platform. AAPL will continue to develop new products to increase its participation in the fast growing Internet of things (IoT) market of connected and automated devices, appliances and automobiles. AAPL it is expected to introduce its Siri-enabled home audio interface HomePod sometime later this month to compete with Amazon's Echo and Google Home.
- **AAPL plans on being a major provider of autonomous and connected vehicle technology.** This past summer, AAPL announced its development of self-driving AI technology. Apple recently invested \$1 billion in Chinese ridesharing company Didi Chuxing enabling it to collect data and develop connected car technology while gaining a foothold in the large Chinese ridesharing and automobile market. AAPL also recently received a permit for testing self-driving car technology from the California Department of Motor Vehicles. Self-driving technology has the potential for extremely profitable business for AAPL which will be a component and license supplier.
- **AAPL will continue to target emerging markets, specifically China and India for new growth opportunities.** China and India represent AAPL's fastest growing markets driven by their growing middle-classes and increasing investment in 4G and 5G networks. AAPL has recently experienced a reacceleration of growth in these countries. AAPL's feature rich products and strong brand equity are enabling it to gain share over lower-priced local product offerings.

- **AAPL's strong balance sheet and cash flow will continue to fund growth along with enhancing shareholder returns through increasing dividends and share repurchases.** AAPL currently has close to \$231 billion, \$47.31 a share, in excess cash. In addition, we forecast that AAPL will generate an additional \$106.5 billion in Economic Operating Cash Flow (EBITDAR) over the NTM enabling it to continue to fund its massive return of capital to shareholders. In May of this year, increased its quarterly dividend 16% from \$0.63 a share to \$0.73 a share which was above its five-year annual average dividend growth rate of 11%. Also, in May, AAPL announced an additional open market purchase for \$100 billion worth of stock which follows previous announcements of the purchase of \$35 billion worth of stock in both 2017 and 2016 and a \$50 billion repurchase announcement in 2015. Since announcing its initial purchase of \$10 billion worth of stock in 2012, AAPL has announced total open market purchases of \$310 billion. So far in 2018, AAPL has repurchased just under \$20 billion worth of stock bringing its total life to date repurchase of shares since 2012 to \$132 billion worth of stock. AAPL currently has open repurchase capacity of \$178 billion. AAPL intends on purchasing another \$128 billion worth of stock by the end of 2018 bringing its total to \$260 billion in repurchases.
- **AAPL is on our Research Focus List and in our Focus Opportunity Portfolio.** AAPL's strong brand equity, innovative ability, and leading global position together with its powerful cash generating ability will continue to drive greater shareholder value creation.

**Investment Thesis**

Despite its recent gains, AAPL continues to remain undervalued stock relative to its economic earnings power, brand equity, loyal customer base, cash generation ability, incredibly strong balance sheet, and ability to innovate to create new products as it continues to expand its ecosystem. The ever-growing AAPL user base and ecosystem continues to drive increasing growth in its highly profitable services business. We believe AAPL's ongoing ability to grow the iPhone user base globally along with its ever-expanding ecosystem, which will eventually include the connected home and connected car, together with its ability to continually return large amounts of cash to shareholders and continue to drive greater shareholder value creation.

**Company Overview**

Apple Inc. (AAPL-US) is the world's leading designer, manufacturer, and marketer of personal computers and mobile communication and media devices, along with related software, services, peripherals, and networking solutions. Apple has also expanded into new markets of connected devices and services that compile its connected ecosystem including the Apple Watch, Apple TV, Apple Music, HomeKit, HealthKit, and CareKit. Apple recently announced the introduction of a Siri-integrated home control interface speaker called HomePod to compete with Amazon's Alexa-based Echo and Google Home. Apple also operates iTunes which is the world's largest application and content distribution and management platform and iCloud which is its cloud storage and computing service. Apple sells its products worldwide through a combination of its retail and online stores along with its direct sales force, retailers, and third-party wholesalers.

Apple reports its revenue by Business Segments including iPhone (62% of revenue), Services which is iTunes and iCloud (13% of revenue), Mac (11% of revenue), iPad (8% of revenue), and Other Products (6% revenue).

Apple also reports its revenue by Geographic Segments including: The United States (37% of revenue), Europe (24% revenue), greater China (20% of revenue), Japan (8% of revenue), Rest of Asia Pacific (7% of revenue) and the Americas (4% of revenue).

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Apple Inc. (AAPL-US)

Technology Hardware, Storage & Peripherals

Financial Data

Report Basis	LTM	LTM	LTM	LTM	LTM	LTM	NTM	5 Yr	3 Yr	Current
Reported Period Ending	06/29/2013	06/28/2014	06/27/2015	06/25/2016	07/01/2017	06/30/2018	06/30/2019	Average	Average	Trend
<b>Net Sales Revenue</b>	\$169,339.0	\$178,421.0	\$222,562.0	\$218,358.0	\$222,770.0	\$255,702.0	\$273,460.0	\$219,562.6	\$232,276.7	\$264,581.0
Sales Growth	14.13%	5.36%	24.74%	-1.89%	2.02%	14.78%	6.94%	9.00%	4.97%	10.86%
Sales Growth Trend	27.44%	8.87%	16.99%	8.76%	0.46%	9.68%	10.08%	8.95%	6.30%	9.88%
<b>Operating Cash Flow (EBITDAR)</b>	\$61,496.7	\$66,786.5	\$85,664.2	\$85,294.4	\$86,297.7	\$99,783.6	\$106,488.6	\$84,765.3	\$90,458.6	\$103,136.1
EBITDAR Margin	36.32%	37.43%	38.49%	39.06%	38.74%	39.02%	38.94%	38.55%	38.94%	38.98%
EBITDAR Growth	3.41%	8.60%	28.27%	-0.43%	1.18%	15.63%	6.72%	10.65%	5.46%	11.17%
<b>Net Operating Profit Before Tax (NOPBT)</b>	\$50,840.7	\$52,858.5	\$67,307.2	\$63,729.4	\$63,983.7	\$74,567.6	\$79,366.7	\$64,489.3	\$67,426.9	\$76,967.2
NOPBT Margin	30.02%	29.63%	30.24%	29.19%	28.72%	29.16%	29.02%	29.39%	29.02%	29.09%
NOPBT Growth	-4.39%	3.97%	27.33%	-5.32%	0.40%	16.54%	6.44%	8.59%	3.88%	11.49%
<b>Cash Operating Income Tax</b>	\$13,140.4	\$13,782.7	\$17,761.1	\$16,316.7	\$16,118.0	\$15,124.5	\$16,667.0	\$15,820.6	\$15,853.1	\$15,895.8
Economic Tax Effective Rate	25.85%	26.07%	26.39%	25.60%	25.19%	20.28%	21.00%	24.71%	23.69%	20.64%
<b>Net Operating Profit After Tax (NOPAT)</b>	\$37,700.3	\$39,075.8	\$49,546.1	\$47,412.6	\$47,865.7	\$59,443.1	\$62,699.7	\$48,668.7	\$51,573.8	\$61,071.4
NOPAT Margin	22.26%	21.90%	22.26%	21.71%	21.49%	23.25%	22.93%	22.12%	22.15%	23.09%
NOPAT Growth	-5.20%	3.65%	26.79%	-4.31%	0.96%	24.19%	5.48%	10.26%	6.95%	14.83%
<b>Cash &amp; Equivalents</b>	\$146,620.0	\$164,490.0	\$202,848.0	\$231,520.0	\$261,516.0	\$243,743.0	\$268,312.4	\$220,823.4	\$245,593.0	\$256,027.7
<b>Total Assets</b>	\$199,856.0	\$222,520.0	\$273,151.0	\$305,602.0	\$345,173.0	\$349,197.0	\$384,396.3	\$299,128.6	\$333,324.0	\$366,796.6
<b>Non - Interest Bearing Liabilities (NIBLS)</b>	\$58,538.0	\$69,306.0	\$91,505.0	\$94,126.0	\$104,409.0	\$119,648.0	\$131,708.6	\$95,798.8	\$106,061.0	\$125,678.3
<b>Net Assets</b>	\$141,318.0	\$153,214.0	\$181,646.0	\$211,476.0	\$240,764.0	\$229,549.0	\$252,687.7	\$203,329.8	\$227,263.0	\$241,118.3
<b>Economic Asset Adjustments</b>	\$16,457.4	\$20,562.9	\$22,207.3	\$30,594.0	\$37,062.4	\$7,656.2	\$8,427.9	\$23,616.6	\$25,104.2	\$8,042.1
<b>Net Operating Assets</b>	\$157,775.4	\$173,776.9	\$203,853.3	\$242,070.0	\$277,826.4	\$237,205.2	\$261,115.6	\$226,946.4	\$252,367.2	\$249,160.4
<b>Debt &amp; Debt Equivalents</b>	\$20,782.4	\$35,190.9	\$58,833.3	\$90,559.0	\$115,060.4	\$122,748.2	\$135,121.3	\$84,478.4	\$109,455.9	\$128,934.7
<b>Equity &amp; Equivalents</b>	\$123,354.0	\$120,940.0	\$125,677.0	\$126,541.0	\$132,425.0	\$114,949.0	\$126,535.9	\$124,106.4	\$124,638.3	\$120,742.5
<b>Total Capital - Financing Sources</b>	\$144,136.4	\$156,130.9	\$184,510.3	\$217,100.0	\$247,485.4	\$237,697.2	\$261,657.2	\$208,584.8	\$234,094.2	\$249,677.2
<b>Capital Adjustments</b>	\$12,633.0	\$16,412.0	\$17,792.0	\$24,970.0	\$30,341.0	(\$492.0)	(\$541.6)	\$17,804.6	\$18,273.0	(\$516.8)
<b>Net Capital Financing Sources</b>	\$156,769.4	\$172,542.9	\$202,302.3	\$242,070.0	\$277,826.4	\$237,205.2	\$261,115.6	\$226,389.4	\$252,367.2	\$249,160.4
<b>Net Working Capital</b>	(\$1,129.1)	(\$3,810.0)	(\$9,273.9)	(\$12,512.1)	(\$15,517.5)	(\$13,441.9)	(\$14,796.9)	(\$10,911.1)	(\$13,823.8)	(\$14,119.4)
Cost of Net Working Capital	(\$57.5)	(\$164.5)	(\$425.7)	(\$614.1)	(\$877.3)	(\$1,022.3)	(\$1,125.4)	(\$620.8)	(\$837.9)	(\$1,073.9)
% of Revenue	-0.03%	-0.09%	-0.19%	-0.28%	-0.39%	-0.40%	-0.41%	-0.27%	-0.36%	-0.41%
<b>Operational Capital</b>	\$19,022.4	\$17,926.0	\$16,290.4	\$18,559.9	\$20,489.9	\$32,823.3	\$36,131.9	\$21,217.9	\$23,957.7	\$34,477.6
Cost of Operational Capital	\$1,123.6	\$1,230.3	\$1,113.3	\$982.4	\$1,222.2	\$1,882.1	\$2,071.8	\$1,286.0	\$1,362.2	\$1,976.9
% of Revenue	0.66%	0.69%	0.50%	0.45%	0.55%	0.74%	0.76%	0.58%	0.58%	0.75%
<b>Productive Capital</b>	\$24,897.4	\$24,067.0	\$25,113.4	\$27,326.9	\$28,594.9	\$32,823.3	\$36,131.9	\$27,585.1	\$29,581.7	\$34,477.6
Cost of Productive Capital	\$1,525.2	\$1,630.4	\$1,600.1	\$1,478.2	\$1,750.3	\$2,168.2	\$2,386.7	\$1,725.4	\$1,798.9	\$2,277.5
% of Revenue	0.90%	0.91%	0.72%	0.68%	0.79%	0.85%	0.87%	0.79%	0.77%	0.86%
<b>Total Operating Capital</b>	\$19,622.4	\$18,208.0	\$12,133.4	\$21,467.9	\$27,448.9	\$6,247.3	\$6,877.0	\$17,101.1	\$18,388.0	\$6,562.2
Cost of Total Operating Capital	\$1,268.6	\$1,259.6	\$987.2	\$947.2	\$1,531.0	\$1,189.5	\$1,309.5	\$1,182.9	\$1,222.6	\$1,249.5
% of Revenue	0.75%	0.71%	0.44%	0.43%	0.69%	0.47%	0.48%	0.55%	0.53%	0.47%
<b>Non - Operating Capital</b>	\$138,153.1	\$155,569.0	\$191,719.9	\$220,602.1	\$250,377.5	\$230,957.9	\$254,238.6	\$209,845.3	\$233,979.2	\$242,598.2
Cost of Non - Operating Capital	\$8,783.0	\$9,780.0	\$11,299.4	\$11,622.6	\$14,741.2	\$16,992.1	\$18,705.0	\$12,887.1	\$14,452.0	\$17,848.6
% of Revenue	5.19%	5.48%	5.08%	5.32%	6.62%	6.65%	6.84%	5.83%	6.20%	6.74%
<b>Total Capital</b>	\$157,775.4	\$173,776.9	\$203,853.3	\$242,070.0	\$277,826.4	\$237,205.2	\$261,115.6	\$226,946.4	\$252,367.2	\$249,160.4
Cost of Total Capital	\$10,051.6	\$11,039.7	\$12,286.5	\$12,569.8	\$16,272.2	\$18,181.7	\$20,014.4	\$14,070.0	\$15,674.6	\$19,098.1
% of Revenue	5.94%	6.19%	5.52%	5.76%	7.30%	7.11%	7.32%	6.38%	6.72%	7.21%
<b>Cost of Capital (WACC)</b>	7.08%	6.66%	6.51%	5.64%	6.26%	7.06%	7.06%	6.42%	6.32%	7.06%
<b>Capital Structure</b>										
<b>Debt &amp; Debt Equivalents</b>	\$20,782.4	\$35,190.9	\$58,833.3	\$90,559.0	\$115,060.4	\$122,748.2	\$135,121.3	\$84,478.4	\$109,455.9	\$128,934.7
Debt & Debt Equivalents % of Market Value	5.29%	5.97%	7.46%	15.04%	13.29%	11.89%	11.89%	10.89%	13.13%	11.89%
<b>Preferred Equity</b>	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Preferred Equity % of Market Value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<b>Market Value of Common Equity</b>	\$372,202.5	\$554,608.8	\$730,210.5	\$511,591.5	\$750,897.2	\$909,841.2	#####	\$691,429.9	\$724,110.0	\$955,697.5
Common Equity % of Market Value	94.71%	94.03%	92.54%	84.96%	86.71%	88.11%	88.11%	89.11%	86.87%	88.11%
<b>Total Economic Market Value (MV)</b>	\$392,984.9	\$589,799.7	\$789,043.8	\$602,150.5	\$865,957.6	#####	#####	\$775,908.2	\$833,565.9	#####
Total %	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
<b>Excess Cash</b>	\$138,153.1	\$155,569.0	\$191,719.9	\$220,602.1	\$250,377.5	\$230,957.9	\$254,238.6	\$209,845.3	\$233,979.2	\$242,598.2
<b>Economic Enterprise Value</b>	\$254,831.9	\$434,230.8	\$597,323.9	\$381,548.4	\$615,580.1	\$801,631.5	\$882,436.4	\$566,063.0	\$599,586.7	\$842,034.0
<b>Average Capital</b>	\$140,999.8	\$164,656.2	\$187,422.6	\$222,186.2	\$259,948.2	\$257,515.8	\$249,160.4	\$218,345.8	\$246,550.1	\$253,338.1
Capital Δ	\$31,539.3	\$15,773.5	\$29,759.4	\$39,767.7	\$35,756.3	(\$40,621.2)	\$23,910.4	\$16,087.2	\$11,634.3	(\$8,355.4)

Source: Company Data, Financial statements and Tigress Research

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Company Report – Research Update

Apple Inc. (AAPL-US)

Technology Hardware, Storage & Peripherals

Financial Analysis

Table with multiple columns: Report Ends, Reported Period Ending, LTM (05/29/2013, 05/28/2014, 05/27/2015, 05/26/2016, 07/01/2017, 06/30/2018), NTM (06/30/2019), 6 Yr Average, 3 Yr Average, Current Trend. Rows include Return on Market Value, Economic Profit, EPS, and various financial ratios.

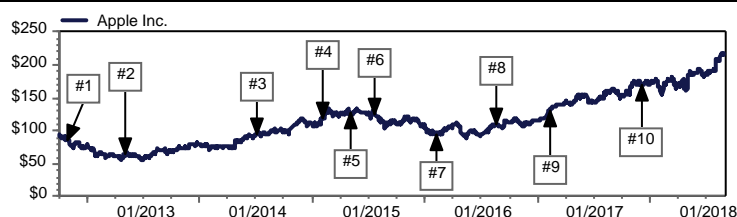
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**Apple Inc. (AAPL-US)**
**Technology Hardware, Storage & Peripherals**
**Ratings History**

Apple Inc. (AAPL-US)				
Item #	Date	Research Action	Rating	Price
#10	12/04/2017	Reiterate Rating	Strong Buy	\$169.80
#9	02/07/2017	Reiterate Rating	Strong Buy	\$131.53
#8	08/22/2016	Reiterate Rating	Strong Buy	\$108.51
#7	02/08/2016	Reiterate Rating	Strong Buy	\$95.01
#6	07/22/2015	Reiterate Rating	Strong Buy	\$125.22
#5	05/01/2015	Reiterate Rating	Strong Buy	\$128.95
#4	02/04/2015	Reiterate Rating	Strong Buy	\$119.56
#3	07/07/2014	Reiterate Rating	Strong Buy	\$95.97
#2	03/18/2013	Reiterate Rating	Strong Buy	\$65.10
#1	10/25/2012	Initiation of Coverage	Strong Buy	\$87.08


**Tigress Research Methodology Overview**

We employ proprietary quantitative valuation models combined with dynamic fundamental analysis based on the principles of Economic Profit to formulate timely and insightful investment ratings, analysis, strategies, and recommendations.

We make key adjustments to reported financial data eliminating GAAP-based accounting distortions and measuring all companies on a cash operating basis.

Our proprietary research framework is a multi-factor model that scores and ranks companies based on their risk-adjusted ability to create Economic Profit relative to their current market value focusing on three key components:

**Business Performance:** Measuring economic profitability, growth and operating efficiency.

**Risk:** Measuring business sustainability, volatility, strength, and consistency.

**Valuation:** Linking business performance to market value. Measuring value created relative to capital employed and enterprise multiples of economic profit and cash flow.

We score and rank 24 key measurements of performance, risk, and value into relative market and industry investment recommendations.

For more information on our research methodology, please review the *Tigress Investment Research Guide to Company Valuation and Analysis*.

**Glossary of Key Terms and Measures**

**Excess Cash per Share:** Excess Cash per Share is the amount of excess cash divided by basic shares outstanding. Excess Cash consists of all cash and short-term securities less operating cash needed to run the business. Operating Cash is 5% of TTM net sales revenue.

**EBITDAR:** Earnings Before Interest, Taxes, Depreciation, Amortization, and Restructuring and Rent Costs. This is especially important when comparing companies that use a significant amount of leased assets like restaurants and retailers.

**NOPAT:** Net Operating Profit after Tax represents a company's after-tax cash operating profit excluding financing costs.

**Total Invested Capital:** Total Invested Capital the total cash investment that shareholders and debt holders have made during the life of the company.

**Return on Capital:** Return on Capital equals NOPAT divided by Total Invested Capital. It is a key measure of operating efficiency. ROC quantifies how well a company generates cash flow relative to the capital invested in its business.

**Cost of Capital:** Is the proportionately weighted cost of each category of capital – common equity, preferred equity and debt.

**Economic Profit:** Economic Profit is the net operating income after tax less the opportunity cost of the total capital invested. It is the most important driver of shareholder value.

**Current Operations Value:** Current Operations Value is the portion of market value based on the discounted present value of the current earnings stream assuming it remains constant forever.

**Future Growth Value:** Future Growth Value is the portion of market value based on un-earned Economic Profit

For more information on the key terms and measures, please review the *Tigress Investment Research Guide to Company Valuation and Analysis*.

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Rating:	Meaning:	Rating Distribution (08/29/2018)				
		Companies Under Coverage		Relationship Companies Under Coverage*		
		#	%	#	%	
<b>Strong Buy:</b>	Expect significant price gains in the price of the stock relative to its industry peer group and general market over the next 12 months.	16	14%	1	15%	
<b>Buy:</b>	Expect out-performance for the price of the stock relative to its industry peer group and general market over the next 12 months.	51	43%	5	70%	
<b>Neutral:</b>	Expect little or no outperformance opportunity over the next 12 months.	46	39%	1	15%	
<b>Underperform:</b>	Expect underperformance for the price of the stock relative to its industry peer group and general market over the next 12 months.	5	4%	0	0%	
<b>Sell:</b>	Expect price decline or significant relative market and industry underperformance over the next 12 months.	0	0%	0	0%	
<b>Not Rated</b>	No Current Research Rating	NA	NA	65	NA	
		<b>Total</b>	<b>118</b>	<b>100%</b>	<b>72</b>	<b>100%</b>

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<b>Company:</b>	<b>Disclosure:</b>
Apple Inc. (AAPL-US)	14

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