

## APPLE INC. (NASD) - AAPL

### **Company Description:**

Apple Inc. is one of the world's largest makers of PCs and peripheral and consumer products, such as the iPod digital music player, the iPad tablet, the iPhone smartphone, and the "Apple Watch," for sale primarily to the business, creative, education, government, and consumer markets. It also sells operating systems, utilities, languages, developer tools, and database software. Apple operated a total of 488 retail outlets, including 259 stores in the U.S. and 178 in international markets. R&D: 4.7% revenues. Has 116,000 employees. CEO: Tim Cook. Cupertino, CA www.apple.com.

### **Basic Description:**

Earnings and revenues were fairly flat until 2005 when they exploded. Since that time, earnings growth has been much faster than the top line as operating margins expanded and tax rates dropped. However, P/E ratios have dropped both absolutely and relatively to the market since 2010. The volatility between annual lows and highs has gradually reduced. In light of reduced investment opportunities, AAPL has been paying out dividends at a roughly 25% payout ratio and buyback shares heavily rather than accumulate cash. It appears that debt is accumulating but that is a function of retaining cash and securities offshore for tax purposes. AAPL has a superior operating margin, especially for a "hardware" company. In addition, the depreciation rates indicate rising rates of capital intensity.

### **Profitability Description:**

AAPL has managed to continue to drive strong top line growth by innovating in new categories and expanding geographies. AAPL has a unique blend of an advertising-based consumer franchise with a research-based technology company. The combination fortifies their profitability. In addition, AAPL works hard to minimize taxation by retaining assets overseas and taking on US debt. The result is that AAPL tends to payout 20-25% of its earnings in dividends, roughly another 50% on share repurchases while building the rest on its balance sheet. The rising capex appears to adequately be funded by amortization/depreciation. Long-term visibility of current strong performance is definitely a challenge as topline growth has weakened.

### **Core Advantage Description:**

AAPL has a core brand advantage of style, performance and quality service. There is a global segment that is willing to and has the capacity to pay up for these brand characteristics. In addition, AAPL has created a multi-device following that is knitted together in a fairly closed ecosystem which creates some stickiness. AAPL has also created a powerful balance sheet by accumulating and not squandering the results from its "one-hit" wonders that have continued to roll out. This balance sheet allows funding the vertically-integrated model that prevents a certain type of commoditization and limits the negotiating power of anyone in the supply chain. Despite these strengths, the hardware industry has a long history of cyclicity and turnover of leaders.

### **Investment Thesis:**

Currently, the cash flow margins are much higher than their competitors. Global capacities and scale help here. However, growth opportunities are limited due to AAPL's "capital goods" aspect as durability has increased and innovation rate has decreased (think of PCs here). As a result, AAPL is likely to become a strong "equity bond" with periodic anxiety about its ability to maintain topline levels and margins. While iPhones face growth headwinds (except in India), the stickiness of its products and the introduction of new ones (e.g. watch, auto) should allow for a topline growth of 4% (flat iPhone and Mac, decline iPad and increased other and services) long term and maintenance of margins with an excess cash flow of 80%. A buyback level of 40% at an average P/E of 12 drives an EPS growth of 8%. A terminal P/E of 15 is assumed.

### **Purchase Description:**

Given the above factors, we would recommend patient, value-oriented investors purchase shares of AAPL as a Tier III at prices up to \$103 per share (average of capl charge and low hist P/S), with a targeted sales price of \$190 per share (20X P/E). These prices partially consider a separate addition of nearly \$30 per share in cash/investments (capl charge approach).

	FY End		Stock Price			Mkt. Value															
	September		\$135.00			\$708,750.00															
	1996	1997	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Earnings (mln)			405	564	-98	101	51	274	1,254	1,989	3,496	4,834	5,704	14,013	25,922	41,733	37,037	39,510	53,394	45,687	48,550
EPS			\$0.13	\$0.15	(\$0.01)	\$0.01	\$0.01	\$0.05	\$0.23	\$0.33	\$0.57	\$0.78	\$0.91	\$2.19	\$3.98	\$6.35	\$5.88	\$6.74	\$9.57	\$8.56	\$9.25
Operating EPS			\$0.09	\$0.12	(\$0.02)	\$0.02	\$0.01	\$0.05	\$0.21	\$0.33	\$0.57	\$0.78	\$0.91	\$2.19	\$3.98	\$6.35	\$5.88	\$6.74	\$9.57	\$8.56	\$9.25

Ave. P/E Ratios			17.3	30.8	nmf	nmf	nmf	38.0	26.2	29.1	26.3	30.4	19.2	15.2	12.4	12.0	12.3	13.0	12.8	12.6	
Yrly Price Low								1.5	4.5	7.2	11.7	11.3	11.2	27.2	44.4	58.4	55.0	70.5	92.0	89.0	116.0
Yrly Price High								5.0	10.8	13.3	29.0	28.6	30.6	46.7	61.0	100.7	82.2	119.8	134.5	118.7	136.0

Dividends Paid			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	2,498	10,260	10,618	11,046	11,633	12,495
Dividends PS			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.38	\$1.63	\$1.81	\$1.98	\$2.18	\$2.38
Ave. Div. Yld.			#####	#####	#####	#####	#####	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.48%	2.38%	1.90%	1.75%	2.10%	1.89%

Shares Outstdg.			4,502	4,700	4,913	5,025	5,134	5,480	5,845	5,987	6,106	6,218	6,299	6,412	6,505	6,575	6,295	5,866	5,579	5,336	5,250
Buyback \$ (mln)			0	0	0	0	0	(1,125)	(2,791)	(1,452)	(2,432)	(2,234)	(1,678)	(4,183)	(4,906)	(5,537)	19,208	40,753	32,525	25,215	10,861

Shr. Equity (mln)			2,972	4,042	3,930	4,071	4,210	5,097	7,466	9,984	14,532	21,030	27,832	47,791	76,615	118,210	123,549	111,547	119,355	128,249	138,500
Book Value PS			\$0.66	\$0.86	\$0.80	\$0.81	\$0.82	\$0.93	\$1.28	\$1.67	\$2.38	\$3.38	\$4.42	\$7.45	\$11.78	\$17.98	\$19.63	\$19.02	\$21.39	\$24.03	\$26.38

LT Debt (mln)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	16,960	28,987	53,463	75,427	75,000
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Return On Eq.			13.64%	13.95%	-2.50%	2.47%	1.22%	5.38%	16.80%	19.92%	24.06%	22.99%	20.49%	29.32%	33.83%	35.30%	29.98%	35.42%	44.74%	35.62%	35.05%
Return On Capl.			13.64%	13.95%	-2.50%	2.47%	1.22%	5.38%	16.80%	19.92%	24.06%	22.99%	20.49%	29.32%	33.83%	35.30%	26.36%	28.11%	30.90%	22.43%	22.74%

Description:

Instructions:

Analysis:

Observations:

## Investment Characteristics

Earnings Analysis:

Use Of Earnings Analysis:

Growth Rate %: 36.8%

Avg Div Payout Ratio 18.61%

Quality %: 100.2%

Avg Stk Buyback 31.98%

	1995	1996	1997	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Sales (mln)				6,123	7,989	5,355	5,729	6,212	8,275	13,931	19,315	24,006	32,479	36,537	65,225	108,249	156,508	170,910	182,795	233,715	215,639	230,000
SPS				\$1.36	\$1.70	\$1.09	\$1.14	\$1.21	\$1.51	\$2.38	\$3.23	\$3.93	\$5.22	\$5.80	\$10.17	\$16.64	\$23.81	\$27.15	\$31.16	\$41.89	\$40.41	\$43.81
Adj. Sales (mln)																						

Sales Analysis:

Sales Analysis (last 5 yrs.):

Growth Rate %: 26.32%

Growth Rate %: 8.00%

Growth Rate PS 27.46%

Growth Rate PS 12.97%

	1995	1996	1997	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Oper. Margin										13.10%	13.90%	19.70%	20.80%	22.90%	29.80%	32.90%	37.40%	32.60%	33.10%	35.30%	32.70%	32.50%
Tax Rate										30.90%	29.40%	30.20%	29.90%	28.60%	24.40%	24.20%	25.20%	26.20%	26.10%	26.40%	25.50%	25.50%
Deprec. (mln)										179	225	317	473	703	1,027	1,814	3,277	6,757	7,946	11,257	10,505	11,000
Depreciation %										14.27%	11.31%	9.07%	9.78%	12.32%	7.33%	7.00%	7.85%	18.24%	20.11%	21.08%	22.99%	22.66%

Description:

Instructions:

Analysis:

Observations:

## Description & Analysis of Profitability (in mlns):

	2013		2014		2015		2016	
<b>Net Revenues:</b>	<b>17%</b>	<b>170,910</b>		<b>182,795</b>		<b>233,715</b>		<b>215,639</b>
30% iPhone		91,279	53.4%	101,991	55.8%	155,041	66.3%	136,700
-15% iPad		31,980	18.7%	30,283	16.6%	23,227	9.9%	20,628
9% Mac		21,483	12.6%	24,079	13.2%	25,471	10.9%	22,831
11% Services		16,051	9.4%	18,063	9.9%	19,909	8.5%	24,348
0% Other Products		10,117	5.9%	8,379	4.6%	10,067	4.3%	11,132
<b>Internal Costs:</b>	<b>15%</b>	<b>121,911</b>		<b>130,292</b>		<b>162,485</b>		<b>155,615</b>
15% Cost of Sales		106,606	62.4%	112,258	61.4%	140,089	59.9%	131,376
34% Research and development exp		4,475	2.6%	6,041	3.3%	8,067	3.5%	10,045
15% Selling, general and admin.		10,830	6.3%	11,993	6.6%	14,329	6.1%	14,194
<b>EBITDA:</b>	<b>22%</b>	<b>55,756</b>	32.6%	<b>60,449</b>	33.1%	<b>82,487</b>	35.3%	<b>70,529</b>
29% Amortization/Dep.		6,757		7,946		11,257		10,505
<b>"Free" Cash Flow</b>	<b>22%</b>	<b>47,591</b>	27.8%	<b>50,878</b>	27.8%	<b>71,240</b>	30.5%	<b>57,795</b>
17% Capital Expenditures		8,165		9,571		11,247		12,734
<b>Operating Margin:</b>	<b>21%</b>	<b>48,999</b>	28.7%	<b>52,503</b>	28.7%	<b>71,230</b>	30.5%	<b>60,024</b>
<b>External Costs:</b>	<b>22%</b>	<b>11,962</b>		<b>12,993</b>		<b>17,836</b>		<b>14,337</b>
34% Interest and dividend income		(1,616)		(1,795)		(2,921)		(3,999)
132% Interest expense		136		384		733		1,456
67% Other expense, net		324		431		903		1,195
21% Taxes:		13,118	26.2%	13,973	26.1%	19,121	26.4%	15,685
<b>Earnings:</b>	<b>20%</b>	<b>37,037</b>		<b>39,510</b>		<b>53,394</b>		<b>45,687</b>
<b>Dividend Paid/% of FCF:</b>		<b>10,260</b>	27.7%	<b>10,618</b>	26.9%	<b>11,046</b>	20.7%	<b>11,633</b>
<b>Common Stock/% of FCF:</b>		<b>19,208</b>	51.9%	<b>40,753</b>	103.1%	<b>32,525</b>	60.9%	<b>25,215</b>
Share buybacks: Stmt of C. F.		22,860		43,531		33,961		28,820
<b>Net Business Acquisitions:</b>		<b>496</b>	1.3%	<b>3,765</b>	9.5%	<b>343</b>	0.6%	<b>1,111</b>
Purchases		496		3,765		343		1,111
Disposals								

**Description:**

**Instructions:**

**Analysis:**

**Observations:**

## Balance Sheet (in millions):

	2014	2015	2016	
<b>Assets:</b>	<b>18%</b>	<b>231,839</b>	<b>290,479</b>	<b>321,686</b>
Cash	13,844	21,120	20,484	
Marketable securities	11,233	20,481	46,671	
Accts receivable	17,460	16,849	15,754	
Inventories	2,111	2,349	2,132	
Deferred tax assets	4,318	5,546		
Vendor non-trade receivables	9,759	13,494	13,545	
Other current assets	9,806	9,539	8,283	
Long-term marketable securities	130,162	164,065	170,430	
Prop. plant & equipt., net	20,624	22,471	27,010	
Goodwill	4,616	5,116	5,414	
Intangible assets, net	4,142	3,893	3,206	
Other assets	3,764	5,556	8,757	
<b>Liabilities:</b>	<b>27%</b>	<b>120,292</b>	<b>171,124</b>	<b>193,437</b>
Accounts payable	30,196	35,490	37,294	
Accrued expenses	18,453	25,181	22,027	
Deferred revenue	8,491	8,940	8,080	
Commercial paper	6,308	8,499	8,105	
Current portion of long-term debt	0	2,500	3,500	
Deferred revenue, non-current	3,031	3,624	2,930	
Long-term debt	28,987	53,463	75,427	
Other non-current liabilities	24,826	33,427	36,074	
<b>Shareholder's Equity:</b>	<b>7%</b>	<b>111,547</b>	<b>119,355</b>	<b>128,249</b>
Common Stock	23,313	27,416	31,251	
Retained income	87,152	92,284	96,364	
AOCI	1,082	-345	634	

**Description:**

**Instructions:**

**Analysis:** If we took the approach of subtracting the sizeable cash and m.s., the valuation might be considerably higher.

**Observations:** \$10 bln of cash is in US and declining for acquisitions. Bulk is overseas.

We believe that our long-term strategy, which is focused on delivering intelligent networks and technology and business architectures built on integrated products, services, and software platforms

Description & Analysis of Debt Levels (in mlns):

**Summary:** Debt is a four-letter word. Debt causes the years of repayment of capital to equity shareholders to stretch out into the more distant future. Even worse, debt can cause the best business model to become the property of bondholders in a rough economic environment.

**Total Debt-Capital:** The measure of total debt to total capital is useful when book value is a good measure of a firm's worth. This is particularly true of traditional businesses where property, plant and equipment are important. Further, it helps to have this ratio in capital intensive businesses with cyclical earnings.

**Total Debt:** 193,437.0 Here, deferred income taxes have been excluded.  
**Total Capital:** 321,686.0 Here, deferred income taxes have been excluded.  
**Ratio:** 60.13%

**Long Term Debt-Capital:** The measure of long term debt to total capital is useful when total debt is distorted by the high presence of current assets being financed by current liabilities. Again, the measure works best within a traditional industry setting. The ratio helps position the equity shareholders.

**L. T. Debt:** 78,927.0 Here, the current liabilities have been excluded.  
**L. T. Capital:** 207,176.0 Here, the current liabilities have been excluded.  
**Ratio:** 38.10%

**Net Income Payback:** The measure of how quickly total debt is repaid by net income is a conservative measure, as it includes debt such as current liabilities, that are financed by current assets and excludes some sources of cash, such as noncash amortization numbers.

**Total Debt:** 193,437.0  
**Net Income:** 45,687.0  
**Years Pay:** 4.2

**L.T. Debt:** 78,927.0  
**Net Income:** 45,687.0  
**Years Pay:** 1.7

**Addback Net Inc. Payback:** The measure of how quickly debt is repaid by addback net income is a good measure, as it starts with GAAP net income and adds back expenses on an after-tax basis that are clearly discretionary, such as business acquisitions to better analyze the strength of the repayment stream.

**L.T. Debt:** -158,658.0 Adj for cash and mkt securities  
**Net Income:** 45,687.0  
**Addback:** 0.0 Merger charges, writedowns above the line, dep. Amort below the line less capex  
**Years Pay:** -3.5

**Interpretations:**

Description & Analysis of Stock Options (in mlns):

**Summary:** Stock options are a difficult form of compensation to assess. Heavy use of stock options creates stock issuance and a demand for stock repurchasing in some industries. This can be dilutive to shareholders if no repurchasing occurs or can absorb cash flows in the event that repurchasing occurs to offset issuance. Uses "share-based incentive" language

FASB ASC 718	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
After tax E	3,586.00	4,210.00								
Net profits:	53,394.00	45,687.00								
%	6.72%	9.21%								
Cash net of	33,961.00	28,820.00								
Net share r	32,525.40	25,214.78								
Difference	1,435.60	3,605.22								
% of Net p	2.69%	7.89%								

## Industry Overview

The computer technology area is highly competitive and increasingly global. AAPL competes in devices heavily with Samsung but has a software side that Samsung lacks. AAPL also competes with HP in laptops and some devices, but not phones. Sony is a competitor in some devices, but lacks an emphasis on computing. MSFT is a traditional competitor but has much less exposure to hardware. Yet, Nokia, Blackberry and Ericsson are examples of how quickly successful device ecosystems can fail.

### Operating Statistics:

Company	Debt (yrs.)	Sales	ROC	Operating Margin
AAPL	-3.5	230,000	22.74%	32.50%
Samsung	0.0	176,244	11.00%	21.00%
HP	3.5	111,000	5.00%	12.00%
MSFT	1.1	93,580	21.00%	36.00%

### Market Statistics:

Company	P/B	P/E	Div. Yld.	EV/Sales
AAPL	5.12	14.6	1.9%	3.41
Samsung	1.17	9.8	1.6%	1.03
HP	0.91	5.5	3.6%	0.16
MSFT	5.50	20.1	2.7%	4.92

## Qualitative Characteristics

### Positives:

### Negatives:

#### Product/Service:

**Pricing Power:**

**Durability:**

**Brand Appeal:**

**Unique Importance:**

**Role Of Media:**

**Toll Bridge:**

**Global Opportunity**

**Competition**

**Economic Risk:**

**Government Role**

**Role Of Technology:**

**Supply/Demand:**

#### Financial:

**Business Model:**

**High Capital Reinv.:**

**Effective As Public:**

**Ownership:**

**Growth:**

**Concentration:**

#### Management:

**Characteristics:**

**Proxy Information:**

Technology improves
Created sense of beauty and functionality
Embedded in the computing environment
Has significant advertising expenses
The systemic dominance and coordination
AAPL has worldwide brand
New technology helps synergies.
Global growth in developing countries

Narrowly focused.
Reasonable capital requirments
Yes
No pension plans

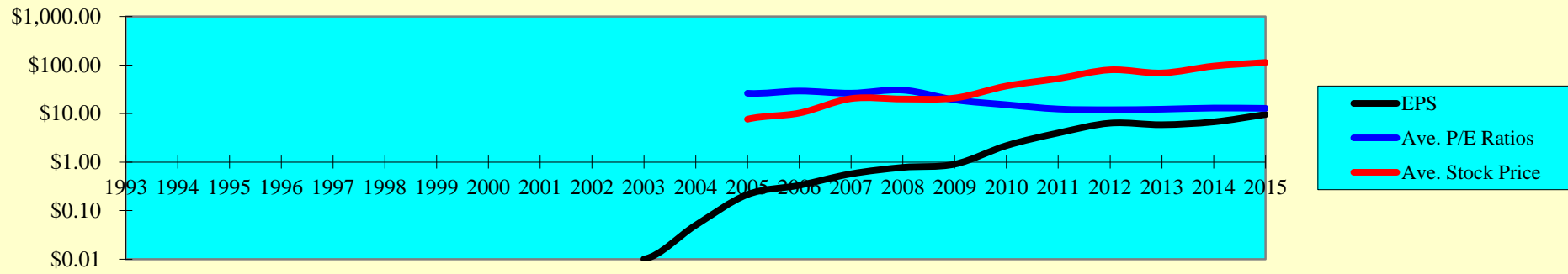
Highly experienced.

Competitive
Has to work to maintain dominance
Innovators dilemma always present
Economy slows purchases
Technology can create competitors, especially

Slowing




# Average Stock Price vs. Average P/E vs. EPS



	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
EPS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.09	\$0.12	####	\$0.02	\$0.01	\$0.05	\$0.21	\$0.33	\$0.57	\$0.78	\$0.91	\$2.19	\$3.98	\$6.35	\$5.88	\$6.74	\$9.57	\$8.56
Ave. P/E Ratios	0.00	0.00	0.00	0.00	0.00	0.00	17.30	30.80	nmf	nmf	nmf	38.00	26.20	29.10	26.30	30.40	19.20	15.20	12.40	12.00	12.30	13.00	12.80	12.60
Ave. Stock Price	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.25	7.65	10.25	20.35	19.95	20.90	36.95	52.70	79.55	68.60	95.15	113.25	103.85

Price/Earnings Ratio: used - \$9.25  
 Thirteen year average low 14.7  
 Thirteen year average high 32.3  
 If we set the purchase at the ave. Thirteen year low P/E,  
 the price implied is: #####  
 If we set the sell at the ave. Thirteen year high P/E,  
 the price implied is: #####

Price/Sales Ratio: used - \$43.81  
 Thirteen year average low 2.21  
 Thirteen year average high 4.28  
 If we set the purchase at the ave. Thirteen year low P/S,  
 the price implied is: \$96.60  
 If we set the sell at the ave. Thirteen year high P/S,  
 the price implied is: #####

Price/Book Ratio: used - \$26.38  
 Thirteen year average low 3.49  
 Thirteen year average high 6.78  
 If we set the purchase at the ave. Thirteen year low P/B,  
 the price implied is: \$92.18  
 If we set the sell at the ave. Thirteen year high P/B,  
 the price implied is: #####

Price/Cash Flow Ratio: used - \$11.34  
 Thirteen year average low 13.4  
 Thirteen year average high 29.9  
 If we set the purchase at the ave. Thirteen year low P/CF,  
 the price implied is: \$152.14  
 If we set the sell at the ave. Thirteen year high P/CF,  
 the price implied is: \$338.96

Initial Rate of Investment		
	Current Price	\$135.00
	Current EPS	\$9.25
	Initial ROI	6.85%

Relative Value to Investment In T-Bonds		
	Current EPS	\$9.25
	T-Bond Rate	4.00%
	Relative Value	\$231.19

Capital "charge" approach		
70,529	ebitda	
0.12	required return	
0.04	growth rate (not on EPS basis) (no acquisitions)	
0.8	% not required	
0.088	denominator	
801,466	ev	
-158,658	debt	
960,124	equity value	
5250	shares	
182.88	share value	
109.73	buy at 60%	
219.46	sell at 120%	

Valuation as an Equity Bond:		
	Current BV	\$26.38
	Current ROE	35.05%
	Retained %	19.41%
	Net BV Growth	6.80%
	BV in Year 10	\$50.95
	EPS in Year 10	\$17.86
	Valueat15P/E	\$267.91
	Total Dividends	\$42.77
	Total F.Value	\$310.68
	Purchaseat14%	\$83.80

Valuation on Earnings Growth:		
	Current EPS	\$9.25
	EPS in Year 10	\$19.96
	Ave. P/E Ratio	20.51
	Valueat15P/E	\$342.24
	Price Return	8.29%
	Dividend Return	1.89%
	Total Return	10.18%
	Purchaseat14%	\$92.32
	Sellat6%	\$191.10

History of Buys/Sells

by Apple aapl 4/26/2016 97.79 1.50%

Discussion of Buys/Sells

- What: The return of the purchase of AAPL  
Over the last 15 years, AAPL's returns  
The strongest lengthy period was
- So what: It appears that we ended up purchasing an "equity bond" as high end smartphone market was maturing.  
On our purchase, we paid nearly
- Now what: Our discipline tends to capture companies moving from growth to mature as we use historical growth rates and P/Es.  
We made our purchase at a
- Takeaway: our pricing discipline works
- Takeaway: tech stocks tend to have "replacement" cycles which hurt returns and highly correlate with economic cycles

