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INNOVATION HAS ITS LIMITS

APPLE (AAPL)

CURRENT PRICE: \$180.94

TARGET PRICE: \$147.37

RATING: SELL

12-month Investment View: Apple's current price is overvalued by 22% and hence warrants a SELL rating. Our target price is based on Apple's Mac, iPod, iPhone, music content, software, and service sales growth. According to sensitivity analysis, Apple's current market price implies 3-8% extra sales growth from undeveloped and untested products.

Will Apple's Luck Run Out?

With high income households increasing in both US and non-US regions, Apple's Mac market share will expand at 1% in the US and continue to grow slowly (by 0.2% in 2007) in non-US markets. We expect Apple Mac total sales growth to outperform the industry average.

iPod and iPhone will keep moving off the shelves despite the market cannibalization that occurred between these two products in 2007. Apple will shift from selling portable media devices to offering accessories such as iTunes music, which is a strategy that will support Apple's long term sales growth.

However, Apple's latest products, such as MacBook Air, OS X Leopard, iPod Touch, and the soon to be released 3G iPhone, are upgraded versions of existing products. The design and creative features of these products were led by Steve Jobs, whose return to Apple sparked the company's incredible rebirth and recent success. As innovation becomes more difficult, especially in a market already saturated with its products, and because of over dependence on Jobs' leadership, Apple has limited options for substantial long-term growth. Therefore, we think Apple's intrinsic value should be \$147 per share.

Sensitivity Analysis: We adjusted for COGS/sales, sales growth, cost of equity, and terminal growth rate. If Apple continues its high gross margin of 34% (which is higher than its historical average of 28%), it still needs 3% extra sales growth from future unknown products to maintain its \$180 share price. If Apple's business risks increase and its required return climbs from 14% to 16%, Apple's terminal growth needs to be higher than 11% to maintain its current share price.

Risks to Our Call:

1. Ability to Launch Innovative Products that Change Consumers' Behavior
2. Stronger Consumer Preference than Expected
3. Unexpected Increase in High Income Households

****Please see disclaimer at end of report Before Reading****

Share Price Outperformed Market Indexes But Was Volatile...

Apple experienced sales growth of 24% in 2007 and 38% in 2006. Such high growth has not gone unnoticed, and its share price has risen by 80% over the last twelve months. However, Apple's share price is volatile (20%-100% over market indexes), which is due to investors' perception of Apple's future innovation.

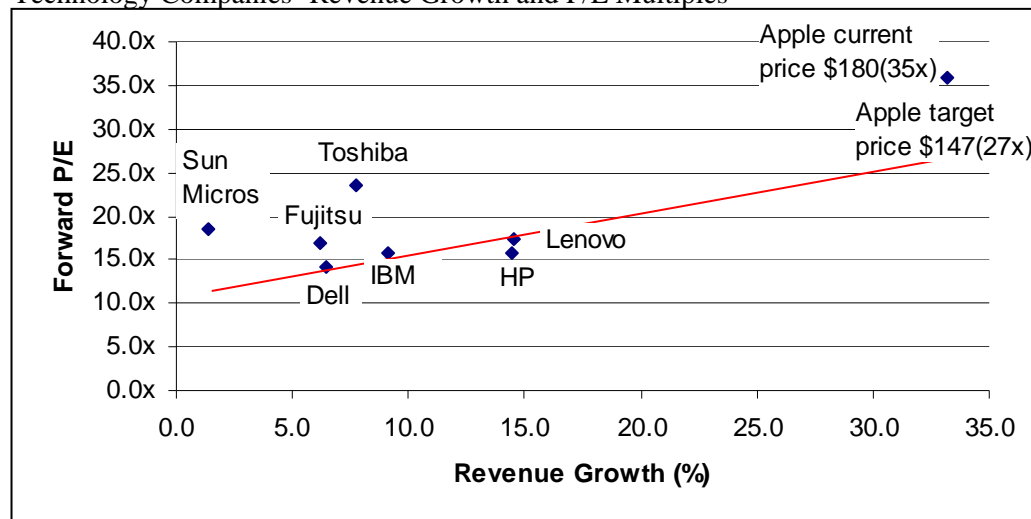
Apple LTM Share Price Compared to Market Indexes



Source: Yahoo Finance

Compared to other industry players' P/E multiples and sales growth, assuming sales growth and P/E multiples have a linear relationship, Apple's share price should be close to our target price of \$147, P/E 27x.

Technology Companies' Revenue Growth and P/E Multiples



Source: Capital IQ, April 2008, and estimation

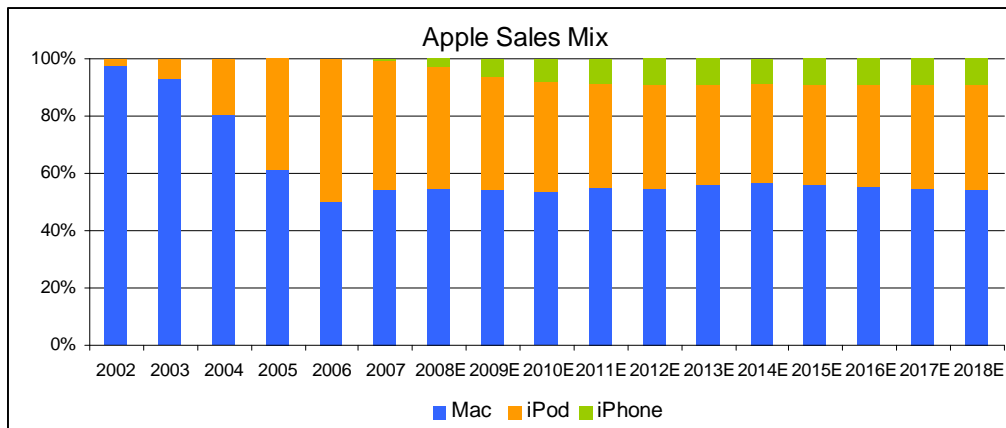
Note: Toshiba and Fujitsu are listed in a non-US stock exchange.

Continue Gaining Share in Global Computer Markets

Apple was a long-established company in decline until the 1996 return of Steve Jobs, who moved Apple toward a design-focused strategy. Under Jobs' leadership, the company developed many innovative products such as Mac portables, iPod, iTunes online store, and most recently, the iPhone.

In 2002, 98% of Apple's revenue came from computer-related sales (noted hereafter as Mac). In 2006, Mac sales accounted for only 50% of Apple's revenue, due to its introduction of the iPod. We believe Apple will continue to generate an estimated 50% of sales from its multimedia business.

Company Total Revenue Composition

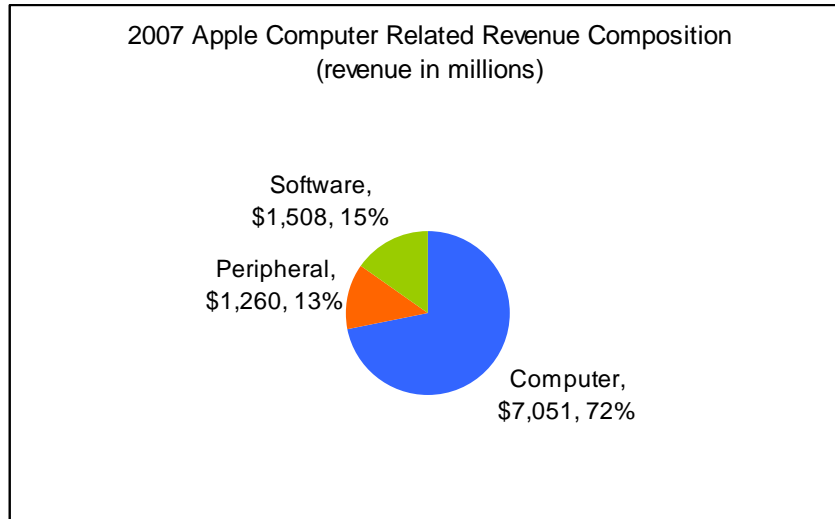


Source: Company 10K and estimation

Recent consumer electronic devices tend to integrate capabilities, such as mobile communication, music, Internet access, camera, and data storage. Competitive pressures have led Apple to develop multi-functional media devices to replace and/or complement the single-functioned music player, which has resulted in product cannibalization.

Mac sales include computers, peripherals, and software. Computer hardware comprised 72% of total Mac sales in 2007, and stayed in a range of 69-75% during 2002-2006. We assume computer hardware sales will continue contributing 72% of total Mac sales, which means \$1 sales in Mac computer generates \$1.37 revenue for Apple.

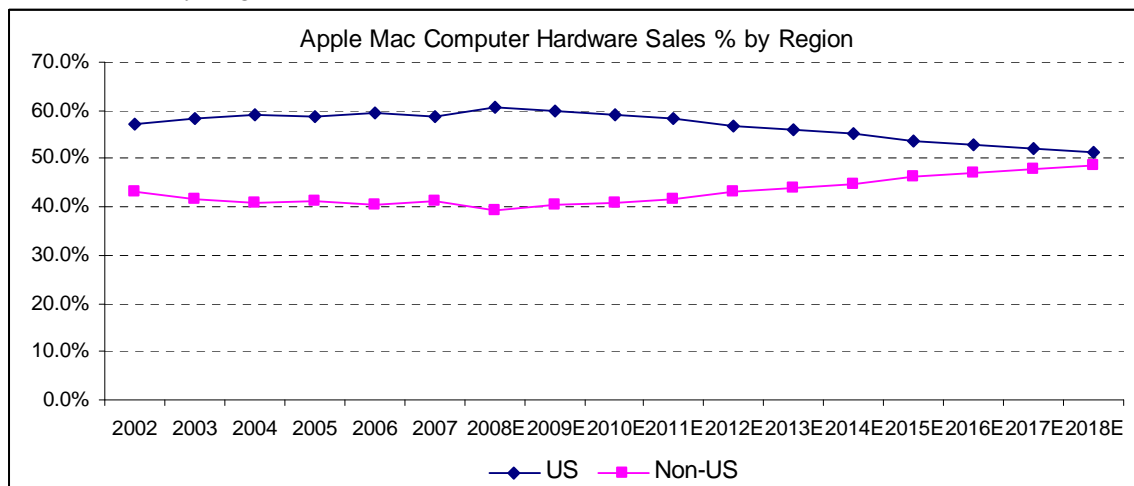
Mac Revenue Composition



Source: Company 10K

From 2003-2007, 60% of Mac sales were in the US market. With rapid growth from non-US computer markets¹, we expect Apple will maintain its strong presence in the US as well as expand to non-US markets; hence, we project that US and non-US segments will each contribute half of Mac sales in the long run.

Mac Revenue by Region



Source: Company 10K and estimation

¹ Refer to Koh & Tseng Analysis HP report for worldwide computer sales forecasts.

In the US computer market, Apple possessed 6.2% of share in 2007 and 5% in 2006. Apple's computer average selling price of \$1,463 in 2007, ranked highest among other vendors. According to the Mintel report², only households that earned an annual income of more than \$100,000 purchased computers priced higher than \$1,400.

US Computer Average Purchase Price by HH and Average Selling Price by Vendor (2007)

US Household income	Avg PC Purchase Price	Vendor	Avg PC Selling Price
Less than \$25K	1,023	Others	<1,000
\$25K-49.9K	1,148	Sony	1,200
\$50K-74.9K	1,221	HP	1,255
\$75K-99.9K	1,339	Dell	1,428
\$100K+	1,495	Apple	1,463

Source: Mintel Home Computers US, December 2007, company 10K, and IDC

Mac's market share will grow based on statistics showing continuous growth in its target segment, the high income households. According to US Census Bureau surveys between 2000 and 2006, households earning an annual income of \$100,000-149,999 increased by 0.95% per annum. We assume Mac's US market share will increase at the same annual rate of 0.95% as US high-income households.

The US Household Income Distribution

HH Income	2000	2006	Avg. Annual Change
Less than \$10,000	9.5%	8.00%	-0.25%
\$10,000 to \$14,999	6.3%	5.90%	-0.07%
\$15,000 to \$24,999	12.9%	11.40%	-0.25%
\$25,000 to \$34,999	12.8%	11.20%	-0.27%
\$35,000 to \$49,999	11.6%	14.80%	0.53%
\$50,000 to \$74,999	19.4%	19.00%	-0.07%
\$75,000 to \$99,999	10.2%	11.80%	0.27%
\$100,000 to \$149,999	5.2%	10.90%	0.95%
\$150,000 to \$199,999	2.5%	3.60%	0.18%
\$200,000 or more	2.2%	3.40%	0.20%

Source: American FactFinder- US Census Bureau 2000 and 2006 survey

With 1.4% market share, Apple has a minimal presence in non-US computer markets. However, as more households migrate to the higher-income bracket, Apple's share in these regions will gradually increase at a 0.22% rate in 2007 to 0.95% rate in 2017, catching up with its US market share.

Mac Market Share

	2004	2005	2006	2007	2008E	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Market share															
US	3.4%	4.4%	5.0%	6.2%	7.3%	8.3%	9.2%	10.2%	11.1%	12.1%	13.0%	14.0%	14.9%	15.9%	16.8%
Non-US	1.1%	1.2%	1.2%	1.4%	1.7%	2.1%	2.5%	3.0%	3.6%	4.3%	5.0%	5.8%	6.7%	7.6%	8.6%
Change in market share															
US	0.0%	0.9%	0.65%	1.21%	1.08%	0.95%	0.95%	0.95%	0.95%	0.95%	0.95%	0.95%	0.95%	0.95%	0.95%
Non-US	-0.1%	0.1%	0.00%	0.22%	0.29%	0.36%	0.44%	0.51%	0.58%	0.66%	0.73%	0.80%	0.88%	0.95%	0.95%

Source: Company 10K, IDC, and estimation

² Mintel Home Computers US, December 2007

Based on US and non-US market share assumptions, Mac's sales are forecasted to be 9.2 million units for 2008. However, Apple only shipped 4.6 million Mac computers through the second quarter of 2008³, which included its highest sales quarter. The current sales data lead us to believe a 30% growth rate for 2008 is an optimistic estimation.

Mac Sales Unit and Average Selling Price (sales unit in thousands and revenue in millions)

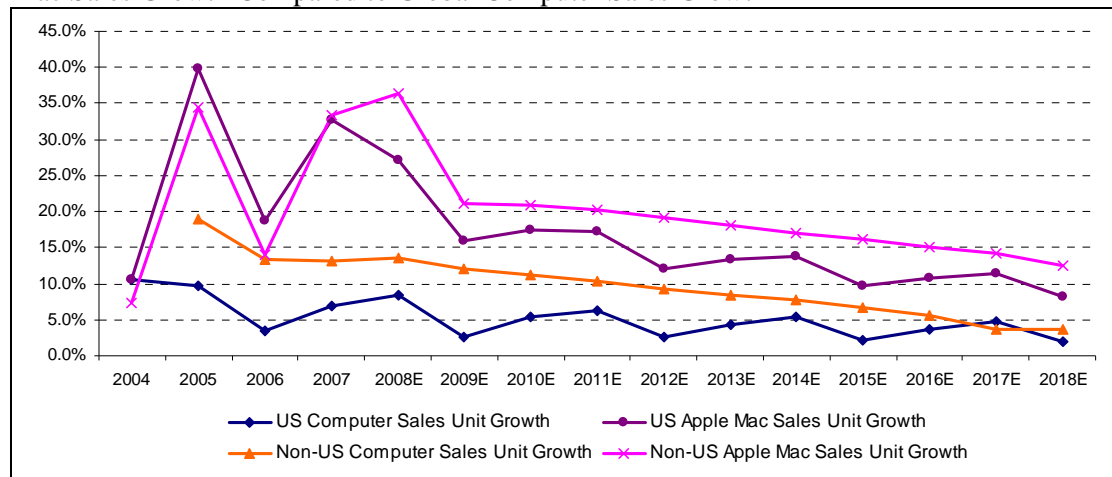
	2004	2005	2006	2007	2008E	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Mac															
Sale unit	3,290	4,534	5,303	7,051	9,212	10,861	12,910	15,299	17,600	20,308	23,397	26,323	29,686	33,480	36,888
Growth	9.2%	37.8%	17.0%	33.0%	30.6%	17.9%	18.9%	18.5%	15.0%	15.4%	15.2%	12.5%	12.8%	12.8%	10.2%
ASP	1,496	1,384	1,391	1,463	1,539	1,579	1,599	1,599	1,599	1,599	1,578	1,558	1,518	1,478	1,440
Change	0.3%	-7.5%	0.5%	5.2%	5.2%	2.6%	1.3%	0.0%	0.0%	0.0%	-1.3%	-1.3%	-2.6%	-2.6%	-2.6%
Hardware Revenue	4,922	6,275	7,376	10,316	14,175	17,145	20,643	24,463	28,143	32,472	36,927	41,007	45,050	49,493	53,119
Growth	9.6%	27.5%	17.6%	39.8%	37.4%	21.0%	20.4%	18.5%	15.0%	15.4%	13.7%	11.0%	9.9%	9.9%	7.3%
Mac Total Revenue	6,694	8,492	9,755	13,084	17,870	21,615	26,026	30,841	35,480	40,939	46,556	51,699	56,796	62,397	66,968
Growth	14.9%	26.9%	14.9%	34.1%	36.6%	21.0%	20.4%	18.5%	15.0%	15.4%	13.7%	11.0%	9.9%	9.9%	7.3%

Source: Company 10K, IDC, and estimation

Mac average selling price (ASP) increased 5% in 2007. We assume Apple will continue increasing Mac ASP because of inelastic demand for Mac computers. However, in the long run, Mac ASP will decrease due to declining manufacturing costs and pressure from lower-priced competitors.

Mac sales growth will continue outperforming the industry average in both US and non-US markets. We assume an aggressive terminal growth rate of 8% for the US market and 12% for non-US markets in 2018.

Mac Sales Growth Compared to Global Computer Sales Growth



Source: Company 10K, IDC, and estimation

Note: The non-US computer sales unit growth forecast is based on the US computer adoption curve from the 1980s, factoring in emerging countries' current computer penetration rates, income levels, and income distributions. For more details, please refer to Koh & Tseng Analysis HP report.

³ Apple quarterly report, March 29, 2008

Double Digit Growth from iPod and iPhone Sales

iPod sales include music players, music contents, and accessories. As of 2007, iPod had a 44% share of the US MP3 player market⁴; however, the paragraph below, from the Mintel report, shows that the US MP3 player market is approaching saturation:

The MP3 market has increased more than 26-fold between 2002 and 2007. However, sales have slowed slightly since 2005. The US MP3 sales increased 31% in 2006, and actually decreased 3% in 2007. This is due in part to the market approaching saturation. Falling sales in 2007 are likely due to the fact that iPod sales, which represent the higher end (and the largest share) of the market, were cut into by iPhone sales starting mid-year.

Total U.S. manufacturer sales of leading portable MP3 player chains, at current and constant prices, 2002-07						
Year	Sales at current prices			Sales at constant 2006 prices*		
	\$million	Index	% change	\$million	Index	% change
2002	205	100	-	234	100	-
2003	424	207	106.8	473	202	102.2
2004	1,289	629	204	1,402	599	196.1
2005	4,229	2,063	228.1	4,447	1,900	217.3
2006	5,559	2,712	31.4	5,704	2,437	28.2
2007 (est.)	5,400	2,634	-2.9	5,400	2,307	-5.3

Includes flash media and hard-drive based portable MP3 players
 *Adjusted for inflation using the All Items CPI
 Source: Mintel/CEA

With the MP3 player market approaching saturation, we assume iPod sales growth will gradually decrease from 30% in 2008 to 10% in 2018, in line with declining Mac sales growth. Apple sold 32.7 million iPods through the second quarter of 2008⁵, which included its highest sales quarter. The current sales data lead us to believe a predicted iPod sales unit of 67.4 million for 2008 is an optimistic estimation.

iPod price will continue decreasing as low entry barriers increase competition and economies of scale lower manufacturing costs.

iPod Sales Unit and Average Selling Price (sales unit in thousands and revenue in millions)

	2004	2005	2006	2007	2008E	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E	2018E
iPod															
Sales unit	4,416	22,497	39,409	51,630	67,453	79,529	94,535	112,025	128,876	148,704	171,323	192,744	217,374	245,154	270,105
Growth	370.3%	409.4%	75.2%	31.0%	30.6%	17.9%	18.9%	18.5%	15.0%	15.4%	15.2%	12.5%	12.8%	12.8%	10.2%
ASP	299	202	195	161	157	153	149	145	141	138	134	131	127	124	121
Change	-25.1%	-32.4%	-3.5%	-17.4%	-2.6%	-2.6%	-2.6%	-2.6%	-2.6%	-2.6%	-2.6%	-2.6%	-2.6%	-2.6%	-2.6%
Hardware Revenue	1,320	4,544	7,685	8,312	10,579	12,150	14,069	16,240	18,199	20,456	22,958	25,160	27,640	30,366	32,591
Growth	69.1%	8.2%	27.3%	14.9%	15.8%	15.4%	12.1%	12.4%	12.2%	9.6%	9.9%	9.9%	9.9%	9.9%	7.3%
Price elasticity	(14.77)	(12.62)	(21.69)	(1.78)	(11.84)	(6.92)	(7.29)	(7.15)	(5.81)	(5.94)	(5.88)	(4.83)	(4.94)	(4.94)	(3.93)

Source: Company 10K and estimation

⁴ Mintel Portable Media Devices - US - December 2007 - Portable MP3 Players

⁵ Apple quarterly report, March 29, 2008

With declining sales growth from iPod, Apple will generate more revenue from the iTunes online store and iPod accessories. In the long run, we believe iPod's business model will change from offering 'merely a device' to providing a whole-package deal that emphasizes contents as well. Music and accessories sales accounted for 30% of iPod sales in 2007, and will increase to more than 80% in 2018.

iTunes Music and iPod Accessories Revenue and its Percentage of iPod Device Revenue (revenue in millions)

	2004	2005	2006	2007	2008E	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E	2018E
iPod															
Hardware Revenue	1,320	4,544	7,685	8,312	10,579	12,150	14,069	16,240	18,199	20,456	22,958	25,160	27,640	30,366	32,591
Growth			69.1%	8.2%	27.3%	14.9%	15.8%	15.4%	12.1%	12.4%	12.2%	9.6%	9.9%	9.9%	7.3%
Music and accessories rev.	278	899	1,885	2,496	3,718	4,893	6,386	8,204	10,126	12,429	15,125	17,865	21,042	24,673	28,150
Growth	672.2%	223.4%	109.7%	32.4%	49.0%	31.6%	30.5%	28.5%	23.4%	22.7%	21.7%	18.1%	17.8%	17.3%	14.1%
% of iPod hardware sales	21.1%	19.8%	24.5%	30.0%	35.1%	40.3%	45.4%	50.5%	55.6%	60.8%	65.9%	71.0%	76.1%	81.3%	86.4%
Change	11.4%	-1.3%	4.7%	5.5%	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%	5.1%
Total iPod Related Rev.	1,598	5,443	9,570	10,808	14,297	17,043	20,455	24,444	28,325	32,885	38,083	43,025	48,682	55,038	60,740
Growth	289.2%	240.6%	75.8%	12.9%	32.3%	19.2%	20.0%	19.5%	15.9%	16.1%	15.8%	13.0%	13.2%	13.1%	10.4%

Source: Company 10K and estimation

iPhone sales include device sales and carrier subsidies. Through the second quarter of 2008⁶, iPhone sales achieved 4 million units. Although Apple CFO Peter Oppenheimer targeted 10 million iPhones to be sold in 2008, we believe Apple will sell at most 8.3 million iPhones, which is five times more than its 2007 sales.

In 2007, the average revenue per iPhone was \$89, which was lower than iPhone's market price or carrier subsidies, at \$400 per phone. This may be due to a new product sales discount. Apple announced a summer launch of its 3G iPhone, at a unit price of \$200. We assume that Apple will collect \$200 per iPhone in 2008, and believe iPhone price will gradually decrease, following the iPod pricing pattern.

iPhone Sales Unit and Average Revenue per unit (sales unit in thousands, revenue in millions)

	2007	2008E	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E	2018E
iPhone												
Sales unit	1,389	8,334	29,169	65,630	106,649	139,334	164,279	195,275	231,404	266,212	307,170	353,892
Growth		500.0%	250.0%	125.0%	62.5%	30.6%	17.9%	18.9%	18.5%	15.0%	15.4%	15.2%
Avg. Rev. per unit	89	200	195	190	185	180	175	171	166	162	158	154
Change		125.9%	-2.6%	-2.6%	-2.6%	-2.6%	-2.6%	-2.6%	-2.6%	-2.6%	-2.6%	-2.6%
Total iPhone Rev.	123	1,667	5,683	12,455	19,716	25,092	28,819	33,370	38,520	43,167	48,520	54,453
Growth		1255.1%	240.9%	119.2%	58.3%	27.3%	14.9%	15.8%	15.4%	12.1%	12.4%	12.2%

Source: Company 10K and estimation

Although cannibalization has occurred between iPod and iPhone, we still have very positive assumptions about their sales, in part due to the strong possibility of future upgrades.

⁶ Apple quarterly report, March 29, 2008

Company Total Sales Revenue

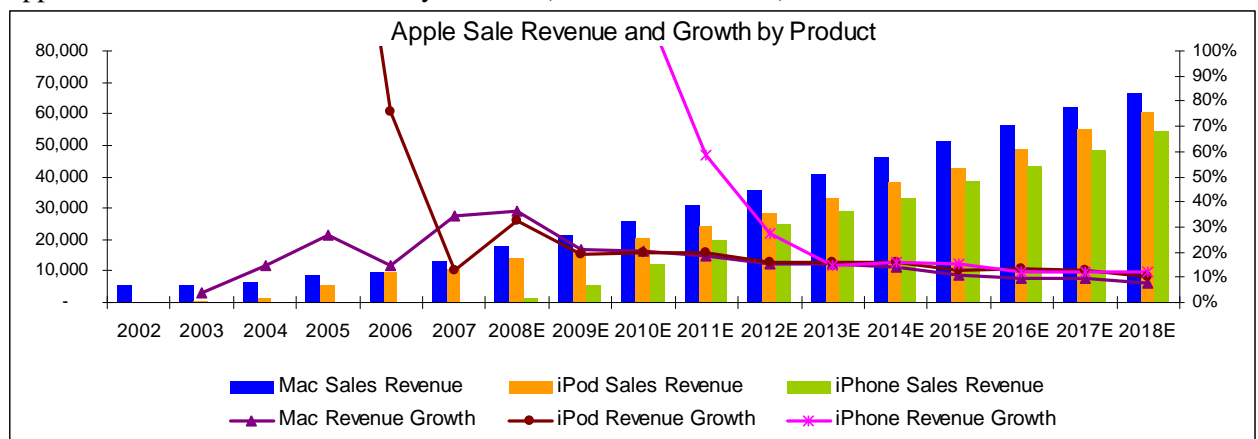
For 2008, Apple total revenue growth is estimated at 40% due to strong growth from the iPhone. During 2008-2018, CAGR of Apple total revenue is estimated as high as 22.5%. Even at the terminal year of 2018, Apple total revenue is still expected to grow at 9%.

Apple Revenue Forecast (revenue in millions)

	2002	2003	2004	2005	2006	2007	2008E	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Apple Total Rev.	5,713	6,237	8,292	13,935	19,325	24,015	33,835	44,341	58,936	75,001	88,898	102,643	118,008	133,243	148,646	165,955	182,161
Growth		9.17%	32.96%	68.05%	38.68%	24.27%	40.89%	31.05%	32.92%	27.26%	18.53%	15.46%	14.97%	12.91%	11.56%	11.64%	9.77%
Mac Total Rev.	5,595	5,826	6,694	8,492	9,755	13,084	17,870	21,615	26,026	30,841	35,480	40,939	46,556	51,699	56,796	62,397	66,968
Growth		4.1%	14.9%	26.9%	14.9%	34.1%	36.6%	21.0%	20.4%	18.5%	15.0%	15.4%	13.7%	11.0%	9.9%	9.9%	7.3%
iPod Related Rev.	118	411	1,598	5,443	9,570	10,808	14,297	17,043	20,455	24,444	28,325	32,885	38,083	43,025	48,682	55,038	60,740
Growth		248.3%	289.2%	240.6%	75.8%	12.9%	32.3%	19.2%	20.0%	19.5%	15.9%	16.1%	15.8%	13.0%	13.2%	13.1%	10.4%
iPhone Rev.						123	1,667	5,683	12,455	19,716	25,092	28,819	33,370	38,520	43,167	48,520	54,453
Growth							1255.1%	240.9%	119.2%	58.3%	27.3%	14.9%	15.8%	15.4%	12.1%	12.4%	12.2%

Source: Company 10K and estimation

Apple Sales Revenue and Growth by Product (revenue in millions)



Source: Company 10K and estimation

With robust assumptions for Apple sales growth and applying its current high gross margin of 34%, our target price of \$147 still indicates Apple's current market price is overvalued by 22%. This may be because of investors' high expectations of future undeveloped products.

However, Apple's latest products, such as MacBook Air, OS X Leopard, iPod Touch, and the soon to be released 3G iPhone, are upgraded versions of existing products, not innovations. The design and creative features of these products were led by Steve Jobs, whose return to Apple sparked the company's incredible rebirth and recent success. As innovation becomes more difficult, especially in a market already saturated with its products, and because of over dependence on Jobs' leadership, Apple has limited options for substantial long-term growth. Therefore, we think Apple's intrinsic value should be \$147 per share.

Key Assumptions

COGS: Since Apple outsources 100% of its manufacturing to the same group of original equipment manufacturers (OEMs) as well as HP and Dell⁷, these three vendors share a similar unit cost structure. Differences in COGS/sales ratio among these three companies are due to their pricing strategies. In 2007, Apple's computer average selling price (ASP) increased 5.2%, HP ASP decreased 20%, and Dell ASP decreased 3%. Because Apple targets high income consumers (household annual income over 100K), its customers have less elastic demand than those of HP and Dell. We believe Apple will continue its pricing strategy and maintain a higher than industry average gross margin of 34%.

COGS	2003	2004	2005	2006	2007	2008E
Apple	4,500	6,022	9,889	13,717	15,852	22,322
HP	53,857	60,811	66,440	69,427	78,887	87,306
DELL	33,891	40,191	45,897	47,904	49,462	54,390
% of Sales						
Apple	72.5%	72.7%	71.0%	71.0%	66.0%	66.0%
HP	73.7%	76.1%	76.6%	75.7%	75.6%	75.4%
DELL	81.8%	81.7%	82.3%	83.4%	80.9%	81.5%

Source: Company 10K and estimation

R&D: Apple spent almost the same percentage of sales in research and development as HP, but with much better results (24% sales growth vs. 13% growth for HP in 2007). We think this is due to Apple's high quality of R&D and the leadership of Steve Jobs. Notably, Apple does not use the "rear-mirror strategy", but instead looks ahead to create products that people desire, even before they know they want them. We expect Apple will continue its R&D investing at 3.6% of sales, its historical average.

R&D	2003	2004	2005	2006	2007	2008E
Apple	471	491	535	712	782	1,216
HP	3,652	3,563	3,492	3,643	3,801	3,988
DELL	464	463	458	498	610	671
% of Sales						
Apple	7.6%	5.9%	3.8%	3.7%	3.3%	3.6%
HP	5.0%	4.4%	4.0%	3.9%	3.6%	3.4%
DELL	1.1%	0.9%	0.8%	0.9%	1.0%	1.0%

Source: Company 10K and estimation

⁷ Refer to Koh & Tseng Analysis Dell report for computer outsourcing model

SG&A: Apple takes an indirect sales model, develops its own retail stores, and creates unique purchase experiences, leading to a slightly higher SG&A/sales ratio than HP, which relies on third party retailers. However, Apple's retail strategy paid off. Through the second quarter of 2008, Apple retail segment sales growth achieved 62% compared to the company's overall sales growth of 38%. We expect Apple will keep this successful strategy and maintain its SG&A at 12.3% of sales, similar to the industry average.

SG&A	2003	2004	2005	2006	2007	2008E
Apple	1,228	1,430	1,864	2,433	2,963	4,320
HP	11,012	10,496	11,396	11,626	12,226	12,994
DELL	3,544	4,298	5,051	5,948	7,538	8,232
% of Sales						
Apple	19.8%	17.3%	13.4%	12.6%	12.3%	12.3%
HP	15.0%	13.1%	13.1%	12.6%	11.7%	11.2%
DELL	8.6%	8.7%	9.1%	10.4%	12.3%	12.3%

Source: Company 10K and estimation

Working Capital: Apple operated more efficiently than its competitors, with cash conversion cycle of negative 81 days in 2007. The number of Apple's account receivable outstanding days is only half of that of HP and Dell. This is due to Apple's own managed retail channels compared to its competitors' third party retail distributions. We believe Apple will maintain this momentum and collect account receivables within 24 days, its historical average.

Apple has high inventory turnover, with a minimal 8-day outstanding inventory. This may be due to the inelastic demand for Apple's products as well as Apple's efficient inventory management. We assume Apple will continue its best practice and have a slight annual increase in inventory outstanding days, following its historical trend.

Since Apple outsources all manufacturing to third parties, its account payable outstanding days are assumed to be 3 months, 90 days, which is its historical average.

AR Outstanding Days	2003	2004	2005	2006	2007	2008E
Apple	45.0	34.1	23.4	23.7	24.9	24.0
HP	44.6	46.7	41.7	43.3	47.0	45.3
DELL	32.0	33.7	35.7	39.1	45.9	48.9
Inventory Outstanding Days						
Apple	4.5	6.1	6.1	7.2	8.0	9.0
HP	41.1	42.4	37.8	40.7	37.2	36.6
DELL	3.5	4.2	4.6	5.0	8.7	12.3
AP Outstanding Days						
Apple	93.6	88.0	65.7	90.2	114.4	90.0
HP	62.9	56.3	56.2	63.6	54.5	53.9
DELL	78.8	80.8	78.3	79.5	84.7	80.1
Cash Conversion Cycle						
Apple	(44.1)	(47.8)	(36.2)	(59.3)	(81.5)	(57.0)
HP	22.8	32.8	23.3	20.4	29.7	28.0
DELL	(43.3)	(42.9)	(38.0)	(35.4)	(30.1)	(18.9)

Source: Company 10K and estimation

Capital Expenditure and Depreciation: We expect Apple will continue investing 3% of sales in new retail stores, its historical average, and depreciate based on straight line method with a 4-years schedule.

Tax Rate: Assume a 30% tax rate as its historical average, which is lower than 35% due to Apple's international operations.

Cost of Capital and Terminal Growth Rate: Apple has no debt since 2004. Assume Apple's cost of equity of 14% and terminal growth rate as high as 7%.

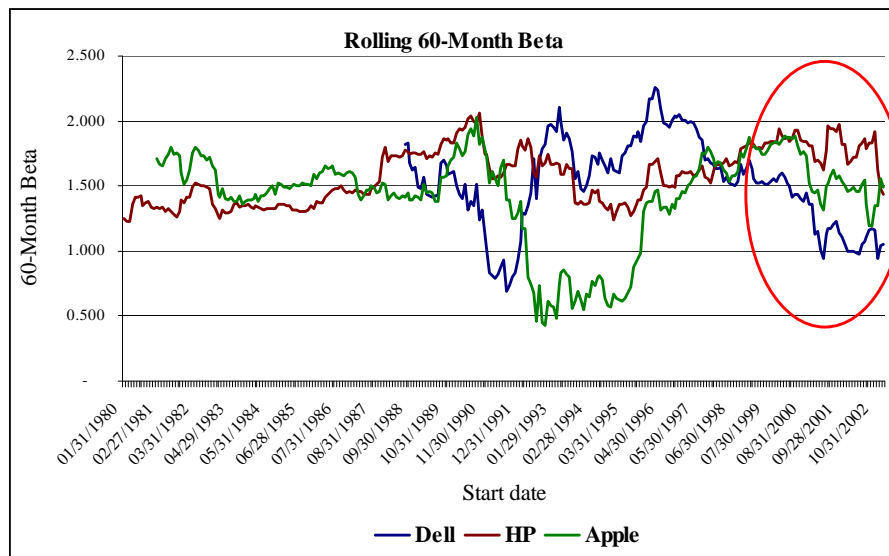
CAPM		
Risk-free	2.87%	The 10-Year Treasury bond rate - 1% time premium
Market risk premium	7.81%	1926Jul - 2007Sep, NYSE, AMEX and Nasdaq
Apple equity beta	1.46	Historical rolling beta trend
Cost of equity	14.27%	
Terminal value growth rate	7.00%	2012-2020 US PC sales average growth rate 4% + 3% premium

Note: Refer to Koh & Tseng Analysis HP report for worldwide computer sales forecasts.

Since Apple and its competitors' historical beta had consistent trends between 2001 and 2006, we decided to use an average beta of 1.46 during this period.

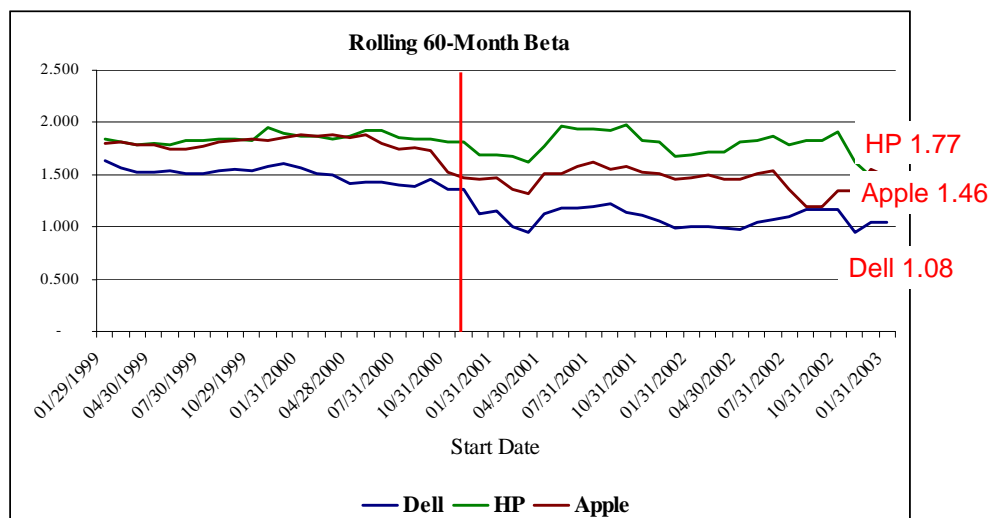
HP owns higher beta due to its higher leverage than Apple. Apple's beta was historically higher than Dell due to Apple's innovation-focused strategy and multiple product-lines business model, which is different from Dell's low-priced strategy and single product-line model.

Historical Rolling 60-Month Equity Beta



Source: Center for Research on Security Prices

1999-2007 Rolling 60-Month Equity Beta



Source: Center for Research on Security Prices

Sensitivity Analysis

Apple's COGS/sales reflects its pricing strategy and elasticity of demand. In 2007, Apple achieved a 66% COGS/sales ratio, which was higher than its historical average of 72%. Our sensitivity analysis indicates that Apple's current share price implies 3-8% extra sales growth from undeveloped products. This optimistic expectation focuses on the success of future innovations despite potential cannibalization.

Target Price		Adjust to COGS/sales				
(\$)		64.0%	66.0%	68.0%	70.0%	72.0%
	-1.0%	151.58	137.18	122.77	108.36	93.96
Adjust to	0.0%	162.83	147.37	131.92	116.47	101.02
Revenue	1.0%	174.98	158.40	141.83	125.25	108.68
Growth	3.0%	202.29	183.22	164.15	145.08	126.01
	8.0%	291.88	264.83	237.79	210.75	183.71

Change in Target Price		Adjust to COGS/sales				
		64.0%	66.0%	68.0%	70.0%	72.0%
	-1.0%	2.9%	-6.9%	-16.7%	-26.5%	-36.2%
Adjust to	0.0%	10.5%	0.0%	-10.5%	-21.0%	-31.5%
Revenue	1.0%	18.7%	7.5%	-3.8%	-15.0%	-26.3%
Growth	3.0%	37.3%	24.3%	11.4%	-1.6%	-14.5%
	8.0%	98.1%	79.7%	61.4%	43.0%	24.7%

If Apple's business risks increase and its required return climbs from 14.3% to 16.3%, Apple's terminal growth needs to be higher than 11% to maintain its current share price.

If Apple's terminal growth rate is at 3% GDP growth rate, its required return has to decrease more than 2% in order to stay at our target price of \$147.

Target Price		Adjust to Cost of Equity				
(\$)		12.3%	13.3%	14.3%	15.3%	16.3%
	3.0%	148.02	131.23	117.59	106.31	96.85
Adjust to	5.0%	169.63	146.92	129.27	115.19	103.71
Terminal	7.0%	207.61	172.61	147.37	128.35	113.53
Growth	9.0%	292.03	222.35	179.21	149.92	128.75
	11.0%	641.65	359.61	249.96	191.67	155.52

Change in Target Price		Adjust to Cost of Equity				
		12.3%	13.3%	14.3%	15.3%	16.3%
	3.0%	0.4%	-11.0%	-20.2%	-27.9%	-34.3%
Adjust to	5.0%	15.1%	-0.3%	-12.3%	-21.8%	-29.6%
Terminal	7.0%	40.9%	17.1%	0.0%	-12.9%	-23.0%
Growth	9.0%	98.2%	50.9%	21.6%	1.7%	-12.6%
	11.0%	335.4%	144.0%	69.6%	30.1%	5.5%

Risks to Our Call**1. Ability to Launch Innovative Products that Change Consumers' Behavior**

On average, Apple introduced groundbreaking new products every 5-6 years. After Steve Jobs returned to Apple in 1996, Apple launched iPod and iTunes in early 2000 and released iPhone last year. If Apple continues this path and assuming Steve Jobs' impact will last even after he leaves, Apple may be able to continue developing new products that create demands by changing consumers' behavior.

2. Stronger Consumer Preference than Expected

If consumer purchases increase more than its current level, Apple will have higher sales growth than our estimation.

3. Unexpected Increase in High Income Households

Since Apple targets high income households, if this segment increases faster than expected, Apple's sales may exceed our estimation.

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Apple Inc. Income Statement

Apple Inc.
Income Statement
(\$ million)

Apple fiscal year ended on Sep. 30

	Historical					Projected											2008-18
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	CAGR
Sales	\$6,207	\$8,279	\$13,931	\$19,314	\$24,006	\$33,822	\$44,324	\$58,914	\$74,973	\$88,864	\$102,604	\$117,964	\$133,193	\$148,590	\$165,892	\$182,093	22.5%
COGS	4,500	6,022	9,889	13,717	15,852	22,322	29,254	38,883	49,482	58,650	67,719	77,856	87,908	98,069	109,489	120,181	22.5%
Gross Margin	1,707	2,257	4,042	5,597	8,154	11,499	15,070	20,031	25,491	30,214	34,885	40,108	45,286	50,521	56,403	61,912	22.5%
R&D	471	491	535	712	782	1,216	1,593	2,118	2,695	3,194	3,688	4,241	4,788	5,342	5,964	6,546	23.7%
SG&A	1,228	1,430	1,864	2,433	2,963	4,160	5,452	7,246	9,222	10,930	12,620	14,510	16,383	18,277	20,405	22,397	22.4%
EBIT	8	336	1,643	2,452	4,409	6,124	8,025	10,667	13,574	16,089	18,577	21,358	24,115	26,902	30,035	32,968	22.3%
Interest income (expense)	79	53	165	365	599	608	446	446	446	446	446	446	446	446	446	446	-2.9%
Income Tax Provision	30	123	480	828	1,512	1,837	2,407	3,200	4,072	4,827	5,573	6,407	7,234	8,071	9,011	9,890	20.7%
Net Income	\$57	\$266	\$1,328	\$1,989	\$3,496	\$4,894	\$6,063	\$7,912	\$9,948	\$11,708	\$13,450	\$15,396	\$17,326	\$19,278	\$21,470	\$23,524	21.0%
<u>EPS</u>																	
Basic	0.08	0.36	1.64	2.36	4.04	5.54	6.72	8.57	10.53	12.11	13.60	15.21	16.72	18.18	19.78	21.17	18.0%
Diluted	0.08	0.34	1.55	2.27	3.93	5.39	6.54	8.35	10.26	11.81	13.27	14.85	16.34	17.77	19.34	20.71	18.1%
Growth -basic		352.9%	358.9%	43.5%	71.6%	37.1%	21.2%	27.6%	22.9%	15.0%	12.3%	11.9%	10.0%	8.7%	8.8%	7.0%	
Growth -diluted		335.7%	351.4%	46.2%	73.4%	37.2%	21.3%	27.7%	23.0%	15.1%	12.3%	11.9%	10.0%	8.8%	8.9%	7.1%	
<u>Weighted avg shares outstanding</u>																	
Basic	721	743	808	844	865	883	903	923	945	966	989	1,012	1,036	1,060	1,085	1,111	
Diluted	723	775	857	878	889	908	927	948	969	991	1,014	1,037	1,061	1,085	1,110	1,136	
<u>Ratios and Assumptions</u>																	
Sales growth	8.1%	33.4%	68.3%	38.6%	24.3%	40.9%	31.1%	32.9%	27.3%	18.5%	15.5%	15.0%	12.9%	11.6%	11.6%	9.8%	
COGS/sales	72.5%	72.7%	71.0%	71.0%	66.0%	66.0%	66.0%	66.0%	66.0%	66.0%	66.0%	66.0%	66.0%	66.0%	66.0%	66.0%	
R&D/sales	7.6%	5.9%	3.8%	3.7%	3.3%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	
SG&A/sales	19.8%	17.3%	13.4%	12.6%	12.3%	12.3%	12.3%	12.3%	12.3%	12.3%	12.3%	12.3%	12.3%	12.3%	12.3%	12.3%	
Interest income/ST/LT inves	1.8%	1.1%	2.4%	4.0%	4.7%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
Effective tax rate	34.1%	31.7%	26.5%	29.4%	30.2%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	

Apple Inc. Balance Sheet

Apple Inc.
Balance Sheet
(\$ million)

Apple fiscal year ended on Sep. 30

	Historical					Projected										
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Cash & cash equivalents	3,396	2,969	3,491	6,392	9,352	2,884	2,884	2,884	2,884	2,884	2,884	2,884	2,884	2,884	2,884	2,884
Short-term investments	1,170	2,495	4,770	3,718	6,034	6,034	6,034	6,034	6,034	6,034	6,034	6,034	6,034	6,034	6,034	6,034
Accounts receivable, net	766	774	895	1,252	1,637	2,224	2,914	3,874	4,930	5,843	6,747	7,756	8,758	9,770	10,908	11,973
Inventories	56	101	165	270	346	550	721	959	1,220	1,446	1,670	1,920	2,168	2,418	2,700	2,963
Deferred tax assets	190	231	331	607	782	1,015	1,330	1,767	2,249	2,666	3,078	3,539	3,996	4,458	4,977	5,463
Other current assets	309	485	648	2,270	3,805	5,361	7,025	9,338	11,883	14,085	16,263	18,697	21,111	23,552	26,294	28,862
Total current assets	5,887	7,055	10,300	14,509	21,956	18,067	20,909	24,856	29,200	32,958	36,675	40,830	44,950	49,115	53,796	58,179
Gross PP&E	1,174	1,298	1,481	2,075	2,841	3,856	5,185	6,953	9,202	11,868	14,946	18,485	22,481	26,938	31,915	37,378
Accumulated Depreciation	(505)	(591)	(664)	(794)	(1,009)	(1,263)	(1,595)	(2,037)	(2,599)	(3,266)	(4,035)	(4,920)	(5,919)	(7,033)	(8,278)	(9,643)
PP&E, net	669	707	817	1,281	1,832	2,593	3,590	4,916	6,603	8,602	10,911	13,565	16,562	19,905	23,638	27,735
LT Investments & Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other assets	259	288	399	1,415	1,559	2,029	2,659	3,535	4,498	5,332	6,156	7,078	7,992	8,915	9,954	10,926
Total Assets	6,815	8,050	11,516	17,205	25,347	22,690	27,158	33,306	40,301	46,892	53,742	61,473	69,504	77,936	87,387	96,839
Account payable	1,154	1,451	1,779	3,390	4,970	5,504	7,213	9,588	12,201	14,462	16,698	19,197	21,676	24,181	26,997	29,634
Accrued/current liabilities	899	1,229	1,708	3,081	4,329	6,096	7,989	10,619	13,513	16,017	18,493	21,262	24,007	26,782	29,900	32,820
Current debt	304	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total current liabilities	2,357	2,680	3,487	6,471	9,299	11,600	15,202	20,206	25,714	30,478	35,191	40,459	45,682	50,963	56,897	62,454
LT debt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Deferred tax liabilities and oth	235	294	601	750	1,516	1,691	2,216	2,946	3,749	4,443	5,130	5,898	6,660	7,429	8,295	9,105
Total liabilities	2,592	2,974	4,088	7,221	10,815	13,291	17,418	23,152	29,463	34,922	40,321	46,357	52,342	58,393	65,192	71,558
Stockholder's Equity	4,223	5,076	7,428	9,984	14,532	9,398	9,740	10,154	10,838	11,970	13,421	15,116	17,162	19,543	22,195	25,281
Total Liabilities & Equity	6,815	8,050	11,516	17,205	25,347	22,690	27,158	33,306	40,301	46,892	53,742	61,473	69,504	77,936	87,387	96,839
Ratios and Assumptions																
Cash/sales	54.7%	35.9%	25.1%	33.1%	39.0%	8.5%	6.5%	4.9%	3.8%	3.2%	2.8%	2.4%	2.2%	1.9%	1.7%	1.6%
Other assets/sales	4.2%	3.5%	2.9%	7.3%	6.5%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
capex	1.9%	1.5%	1.3%	3.1%	3.2%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Dep/capex	59.0%	69.4%	39.9%	21.9%	28.1%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
DTL/sales	3.8%	3.6%	4.3%	3.9%	6.3%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%

Apple Inc. Valuation

Apple Inc.

Free Cash Flow

(\$ million)

Apple fiscal year ended on Sep. 30

	Historical					Projected										
	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
Net income	\$57	\$266	\$1,328	\$1,989	\$3,496	\$4,894	\$6,063	\$7,912	\$9,948	\$11,708	\$13,450	\$15,396	\$17,326	\$19,278	\$21,470	\$23,524
Depreciation	113	150	179	225	317	254	332	442	562	666	770	885	999	1,114	1,244	1,366
Change in work	125	357	359	624	657	(279)	761	1,057	1,163	1,006	995	1,113	1,103	1,115	1,254	1,174
Change in othe	30	(29)	(111)	(1,016)	(144)	(470)	(630)	(875)	(964)	(833)	(824)	(922)	(914)	(924)	(1,038)	(972)
Change in othe	6	59	307	149	766	175	525	729	803	695	687	768	761	770	865	810
Capex	(117)	(124)	(183)	(594)	(766)	(1,015)	(1,330)	(1,767)	(2,249)	(2,666)	(3,078)	(3,539)	(3,996)	(4,458)	(4,977)	(5,463)
Free cash flow	\$214	\$679	\$1,879	\$1,377	\$4,326	\$3,559	\$5,722	\$7,498	\$9,264	\$10,576	\$11,999	\$13,701	\$15,281	\$16,896	\$18,818	\$20,438
PV of FCF						3,115	4,382	5,025	5,433	5,428	5,389	5,385	5,255	5,085	4,956	
														next year's fcf	20,438	
														term. value	281,011	
														PV of term value	74,009	
														PV of firm	123,459	
														+adjustment for excess cash in 2007	6,468	
														MV of D+E	129,928	
														-MV of D	0	
														=MV of E	129,928	
														# of shares	882 million	
														share price	\$ 147.37	
														market price	\$ 180.94	
														overprice	22.8%	
														horizon		
														date		

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