Apple Computers, Inc. (AAPL)

Comprehensive Business Analysis

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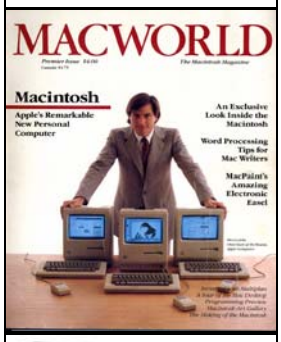

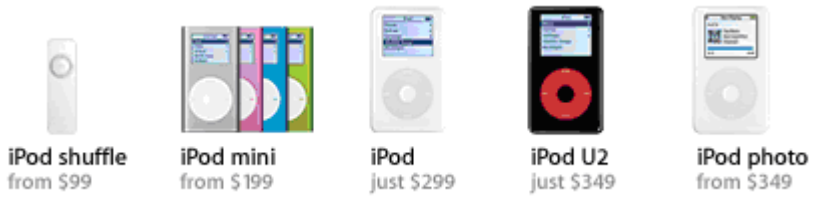

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Executive Summary

Apple Computers, Inc.

Investment Recommendation: **Sell** **Date of Valuation: 4/01/05**

Overvalued

AAPL – NASDAQ	$40.89
52 week price range	$12.75 - $45.44
Revenue (2004)	33.54 B
Market Capitalization	30.45 B
Shares Outstanding	817.17M
Dividend Yield	0%
3-month Avg. Daily Trading Volume	31,109,500
Percent Institutional Ownership	75.19%
Book Value Per Share (mrq)	$7.16
ROE (2004)	10.37%
ROA (2004)	6.63%
Est. 5 year EPS Growth Rate	1.79%

Cost of Capital Estimates	R^2	Beta	Ke
Ke Estimated			
5-Year Beta	.207	1.71	9.22%
3-Year Beta	**.296**	**1.14**	**6.68%**
2-Year Beta	.029	.71	5.39%
Published Beta		1.857	8.78%
Kd		2.63%	
WACC(bt)		5.26%	
Altman's Z - Score		3.30	

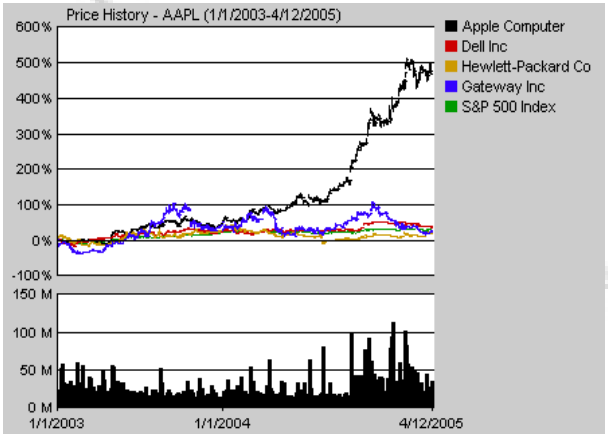
EPS Forecast

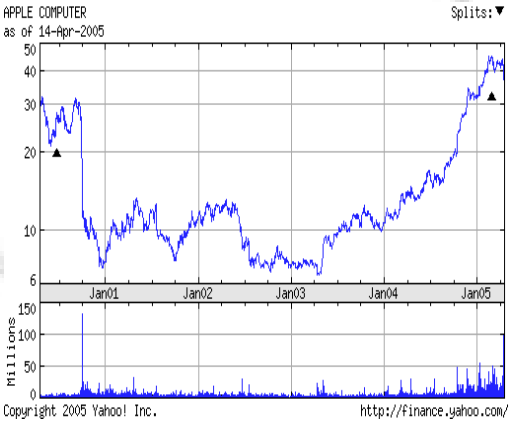
FYE 9/31	2004(A)	2005(E)	2006(E)	2007(E)
EPS	.37	.55	.81	1.14

Valuation Ratio Comparison	**Act.**	**Avg.**
Trailing P/E	65.95	25.18
Forward P/E	32.20	16.29
M/B	33.24	5.44
Forward PEG	1.79	1.20

Ratio Based Valuations	
P/E Trailing	$15.61
P/E Forward	$20.67
M/B	$37.16
Dividend Yield	N/A
PEG Forward	$20.24
Ford Epic Valuation	$16.22

Intrinsic Valuations	
Discounted Dividends	N/A
Free Cash Flows	$28.95
Residual Income	$23.22
Abnormal Earning Growth	$23.40
Long Run Residual Income Perp.	$20.84





Recommendation – Overvalued Security

After a comprehensive evaluation of Apple Computers, Inc., our findings suggest that the firm is overvalued and we recommend selling the stock. Even though, Apple's sales in 2004 grew 33% and are estimated by analysts to grow 25% in 2005, the company has experienced this growth from the iPod, and it is yet to be seen whether or not they will be able to maintain this success. Also, Apple only has a 2% market share in the personal computer market, and it is crucial that they increase this percentage if they wish to be considered a more serious player in the personal computer market.

The computer industry is very diverse, dynamic, capital intensive, and highly competitive. Products offered range from mp3 players to peripherals and personal computers. The high level of competition has forced firms to adopt a cost leadership stance, and has drastically reduced profits. The main competitors in the industry are Apple, Dell, Hewlett-Packard, and Gateway, all of which, excluding Apple and Dell have struggled to turn a profit.

Industry Demand Drivers

The drivers for new growth in the industry historically has been achieved through the introduction of innovative products and/or efficiently and cost effectively producing existing products. Apple and Dell have each capitalized on one of these methods and are currently experiencing the highest levels of success within the industry. Other demand drivers typically have encompassed increased speed, memory, usability, and stylish designs.

Growth in the personal computer market is expected to decrease in 2005 due to the lack of new product introductions, resulting from the highly developed market. However, the portable music sector has experienced tremendous growth and is forecasted to continue this trend in the near future.

Learning Organizations with a high investment in R&D and operating efficiencies will be best positioned to create/capitalize on growth in the industry.

Apple is well positioned

As stated previously, Apple and Dell have most effectively utilized the competitive strategies that allow firms in this industry to remain profitable. Apple is well known for its differentiated and innovative products, and loyal customer base. This coupled with the "halo" effect from iPod sales is projected to increase overall market share and better position Apple to take away market share from its competitors. Also, Apple devotes the highest percentage of its sales to R&D which better positions itself to enjoy first mover advantage with the introduction of new products.

Margin Expansion

Apple has the highest gross profit margin amongst its competitors due to its higher prices, and is solely responsible for allowing Apple to stay afloat in the personal computer market with a meager 2% market share. However, Apple's spare no expense philosophy in producing high quality differentiated goods drastically reduces its ability to translate a larger portion of gross profit into net profit. Apple has the highest operating expense ratio and the lowest net profit margin amongst its competitors. If Apple is able to cut down on operating expenses and utilize some of the benchmark strategies employed by Dell, they will be able to translate more of their revenues into earnings per share.

Healthy Financials

Apple shows favorable numbers in terms of liquidity/operating efficiency analysis. The company is both able to meet short-term obligations and has steadily been recovering its receivables. Inventory turnover was lower in 2004 than in previous years; however, it is our opinion that this is a result of Apple

intentionally increasing its inventory levels precluding the release of new products. Profitability analysis revealed overall good profitability on sales, but they lack the ability to convert satisfactory levels of gross profit into net income. Apple demonstrates a healthy capital structure and is able to take on large amounts of cheap debt.

Valuation

Based on valuation models, Apple's stock is currently overvalued. Our most accurate models indicate that the firm's intrinsic value is in the range of $20-$24. It is our belief that even though the firm is headed in a positive direction, and has very healthy financials, much of their market price is composed expectations instead of actual performance. Earnings in 2004 were $.37 per share ($.74 per share before the 2 for 1 stock split). Estimated earnings in 2005 are $.55 per share. We believe that investors should place Apple on a watch list, and that it may become a more attractive stock in the future.

Other Positive Factors

Apple effectively paid off all its debt in 2004 and is completely equity financed, and is the only firm within their sector that has been able to accomplish this. Furthermore, the stock recently split and many analysts have issued buy and strong buy recommendations while also upgrading to outperform the market.

Risks

The dynamic nature of the computer industry is reason enough to assume a high level of risk. Also, the state of the economy plays a huge factor in Apple's performance; given a dip in the economy, Apple would suffer greatly.

Industry Analysis

The computer industry includes a wide variety of products, from mp3 players and printers to personal computers and powerful servers. Companies have trouble operating within the computer industry, namely due to the dynamic nature of technology. Moore's law, formulated by Gordon Moore in 1965, states that the numbers of transistors per square inch on integrated circuits will double every 18 months, and prices will be reduced. This means even the largest firms must stay on their toes, as the industry is constantly changing and redefining its parameters.

Apple Computer Inc. has recently made headlines by breaking into the portable music market with its introduction of the Apple iPod and iTunes software. Apple also carries a long line of computer products including personal computers, computer accessories, servers, networking solutions, and software packages. Currently capturing a market share of 65% among the portable music market, and holding a profitable 2% of the personal computer market, Apple has consistently kept its name in the industry.[1,12] Apple has stayed afloat in the industry by keeping an eye for aesthetics and creativity, coupled with user friendly and innovative products.

Five Forces Model

Competitive Force 1: Rivalry among Existing Firms

The two main areas within the computer hardware industry in which apple competes are the personal computer and portable music markets. The personal computer market is fairly well developed and growth in this market will be moderate. According to the Credit Suisse First Boston, it is estimated that personal computer growth in 2005 will be approximately 8%, which is 3% lower than 2004.[7] There is a high degree of concentration in this market which is controlled by a few very large competitors who have a great deal of capital invested in the firms, namely, Dell, HP Compaq, Gateway, and Apple. Personal

computers are quickly becoming a commodities market due to virtually identical products produced by the leading competitors. This has placed an increased emphasis on competitive pricing, which has drastically reduced profit. This is forcing companies to be cost leaders to maintain a reasonable profit margin. Apple's bread and butter has always been achieved through product differentiation, and "in a market where everyone except Dell has struggled to make money, Apple has long been highly profitable with only a 2% market share."[12] In 2005, Dell and Apple are speculated to have the most potential to increase market share in the PC market due to lack of new product introductions by other firms and the anticipation of Microsoft Longhorn in 2006.[7] If Apple is able to increase its market share by a few percentage points, its profits and ability to spend on marketing, and research and development (R&D) could allow them to become a much more serious player. Switching costs for the customer have been the main deterrent in Apple's quest to attain a more sizeable market share, due to their higher prices and perceived incompatibility with other software.[8]

Recently, a fairly new and less developed market within the parameters of the computer hardware industry has emerged through portable music, which was a substantial portion of Apple' revenue in 2005.[5] This market provides a great deal of opportunity and high growth potential for firms. Currently, Apple dominates the portable music industry music market with an estimated 90% for hard disk based players, and 65% of the total portable music market.[9] This advantage allows them to set and enforce the rules of competition. Apple has capitalized on its product differentiation, and is charging two to three times the market price of conventional mp3 players for its iPod (A price that consumers are more willing to pay). Competitors are struggling to offer up a product that is a technological/innovative equivalent to the iPod, and until they can produce one that surpasses it, they will not be able to dethrone the portable music juggernaut. Apple is in no danger of losing market share in the short term and has continued to pour money into its R&D to support its long-term strategy.

Since the release of the iPod, Apple has released the iPod Mini and the iPod Shuffle which has tightened its grip on all areas of the portable music market. Switching costs for the consumer are low allowing customers to flow from product to product based on price, but Apple will continue to rely on brand identification, differentiation, and innovation to maintain a firm grip on market share.

In both the personal computer and portable music markets, component costs are large part of the total hardware costs, but through Apple's product differentiation and higher pricing they are able to counteract the price wars that usually ensue under such conditions. Finally, there are little to no exit barriers in either market, which could be advantageous in ousting some of Apple's competition in the future.

Competitive Force 2: Threat of New Entrants

Within the personal computer market there are a few well-established companies that consume most of the market share. These companies are: Dell, HP Compaq, and Gateway. There are large economies of scale in the personal computer market and this limits new entrants. A company would need to have access to an enormous amount of capital in order to effectively compete with the few well-established market leaders. The large economies of scale make it nearly impossible for new start-up companies to gain any type of significant market share. In the personal computer market there are basically two main operating systems offered on personal computers: Microsoft's Windows and Apple's Mac OS X. A new company would have to create competitive software that is one step ahead of the rapidly changing technological advancements within the computer software market. Another barrier that new entrants would have to face are legal barriers; mainly in the form of patents. The main market leaders have numerous patents on computer designs as well as technology, which make it extremely difficult for new entrants to enter the market without

large amounts of start up capital to create new and innovative advancements in technology.

Apple is the most dominant company in the portable music market. The portable music market is relatively new, and as a result there are a fairly large amount of competitors. The main competitors in the MP3 sector are: Apple, Rio, Nike, Sony, Creative, Napster, and Dell. There is more of a threat of new entrants in the MP3/Portable Music market than there is in the personal computer market. While portable music hardware still requires significant capital investment to develop and produce the hardware units, the portable music websites (i.e. Napster, iTunes) have relatively small startup costs. This leaves Apple susceptible to new entrants who could possible steal away a portion of its iTunes market share.

Apple is enjoying the first mover advantage in the hardware side of the market with their iPod. While numerous portable music players have been released within the last 5 years, Apple was the first to combine style, usability, and large capacity into a single unit, and because of this they are enjoying the first mover advantage with the introduction of the iPod. Even though the iPod is most expensive portable music player on the market, it is highly sought after by customers because of the ground breaking technologies it employs. Customers are pleased with the quality of Apple products thus far and they continue to look to Apple for future innovations (iPod mini, Shuffler, and accessories). Although this creates an obstacle for new entrants, it is possible for them to establish themselves within the market. Due to the potentially high growth rate of this market, it is still profitable for companies to invest the capital involved in breaking into the market. It will be essential for companies entering the portable music market to innovate beyond the standard set by Apple. Even though the main market leaders already have many patents protecting their technologies, new entrants can develop pioneering technologies due to the relatively young nature of the market.

Finally, Apple should be aware of the threat of a counter culture of customers which shy away from Apple's products due to their dominance in the market. This phenomenon is best represented by the counter culture that developed with Microsoft that led some customers to Linux. A counter culture of this sort has not yet asserted itself into the portable music market, and is of no immediate threat.

Competitive Force 3: Threat of Substitute Products

On the personal computing side of Apple's market are a number of products from various competitors. Each of these competitors has a wide range of computing systems designed for various types of users. Dell is marketing its Dimension line of computers for desktop users and its Inspiron line for laptop users. Both the Dimension and Inspiron lines differ in features and power to provide varying selections for customers with diverse needs.[2] The same can be said of Hewlett-Packard's Pavilion/Presario desktop and laptop PCs, as well as Gateway's 3200/5200/7200 series desktop computers and M210/M320/M520 series laptops.[3,4] It would immediately seem that Apple has a wide array of substitutes in the market, but the proprietary nature of Apple's products sets itself apart from its competitors. While HP, Dell, and Gateway each use the Microsoft Windows operating system and an Intel/AMD based CPU, Apple's computers use their own in-house OSX operating system and an IBM derived Power processor CPU. This separates the computers in how they function, which inevitably means the software packages and overall functionality differs greatly. While Dell, HP, or Gateway could out perform Apple in both speed and in price, Apple has set itself apart from these other computer manufacturers by keeping itself unique in the market and gathering around itself a loyal group of users. Regardless of this, Apple will have to continue to stay innovative and price conscious as new and existing computer owners begin to make the decision of whether their new computer is a PC or a Macintosh.

Within the portable music market, Apple's hard-drive based MP3 player has many possible substitutes within the market. Some examples include the JetAudio iAudio U2, Creative Nomad, iRiver iFP-790, and Rio Forge. These MP3 players are similar to the iPod, but are flash-memory based, meaning they typically hold less mp3s but consequently cost less. This doesn't seem to be making a substantial impact on Apple's iPod sales as buyers are getting more mp3 capacity per dollar using the iPod and do not have to worry about upgrading their players with additional memory cards in the future. Apple has responded to the flash-memory based market with its recent introduction of iPod Shuffle. However, the iPod Shuffle is a new product and it has yet to be seen if it can capture market share away from the flash-memory units already on the market. Finally, portable CD players and radios are still on the market, though they pose a very small threat to the iPod as they lack the ability of storing your music in digital mp3 files.

Competitive Force 4: Bargaining Power of Buyers

Apple focuses on differentiating its products in both the personal computer market and the portable music product. Both the Macintosh line of products and the iPod have a signature style and innovative features that set them apart from their competitors. This makes buyers less price sensitive when it comes to buying the iPod and Macintosh, as it is very difficult to find a product that has the same features or stylish look. If customers want to avoid Microsoft software and Intel/AMD based PCs, the only alternative would be to purchase a Macintosh computer, creating a niche market out of Apple and in turn making buyers less sensitive to price.

Additionally, buyers of the iPod and Macintosh computers have low relative bargaining power considering they would have to buy in very large volumes. There is no "Wal-Mart" of electronic stores, so there is no way for individual resellers such as Best Buy, Circuit City, or CompUSA (to name a few) to bully Apple into lower prices. Apple also has 98 national and 4 international

retail stores, in addition to its own online store carrying the full line of apple products.[6] The internet is also a huge selling point for iPod and Macintosh products via Amazon.com and Buy.com (to name a few) with the popularity and benefits (tax free) of at-home shopping.[6] Businesses have some relative bargaining power when it comes to purchasing Macintosh computers in bulk for office use, but home users have literally no control over Apple when it comes to their pricing. On a final note, once Apple sells to the end user it has essentially secured future sales of its hardware and software due to a lack of third party options. This gives buyers even less relative bargaining power to shop for better prices or alternatives for their software/hardware needs.

Competitive Force 5: Bargaining Power of Suppliers

Apple uses a large variety of suppliers for manufacture of its computers and portable music players. In most cases, Apple is not limited to a single supplier for the various components used in the process of assembly for its products. This leaves Apple's suppliers with less bargaining power concerning price in most cases. Apple uses both NVIDIA and ATI for video cards in its computers, so it has two choices concerning who to go to. This is the same for its motherboards (ASUSTeK and Ambit Microsystems), Display units (Samsung, Toshiba, International Display Technology), storage devices (Hitachi Global Storage Technologies, Western Digital, Seagate), and CD/DVD drives (Samsung, Hitachi Global, and LG. Phillips Co.).[5] In most of the other parts in Apple's Macintosh computers and iPod the situation is the same, giving Apple power to switch suppliers if needed. The only real exception to this is its current position with IBM and its G series processors, as moving to a new processor would have extremely high switching costs. A customized chip would have to be created to replace the G series processor as PC and Macintosh computers have completely different technologies concerning the CPU.

Key Success Factors

Core Strengths

Apple has numerous internal strengths that make it a successful and competitive company. For one, Apple has a powerful footing in the personal computer market by being "different" with its innovative style and ease of use. Its operating system is developed in house, leaving it free from the tangles of the dominant Microsoft operating systems. This gives apple a very large degree of control over its product in the physical appearance, specifications, and overall usability. Apple does all this while keeping its Macintosh computers compatible with existing PC computers. Additionally, Apple fosters a research intensive office environment and is constantly releasing products with the current trends and styles as seen through its latest iPod and Mac mini. This makes Apple one of the biggest innovators in the computer and portable music industries, being first to bring new and creative ideas to the market.

Core Weaknesses

Due to their research intensive nature, Apple has high R&D costs, which means that Apple is far less cost effective in a very saturated market. While they currently hold 90% of the portable music market, Apple is constantly relying on innovation to keep it ahead, putting the company in a risky position if its R&D does not come through.[1] Moreover, Apple has a hard time selling the Mac computer to many customers do to the perception that the Macintosh is incompatible with other PCs and software. In other words, customers get scared of an operating system that looks different then windows and assume it doesn't work the same. While this is not true, it hinders the ability of Apple to steal away existing PC users to grow its market share.[8] Finally, Apple has problems with some customers due to the high prices of many of their products. While this has not hindered their sales in the portable music market yet, it can be traced to problems within their computer market sales.

Market Opportunities

Within the industries that Apple competes there are numerous opportunities for increased market share and growth. Since Apple is already recognized as one of the main leaders in the portable music market they have the ability to further increase their company image and quality image reputation. This will allow Apple to maintain their already well established clientele as well as attract new customers. Within the personal computer market Apple is expected to sustain substantial market share gains in 2005 because customers are awaiting the launch of Windows Longhorn for Microsoft.[7] On the portable music side of things, it is speculated that if Apple were to release a flash-memory based mp3 player that its music business would be worth close to 5 billion by 2006.[9] As a final point, many speculate that Apple's entire line of Macintosh computers will gain market share due to the halo effect of the iPod.[11]

iPod Shuffler Flash Player
Provided by Apple.com

Market Threats

There are many potential threats that Apple faces everyday. The primary threat that they face is the rapid advancement in technology. Since most people judge the computer on the speed (GHz) of its CPU, Apple has had a hard time with customers considering the Macintosh inferior in speed to the PC. Although, recently the new Macintosh computers have begun using 64bit technology as opposed to the PC which is still primarily using 32bit technology.[6] This has given Apple a slight edge to their speed problem. Therefore, Apple must make sure that they stay up-to-date and on the cutting edge of advancements and innovations. One slip in their R&D department and Apple could lose an enormous amount of their market share. One final note is the threat of Napster, Apple's primary competitor to its iTunes

Image property of Napster.com

music service. Napster has begun aggressively marketing its new service which allows unlimited music downloads which are “rented” to the mp3 unit while the subscription is active. This service, costing only $14.95 a month, is the first serious challenge to iTunes 99 cent per song download business strategy.[13,6] Whether or not Napster will effectively unseat Apple is yet to be seen, but shows the vulnerability of Apple’s portable music market share.

Competitive Strategy Analysis

In such a highly competitive industry where superior quality and brand image are key success factors for a computer company, it is necessary for computer companies to become cost leaders or differentiate themselves by offering a unique product. Apple has become known as a computer company that has innovative and stylish computers and music players. By highly investing in research and development, providing a variety of products, and maintaining a unique brand image, Apple has been able to create a sustainable competitive advantage by differentiating its personal computers and portable digital music players.

By spending 489 million dollars on research and development alone, Apple has been able to develop innovative products that enable them to maintain a loyal customer base.[5] Apple is known for its unique and user friendly products like the new MAC mini, the all in one design of the eMAC and the iPod which all appeal to the "stylish consumer." Introducing PC's in various colors and distinctive monitors have given Apple a unique image. For example, competitors have tried to mimic the iPod but the iPod consistently beats out the competition because of its efficiency and stylish design.

Furthermore, the multi-colored apple logo has become an unmistakable icon. Apple has been able to build up its image in the past couple of years by its innovative products and popular designs. This has given Apple a comparable advantage because the apple logo is now being associated with quality and uniqueness.

Accounting Analysis

Step 1: Identifying Key Accounting Policies

As a leading competitor in the personal computer market and the dominant firm in the portable music market, Apple has maintained and gained market share time and time again through its focus on creativity, innovation, a high investment in research and development (R&D) and brand image.

Apple is very limited by GAAP in accurately portraying key success factors through the use of different accounting policies. As stated previously, Apple invests heavily in R&D and brand image (advertising), 489 million and 206 million in 2005, respectively. However, in accordance with GAAP, they are forced to expense the costs as they are incurred, and are unable to capitalize them. Some latitude is given in capitalizing software R&D expenses pursuant to SFAS No. 86, which states that development costs of computer software to be sold, leased or otherwise marketed are subject to capitalization beginning when a product's technological feasibility has been established. However, in 2005, capitalization of software R&D amounted to less than one percent of R&D expenditures.

Per Apple's notes to consolidated financial statements, management identifies key accounting policies and estimates as those related to revenue recognition, allowance for doubtful accounts, inventory valuations and purchase commitments, valuation of long lived assets including acquired intangibles, warranty costs, and income taxes. These policies are deemed important because they are critical in the representation of the firm's financial standing and that they require judgments and estimates regarding events that are uncertain. However, the stances taken on these issues reflect industry norms, and are stated very similarly by leading competitors in the respective markets.

Step 2: Assessment of Accounting Flexibility

Apple has very limited accounting flexibility in capturing its key success factors concerning research and development, brand image, and marketing. The only flexibility in their key success factors involves a small portion of its R&D costs being capitalized. This leaves management with few accounting policies in which they can be flexible, which causes accounting data to be less informative regarding the true economy of the firm.

Flexible Accounting Policies	
Accounting Policy	**Degree of Flexibility**
Research and Development*	Minimal
Brand Image (Advertising)*	None
Inventory Policies	Moderate
Estimation of Bad Debt	Moderate to High
Amortization of Goodwill and Intangibles	Moderate to High

***** *Key Success Factor*

Apple currently uses a straight-line method over the estimated useful lives of assets concerning the depreciation of property, plant, and equipment, which are 30 years for building, 2 to 5 years for equipment, and the shorter of lease terms of 10 years for leasehold improvements. It is of importance to note that Apple, as of first quarter of fiscal 2002, adopted SFAS No. 142, which required that assets with indefinite useful lives no longer be amortized, but instead use an impairment test annually or sooner whenever changes or events in circumstances indicate they may be impaired. Prior to 2002, Apple amortized its goodwill and other intangibles using the straight-line method over its estimated useful life. This essentially gives Apple a great deal of freedom concerning the write-off of its goodwill assets, allowing subjective manipulation of the value of its goodwill assets and the expenses incurred by writing them off. In fact, since

the 2002 conversion to SFAS No. 142 Apple has found no impairment from its annual goodwill tests held on August 30th of each year.

As far as inventory is concerned, Apple uses the industry standard of FIFO (First In, First Out) and provisions are made currently for the difference between cost and market value if cost of inventories exceeds their market value. Under the FIFO method, net income is typically overstated because the less expensive inventory is sold off first, leaving the most recently acquired higher priced inventory in the inventory account. The only flexibility that Apple has in terms of inventory accounting policies would be to change to a different method, perhaps in and effort to reduce income tax liability.

Apple currently uses a flexible variety of methods for estimating its allowance for doubtful accounts. Stated in the 10k, Apple estimates bad debt by "historical experience with bad debts, the general economic environment, the financial condition of the Company's distribution channels, and the aging of such receivables". With such a long list of conditions to base their analysis on, Managers have a great deal of freedom when choosing an appropriate allowance.

Finally, Apple identifies one of its key success factors as research and development. Unfortunately for Apple, GAAP does not allow for most research and development costs to be capitalized, and therefore they must be expensed as incurred. However, Apple is able to capitalize the software development costs for the development of some its software. This allows flexibility in choosing which points in the development cycles are to be capitalized. The total amount capitalized was approximately $4.5 million according to the 10k footnotes.

Step 3: Accounting Strategies

Apple's accounting policies are consistent with their main competitors Dell and HP. They recognize revenue when persuasive evidence of an arrangement exists, delivery has occurred, the sales price is fixed or determinable, and collection is probable[5]. Apple, along with their competitors, also recognizes most expenses when they are incurred. Further, per GAAP, research and development costs are expensed as incurred. Apple, Dell, and HP use FIFO when accounting for inventory. This leads to a higher stated Net Income; however, in the computer industry this is necessary due to technology prices deflating considerably over time. The only main difference between Apple, HP, and Dell's accounting strategy is when accounting for depreciation of property, plant, and equipment. Apple and Dell consistently use straight-line depreciation based on a 30 year time frame for the depreciation of buildings, and two to five years for equipment. Where as HP uses straight-line depreciation based on a five to 40 year time frame depending on the type of asset[5]. When accounting for Goodwill and Income taxes Apple, Dell, and HP comply with SFAS No. 142 and 109, respectively.[5]

A common expense manipulation deals with the estimation of warranty expense. Historically, Apple's warranty expense has been two percent of net sales. This percentage is within one point of their competitors and is well within the norm of the industry.

Within Apple, the managers could face some incentive to use accounting strategies to manage earnings as in many publicly traded companies. Their stock option plans allow all employees, not only managers, the option of purchasing stock. Steven P. Jobs (C.E.O.) and the other top managers hold a large amount of stock in the company.[5] While this could raise an initial concern, the managers overall lack of flexibility with regard to the accounting strategy greatly reduces their ability to use their discretion or manage earnings.

Additionally, diagnostics raised no red flags concerning manipulation of revenues or expenses by management.

Apple's accounting policies have remained consistent and unchanged throughout the past, and any changes they made were made throughout the industry. There have been no significant fourth quarter adjustments to revenues or estimates on their annual report (10-K). This indicates that there is not a substantial amount of manipulation in quarterly reports in efforts to artificially inflate revenues or deflate expenses.

Apple deals almost entirely in-house, and by not structuring any outside business transactions revealing that they don't have any outside operations aimed at achieving certain accounting objectives. Apple's lack of special purpose entities or other "off balance sheet" accounting practices reveals that there is less possibility of hiding any losses or other impairments by the firm's structure.

Step 4: Quality of Disclosure

Apple has demonstrated that it lacks considerable transparency concerning its financial statements. While the bare minimum of disclosure is satisfied within the various statements filed with the SEC, it is apparent that Apple does not like to be forthcoming about the details of its operations. This is most evident through their use of consolidated financial statements, leaving investors and analysts searching through the footnotes to find components of certain accounts (ex. SG&A).

The Management Discussion and Analysis section of the annual report is included in the 10-K and is fairly adequate, including an explanation of many of the large research and development expenses incurred during the period. However, the information conveyed is very broad, lacking specifics such as products, innovations, or a direction to which shareholders can look for future assurance of growth and profitability. However, Apple has completely neglected

to include a Letter to the Shareholders, reinforcing the lack of transparency in the company's financial statements.

One final note is the company policy regarding the disclosure of information to the public. Questions asked of management by this valuation committee were left unanswered due to a company wide policy prohibiting the disclosure of any extra information to the public in general. This clearly shows management's unwillingness to be available to analysts and the firm's lack of a good investor relations program.

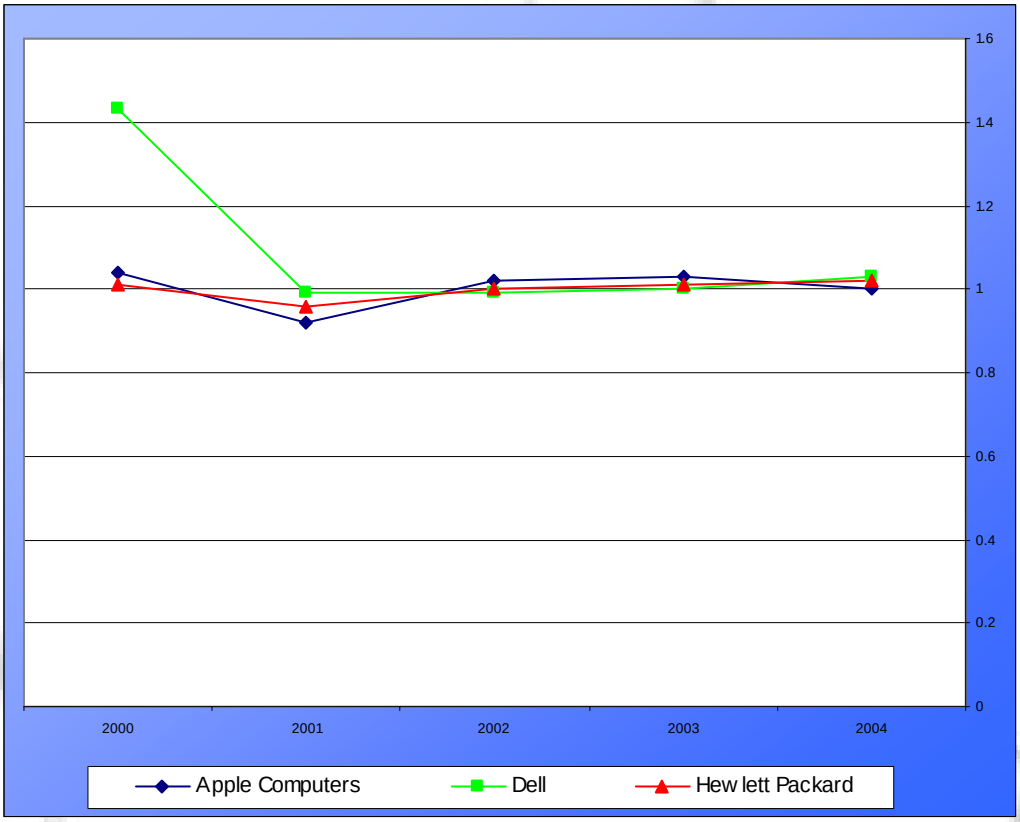
While it is clear Apple is not transparent in their statements, there might be a reason for their approach to minimal disclosure. Apple could be influenced by competitive considerations, supported by the fact that one of Apple's key success factors is its research and development, and brand image. Management may feel that the disclosure of certain information could give competitors proprietary information regarding new product lines or research being done, and aid competitors in their business decisions.

Step 5: Potential Red Flags

Sales Manipulation Diagnostics

Net Sales / Cash From Sales

	2000	2001	2002	2003	2004
Apple Computers	1.04	.92	1.02	1.03	1.00
Dell	1.43	.99	.99	1.00	1.03
Hewlett Packard	1.01	.96	1.00	1.01	1.02

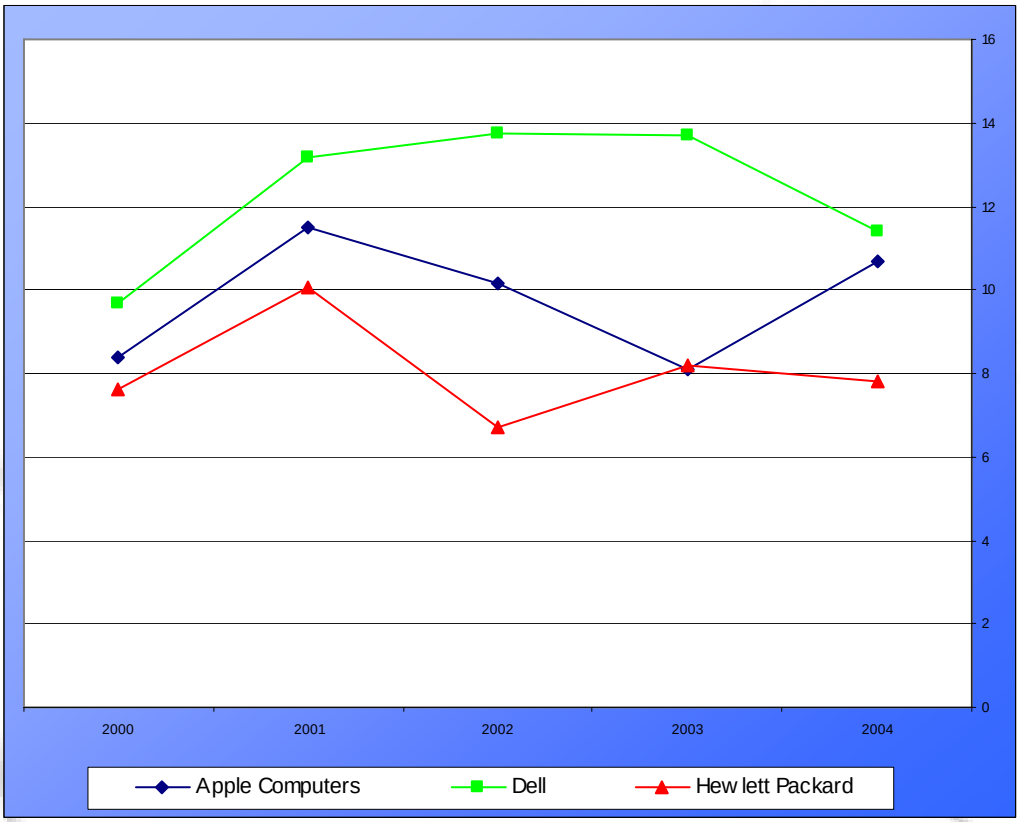


- The data above for Net Sales / Cash From Sales are relatively constant over the last 5 years and raise no concern.

Sales Manipulation Diagnostics

Net Sales / Net Accounts Receivable

	2000	2001	2002	2003	2004
Apple Computers	8.38	11.51	10.16	8.10	10.69
Dell	9.69	13.16	13.74	13.69	11.4
Hewlett Packard	7.64	10.08	6.69	8.19	7.81



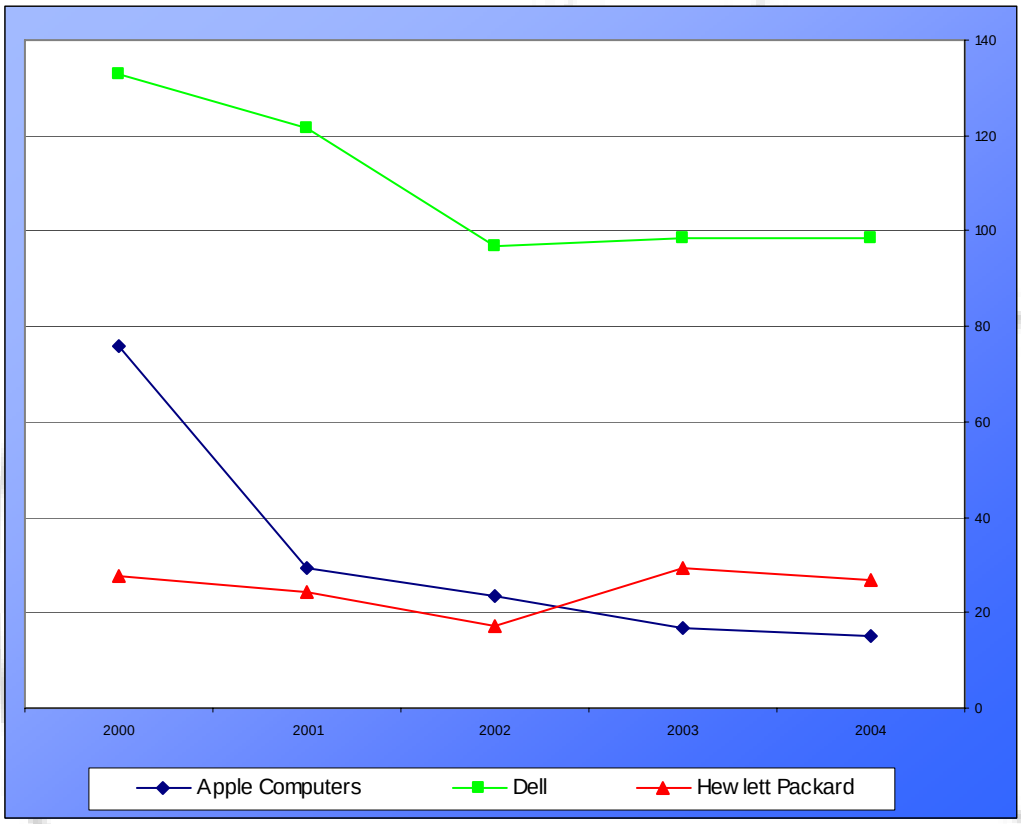
- After analyzing the Net Sales / Net Accounts Receivable ratio, there is no need for concern as the industry seems to follow no particular trend in their numbers. All of the above ratios stay within a given range depending on the company.

Sales Manipulation Diagnostics

Net Sales / Unearned Revenue

	2000	2001	2002	2003	2004
Apple Computers	76.03	29.15	23.39	16.87	15.22
Dell	132.97	121.71	96.80	98.34	98.40*
Hewlett Packard	27.78	24.22	17.36	29.27	27.01

*Estimated due to consolidation of Unearned Revenues and Warranty Liabilities



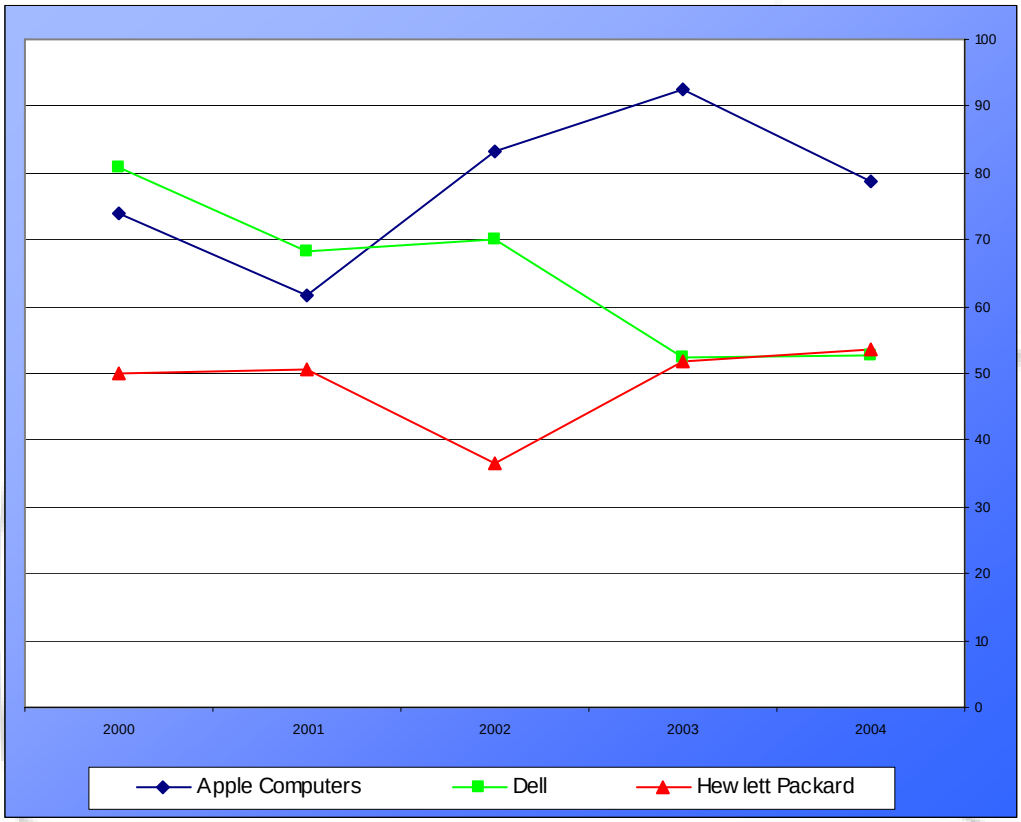
- The above analysis for Net Sales / Unearned Revenue shows no concern as the ratio is moving in a downward trend.

Sales Manipulation Diagnostics

Net Sales / Warranty Liabilities

	2000	2001	2002	2003	2004
Apple Computers	73.92	61.64	83.22	92.64	78.85
Dell	80.72	68.28	70.20	52.53	52.59*
Hewlett Packard	50.02	50.53	36.56	51.71	53.48

*Estimated due to consolidation of Unearned Revenues and Warranty Liabilities

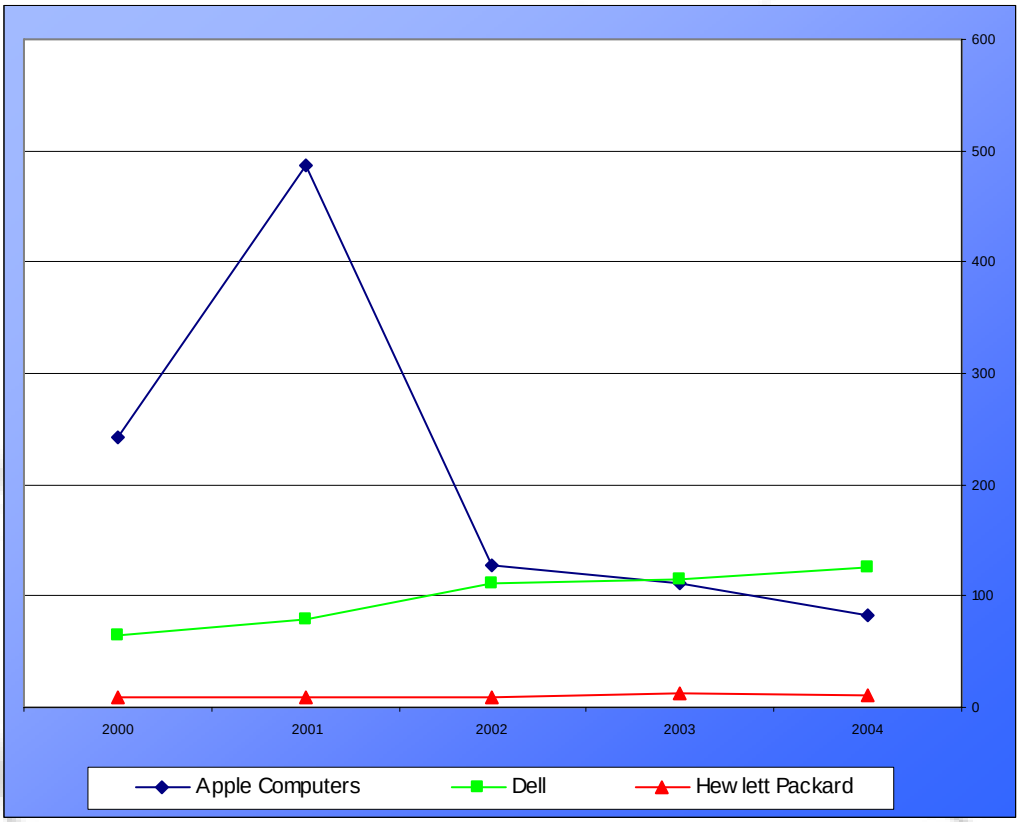


- The ratio Net Sales / Warranty Liabilities has no particular trend line associated with it, but the 2004 decrease causes no concern as it is moving downward. However, there might be some concern that the rest of the industry has flattened out and Apple is still changing.

Sales Manipulation Diagnostics

Net Sales / Inventory

	2000	2001	2002	2003	2004
Apple Computers	241.91	487.55	127.6	110.89	81.97
Dell	64.62	79.72	112.12	115.7	126.24
Hewlett Packard	8.58	8.69	9.76	12.04	11.30

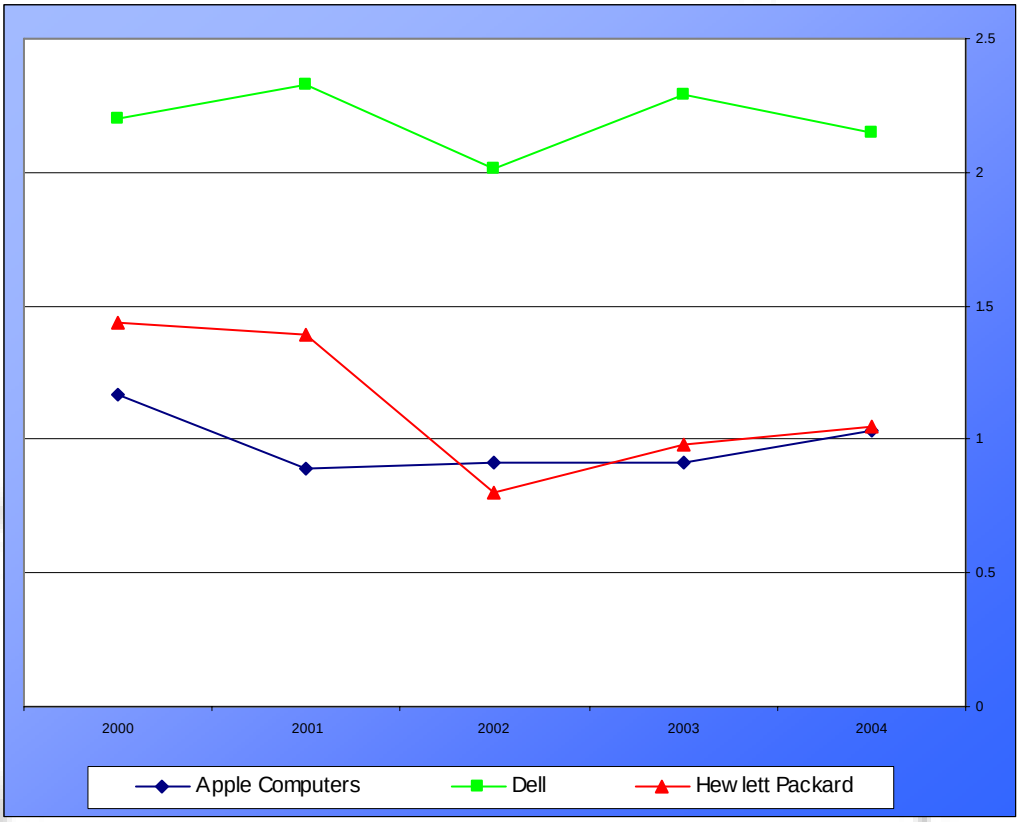


- Apple's ratio for Net Sales / Inventory has changed drastically over the last 5 years, and can be attributed to its growing sales. Apple is probably bulking up in inventory in preparation for new releases such as the many new announced iPod products. We see this as no cause for concern, especially considering the downward nature of the trend.

Core Expense Manipulation Diagnostics

Asset Turnover (Sales / Assets)

	2000	2001	2002	2003	2004
Apple Computers	1.17	.89	.91	.91	1.03
Dell	2.20	2.33	2.01	2.29	2.15
Hewlett Packard	1.44	1.39	.80	.98	1.05

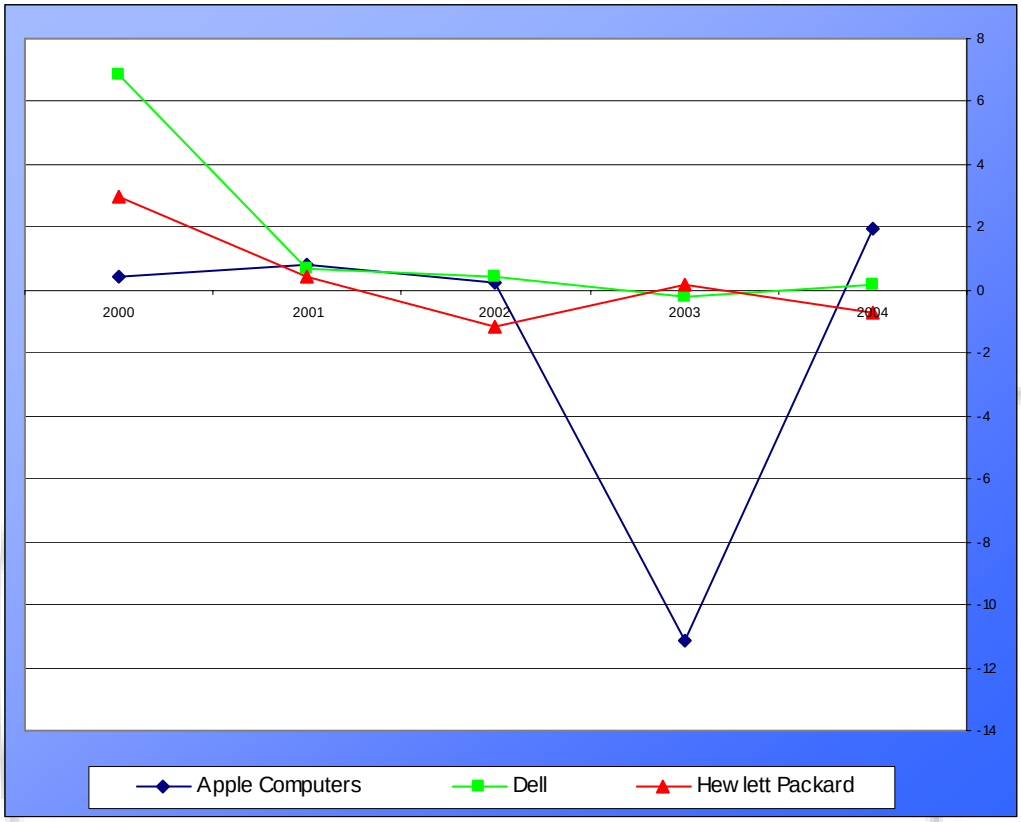


- The data above for Asset Turnover is relatively constant over the last 5 years. The upward motion at the end of 2004 indicates no cause for concern.

Core Expense Manipulation Diagnostics

Change in Cash Flows From Operations / Operating Income

	2000	2001	2002	2003	2004
Apple Computers	.43	.79	.27	-11.11	1.97
Dell	6.87	.67	.45	-.2	.19
Hewlett Packard	2.97	.44	-1.17	.16	-.73

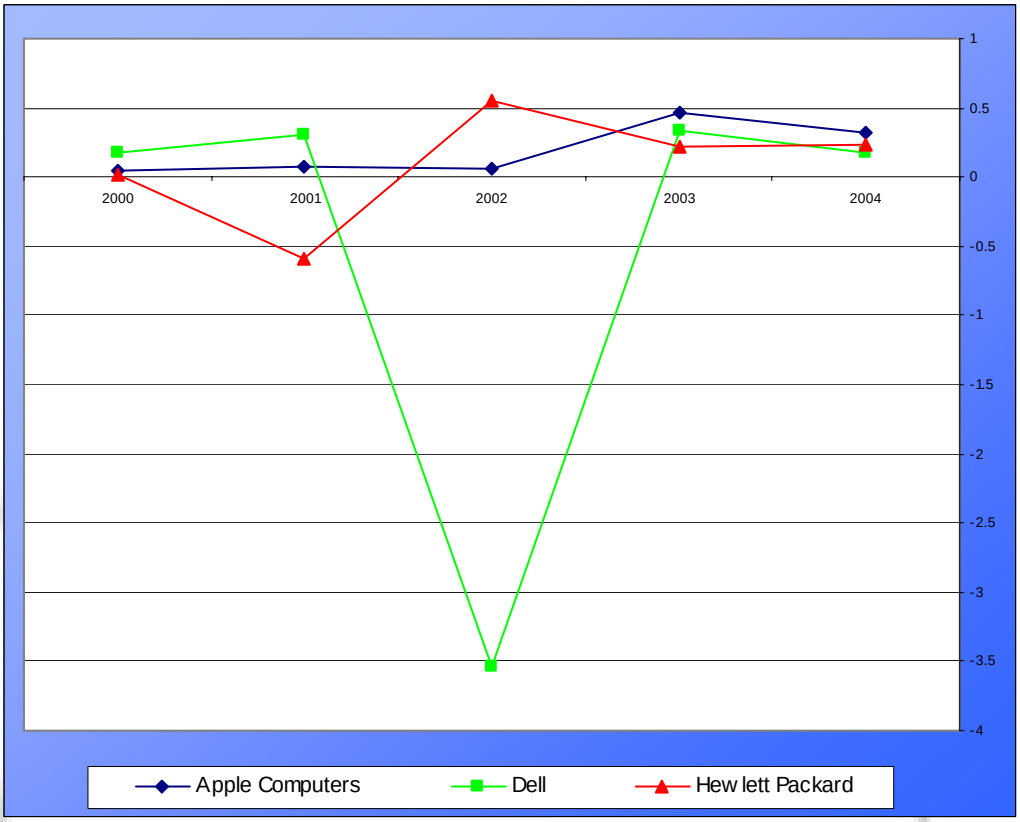


- From looking at the Change in Cash Flows From Operations / Operating Income, Apple's numbers shows a relatively safe trend excluding its 2003 fiscal year. During 2003, Apple had an operating income (loss) of $(1) million causing the sharp dip in the numbers. From 2003 to 2004 the trend is both upwards and relative to its 2000-2002 numbers, leaving no cause of concern.

Core Expense Manipulation Diagnostics

Total Accruals / Change in Sales

	2000	2001	2002	2003	2004
Apple Computers	.04	.08	.06	.47	.32
Dell	.18	.31	-3.54	.33	.17
Hewlett Packard	.02	-.59	.559	.214	.232

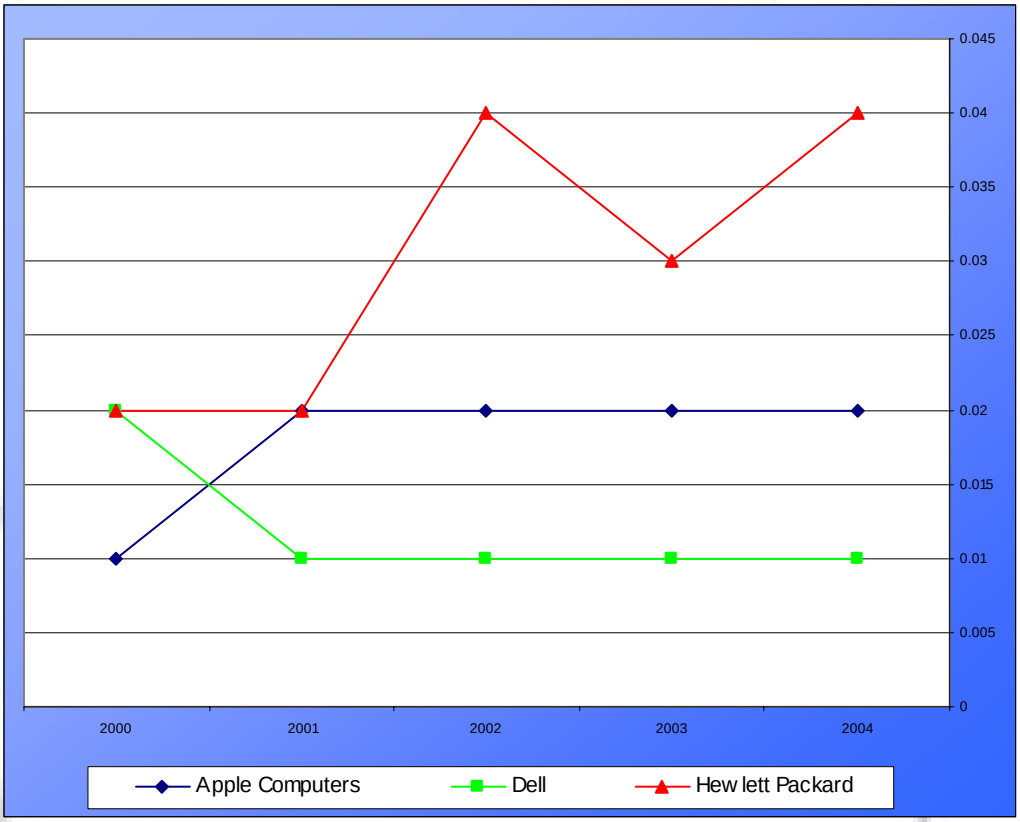


- The above analysis of Total Accruals / Change of Sales shows a jump upward in 2003, and then a relative drop in 2004. The volatile nature of the data can be primarily attributed to an operating loss during 2003 and then in a surge of sales during 2004. More sales is obviously going to mean more accruals, so we see no need for concern regarding the above data.

Core Expense Manipulation Diagnostics

Pension Expense / SG&A

	2000	2001	2002	2003	2004
Apple Computers	.01	.02	.02	.02	.02
Dell	.02	.01	.01	.01	.01
Hewlett Packard	.02	.02	.04	.03	.04



- The numbers above are relatively constant over the last 5 years and raise no concerns. Apple uses a defined contribution retirement plan, leaving the liability on the shoulders of the employee and not the company. They are not required to make estimates since they match employee contributions that change every fiscal year.

Step 6: Undo Accounting Distortions

After a careful review of Apple's financial statements and accounting policies, along with an analytical dissection of the sales and core expense manipulation diagnostics, we feel the available information has no accounting distortions that must be corrected. Apple did have a few accounting policies by which it could be flexible in its reports, but none of these were used to exaggerate or understate any part of the financial statements.

Ratio Analysis and Forecast Financials

This section will include financial ratio analysis for Apple as well as provide forecasted financial statements for the upcoming ten years. The ratios will supply the overall profitability, liquidity (short-term solvency), and capital structure (long-term solvency) for Apple. The major purpose of using financial data in ratio form is making the results comparable across firms and over time by controlling for size. After computing the selected ratios, we will be able to compare Apple to its top competitors within the technology industry, and against the overall industry average. Ultimately, these ratios will act as a guide in assessing Apple's financial position and state of operations. This ratio analysis of Apple's past and present performance will also provide the foundation for making forecasts of future performance[14]. Analysis of these ratios is important to numerous parties, but for our purposes, it will provide current and potential investors valuable information not so easily derived or transparent in the financial statements. In addition to the standard fourteen ratios used for computing profitability, liquidity, and capital structure we also included a Research and Development turnover ratio, which will gauge Apple's utilization of one of its key success factors.

This section will further provide investors with a realistic approximation of Apple's future performance as well as an accurate assessment of the previous trends and oscillations within the industry. This information will give current and perspective investors a cross-sectional comparison. By doing this investors will be able to see exactly how Apple is performing in comparison to their competition, and see how Apple is predicted to perform during the upcoming ten years.

Trend Analysis

	2000	2001	2002	2003	2004
Sales Growth	-	-32.82%	7.07%	8.10%	33.38%
Sustainable Growth Rate	19.14%	-.64%	1.59%	1.63%	5.44%
Liquidity Analysis					
Current Ratio	2.81	3.39	3.25	2.50	2.63
Quick Asset Ratio	2.58	3.16	2.96	2.26	2.33
Inventory Turnover	176.27	375.27	91.98	80.34	59.60
Days supply of inventory	2.07	0.97	3.97	4.54	6.12
Accounts Receivable Turnover	8.38	11.51	10.16	8.10	10.70
Days supply of receivables	43.57	31.72	35.92	45.04	34.12
Working Capital Turnover	2.28	1.48	1.54	1.76	1.89
Profitability Analysis					
Gross Profit Margin	27.13%	23.03%	27.92%	27.52%	27.29%
Operating Expense ratio	20.59%	29.44%	27.62%	27.53%	23.35%
Net Profit Margin	9.85%	-0.47%	1.13%	1.11%	3.33%
Asset Turnover	1.17	0.89	0.91	0.91	1.03
Return on Assets	11.55%	-0.42%	1.03%	1.01%	3.43%
Return on Equity	19.14%	-0.64%	1.59%	1.63%	5.44%
Capital Structure Analysis					
Debt to equity ratio	0.66	0.54	0.54	0.61	0.59
Times Interest Earned	53	-2.25	8.9	12.5	128.67
Debt Service Margin	2.89	.584	.28	.95	0
R&D Turnover	4.8%	8.0%	7.8%	7.6%	5.9%

Liquidity / Operating Efficiency Analysis

The liquidity ratios will provide information indicating whether or not Apple will be able to pay off short term obligations through the use of its current assets. Apple is strong in terms of its basic liquidity analysis. Concerning the Current and Quick Assets ratios, Apple has the means to meet its short term obligations, and has consistently met the "golden standard" sought by banks. We conclude that the firm's numbers are very satisfactory, and give them an overall good short term solvency rating.

Operating efficiency (working capital management) ratios provide insight

into Apple' cash to cash cycle. More specifically, how efficiently Apple is able to convert inventory into sales, sales into payment, and use working capital to generate sales. Inventory turnover has been decreasing over time, which is not a favorable trend, but is suspected to be due to the increase of demand, sales, and new products launches. Furthermore, accounts receivable turnover has been fluctuating within reasonable means, showing no indication of a trend in either direction. However, in 2004 they collected on accounts receivables much more efficiently than in the previous year. The cash to cash cycle in 2004 was approximately 40 days. Lastly, Working capital has been growing steadily since 2001, which is a favorable trend with more sales dollars being generated per dollar of working capital. This is a good indication of growth and liquidity.

With the exception of inventory turnover, Apple shows favorable numbers in terms of liquidity analysis. The company is both able to meet short term obligations and has been steadily recovering its receivables. While inventory could be a concern, it is our opinion that the ratio is a reflection of increased sales and growing stockpiles of inventory precluding the release of new products.

Profitability Analysis

Profitability ratios will demonstrate Apple's ability to earn satisfactory profits, so that investors and shareholders will continue to provide capital. Apple is strong in terms of its profitability and trends indicate stability, and increased efficiencies in some areas. Much of their success in the arena of profitability can be credited to product differentiation and pricing strategy. As mentioned previously Apple is one of the few computer companies who have been profitable of recent. The gross profit margin for Apple has been relatively steady since 2001, showing no concerns for an increased cost of goods. The operating expense ratio shows what portion of sales is used for operating expenses. The ratio has been consistently declining, which is a favorable trend, suggesting that smaller portions of sales are consumed by operating expenses.

Net profit margin demonstrates how much of each sales dollar is left over

after all expenses have been paid. Apple's ratio hit a low in 2001, but since then, there has been an increasing trend in net profit margin.

Finally, Apple has been slowly increasing the ratios concerning asset turnover, return on assets, and return on equity. These increases are favorable, showing the companies ability to increase its earnings in proportion to the overall investment in the company.

Capital Structure Analysis

Capital structure (gearing) ratios are used to assess the finance risk of a business (long term solvency). Capital Structure refers to the different ways in which a company raises the capital needed to establish and grow it business activities. Apple, per the ratio numbers above, has been moving towards a capital structure that primarily uses equity as the means to finance operations. In 2004, Apple paid off all long term debt, essentially making equity the sole source of capital for the company. This allows the classification of Apple as low geared and solvent (long term). This lends itself flexibility in acquiring long term debt if required to finance future operations.

Other Observations

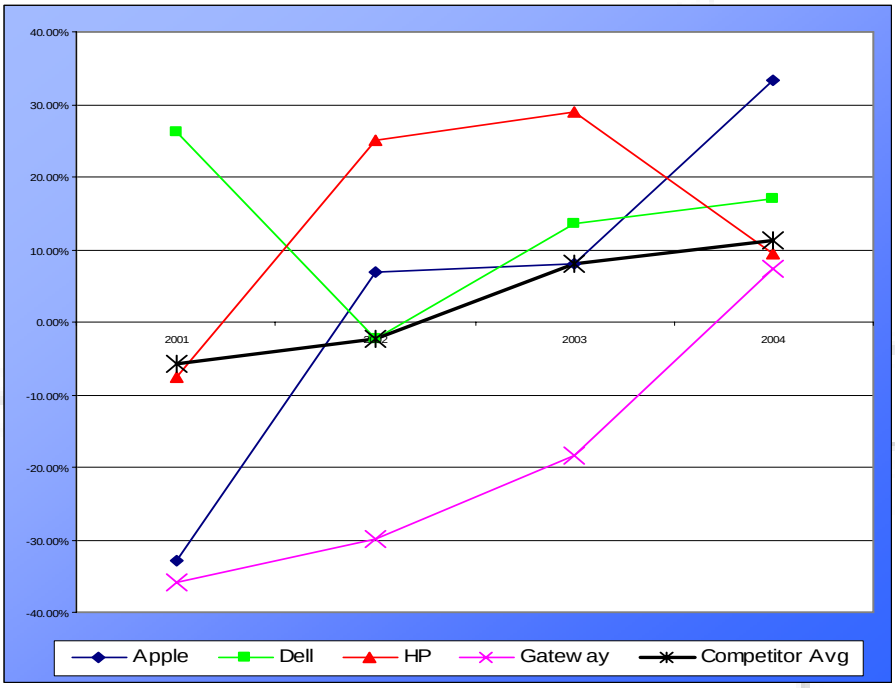
Some additional ratios were analyzed concerning apple and the industry to better represent some of the key success factors identified in previous assessments. R&D turnover is a very important number for Apple, as they have stated through the 10-K their focus on creativity, and research and development. The numbers above reflect this focus, as Apple has continually brought in a very favorable ratio concerning its R&D costs relative to its overall sales.

Cross Sectional Analysis

The purpose of the cross sectional analysis is to add value to the meaning of the ratios derived in the previous section. Analyzing the ratios independent from competition and industry averages will provide very limited information to the investor, and could result in erroneous decisions. In order to accurately gauge the firm's financial position and operating performance they must be compared to competitors and industry averages over the same periods of time. For example, if Apple's gross profit margin declined steeply in one year, it may not be a cause for concern if that decline reflected the status quo amongst other competitors in the industry.

Sales Growth

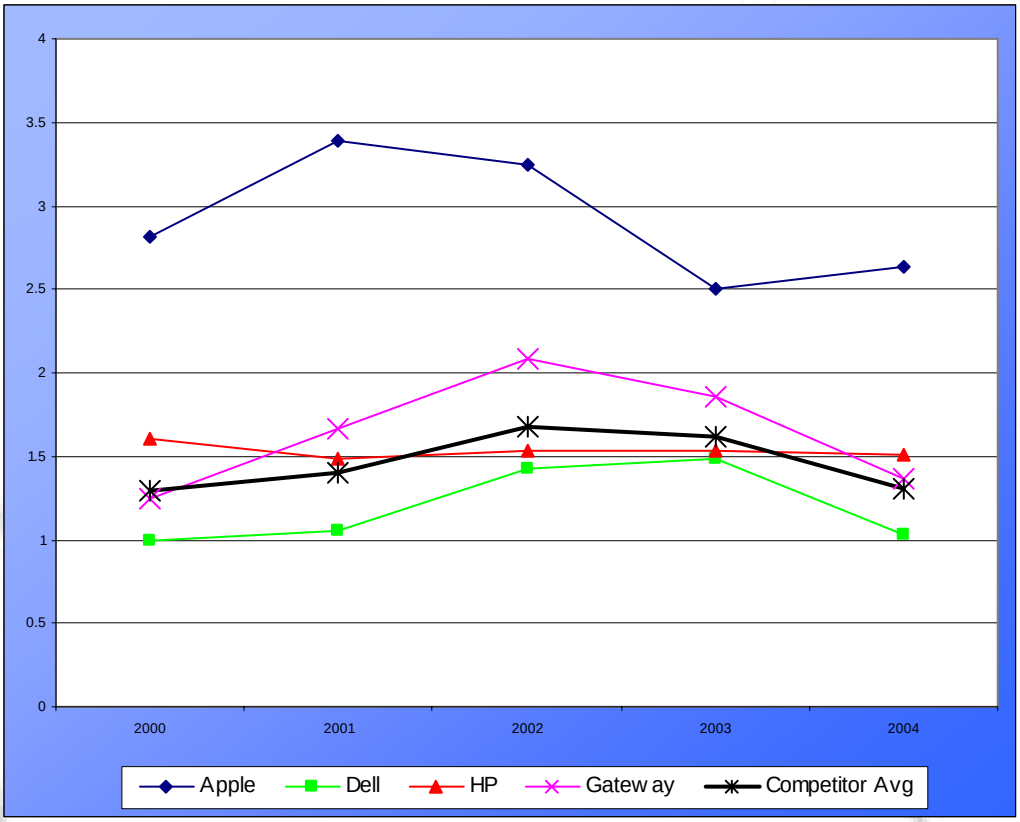
	2001	2002	2003	2004
Apple	-32.8%	7.0%	8.1%	33.4%
Dell	26.2%	-2.3%	13.6%	17.1%
HP	-7.5%	25.0%	29.0%	9.4%
Gateway	-35.8%	-29.8%	-18.4%	7.3%
Competitor Avg	-5.70%	-2.37%	8.07%	11.27%



Sales growth is an excellent indicator of how well a company is performing in its industry as well as its ability to capture new market share. A close look at the competitor's numbers show a battle in sales growth between Dell, HP, and Gateway. It is of particular interest to note that strong gains in one company usually resulted in a loss or smaller gain in a competitor. This can be credited to these companies fighting over a market that is already primarily saturated. Apple does not seem to be effected by the earnings of its competitors, as shown in its steady growth from 2002 to present. This is a result of Apple's computer products capturing a niche market and its portable music products entering a market experiencing rapid growth. While Apple's numbers seem to be increasing significantly for now, it is very possible that with the saturation of the portable music market that Apple's numbers could slump in the not so distant future.

Current Ratio

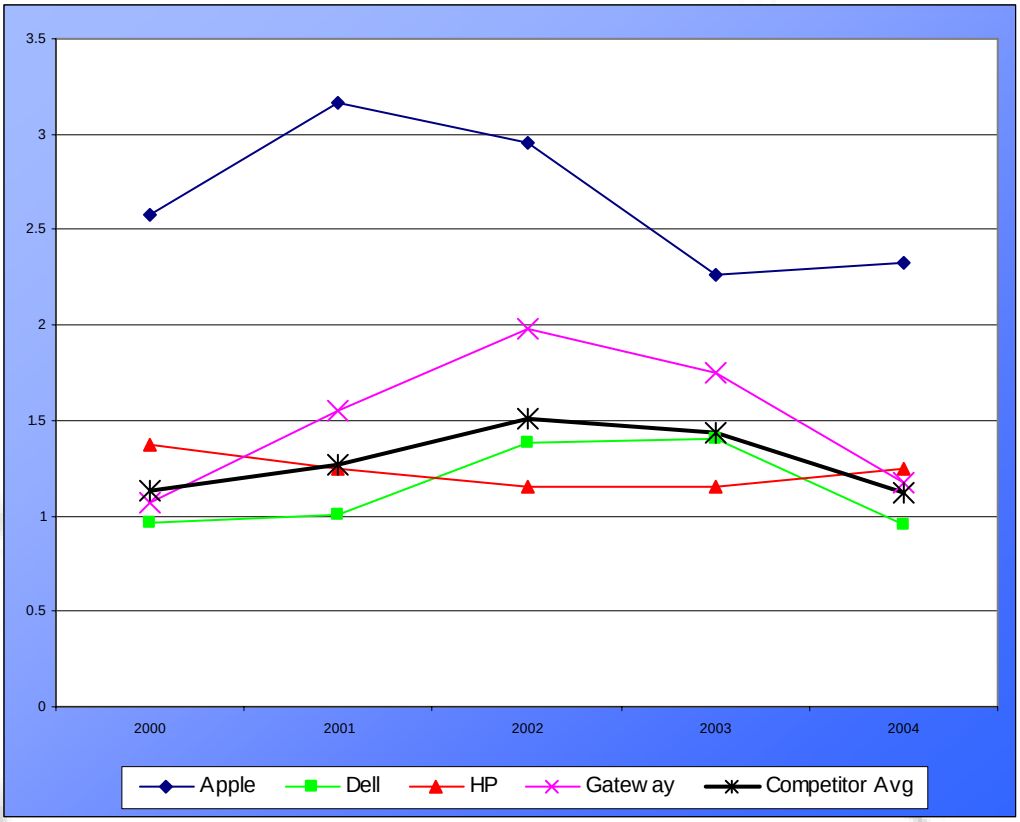
	2000	2001	2002	2003	2004
Apple	2.81	3.39	3.25	2.50	2.63
Dell	1.00	1.05	1.43	1.48	1.03
HP	1.61	1.48	1.53	1.53	1.51
Gateway	1.25	1.67	2.08	1.85	1.37
Competitor Avg	1.29	1.40	1.68	1.62	1.30



Over the past five year Apple's current ratio has been declining. However, their current ratio has remained considerably higher than their competitors, who have all failed to meet the "golden standard". It is evident that even though Apple's current liabilities have been increasing their current assets remain strong enough to cover them, and keep Apple's current ratio higher than their competition.

Quick Asset Ratio

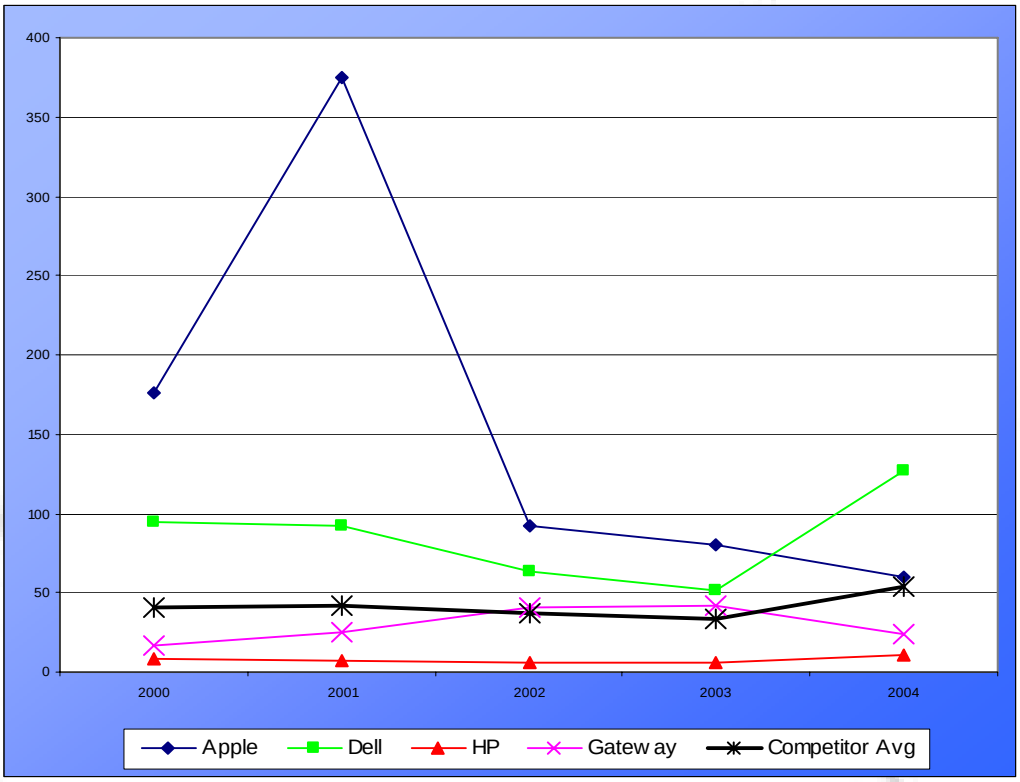
	2000	2001	2002	2003	2004
Apple	2.58	3.16	2.96	2.26	2.33
Dell	.96	1.01	1.38	1.40	.95
HP	1.37	1.25	1.15	1.15	1.25
Gateway	1.07	1.55	1.99	1.75	1.18
Competitor Avg	1.13	1.27	1.51	1.43	1.13



As with their current ratio, Apple's quick ratio has been declining over the previous five years, but it has remained consistently higher than their competitors and the industry average. It peaked in 2001 and has been declining until 2003. However, the most recent year is shows an increase the ratio. This is due to Apple's great success with its introduction of new innovative products into the market, and is now experiencing an increase in their quick assets: cash, accounts receivable, and securities.

Inventory Turnover

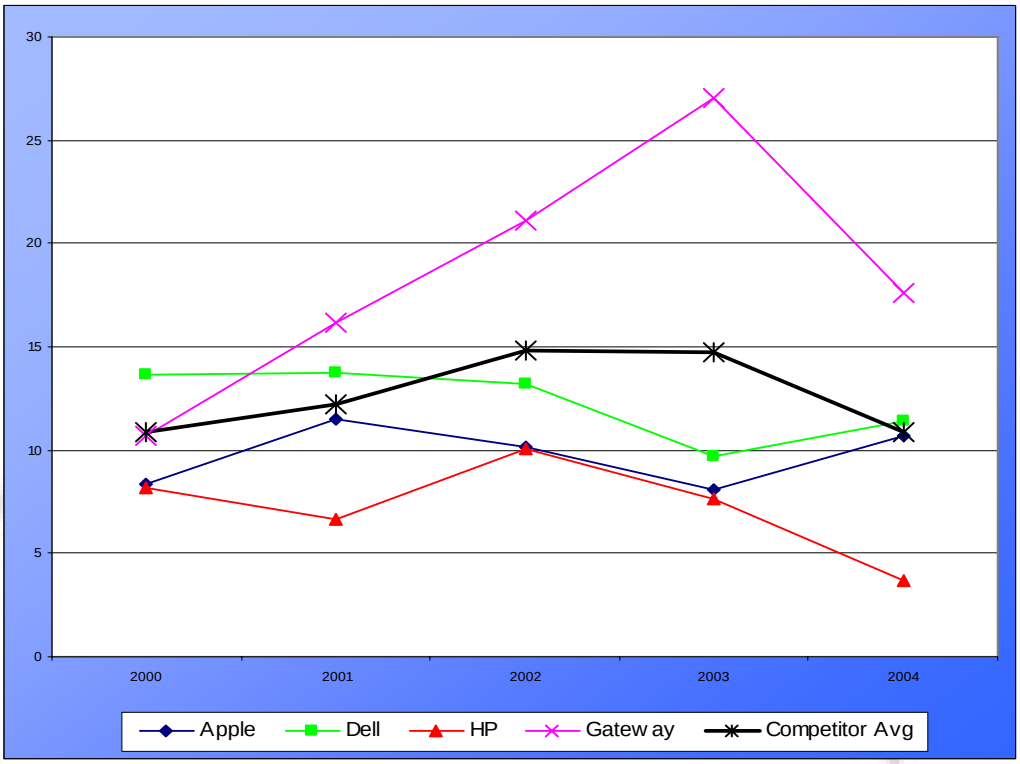
	2000	2001	2002	2003	2004
Apple	176.27	375.27	91.98	80.34	59.60
Dell	94.95	92.31	63.61	51.27	126.74
HP	8.85	7.14	6.39	6.11	11.3
Gateway	17.03	25.75	40.62	42.40	23.94
Competitor Avg	40.28	41.73	36.87	33.26	53.99



Apple's inventory turnover has sharply declined since 2001. A probable explanation of the sharp decline experienced by the Apple can be associated with the state of the economy at the time. Post September 11, 2001, the economy was experiencing recession. Apple who specializes in differentiated, higher priced goods, was unable to convert inventory into sales, resulting in a longer inventory turnover period and the large decline. Also the costs associated with holding inventory will have increased the cost of goods sold. As the economy has begun to pick up, Apples ratio has begun leveling off, and is more reflective of the industry norms. However, it still is declining, albeit at a much slower rate. This can be attributed to the increased demand for Apple products, and our assumption is that they are deliberately increasing inventory levels in preparation for new product launches.

Accounts Receivable Turnover

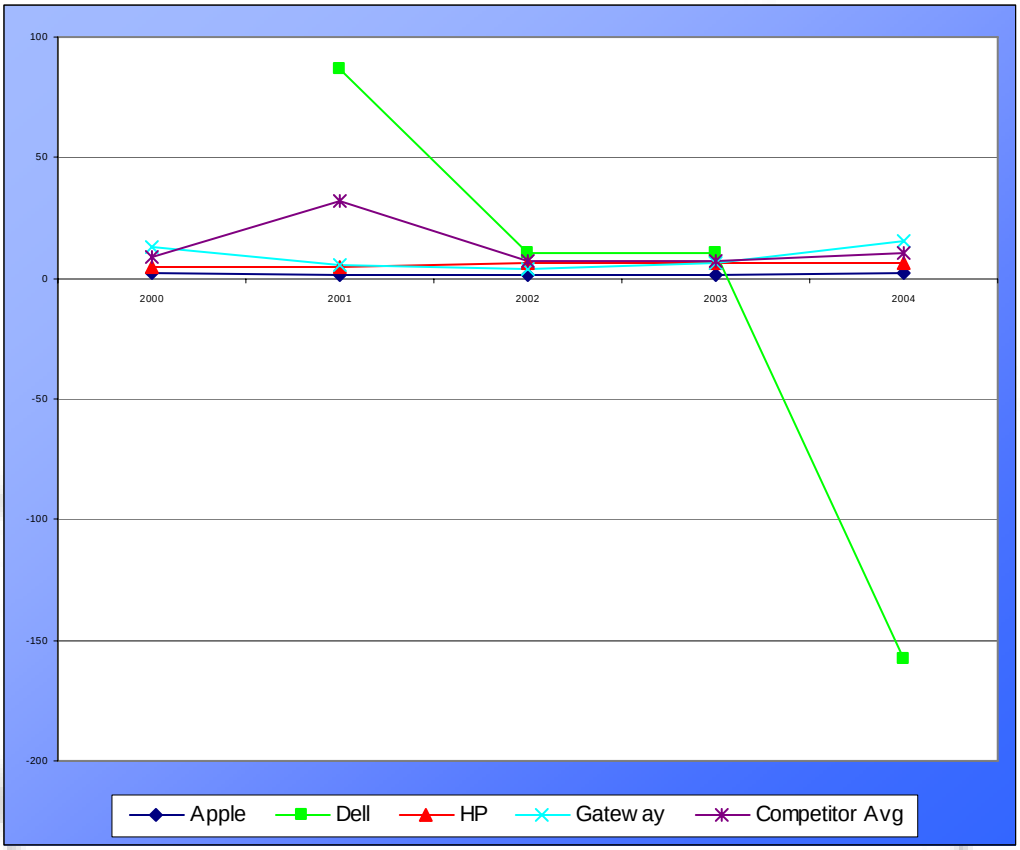
	2000	2001	2002	2003	2004
Apple	8.38	11.51	10.16	8.10	10.70
Dell	13.69	13.74	13.16	9.69	11.4
HP	8.19	6.69	10.08	7.64	3.7
Gateway	10.67	16.19	21.09	26.99	17.62
Competitor Avg	10.85	12.21	14.78	14.77	10.91



Over the past five years Apple's accounts receivable turnover has been fairly consistent with respect to how the industry has been performing. From 2002 to 2003 Apple was below the industry average, suggesting that competitors were collecting on their accounts receivables faster. However, 2 out of the 3 competitors also experienced declines in their A/R turnover, and Gateway's high increase in receivables turnover resulted in a less reflective industry average. From 2003 to 2004 apple had the largest increase in improving their A/R turnover, while Gateway suffered the largest decline in A/R turnover. Apple and Dell, the two more profitable companies of recent have A/R turnover ratios similar to the industry average in 2004, with day sales outstanding of 34 and 32, respectively.

Working Capital Turnover

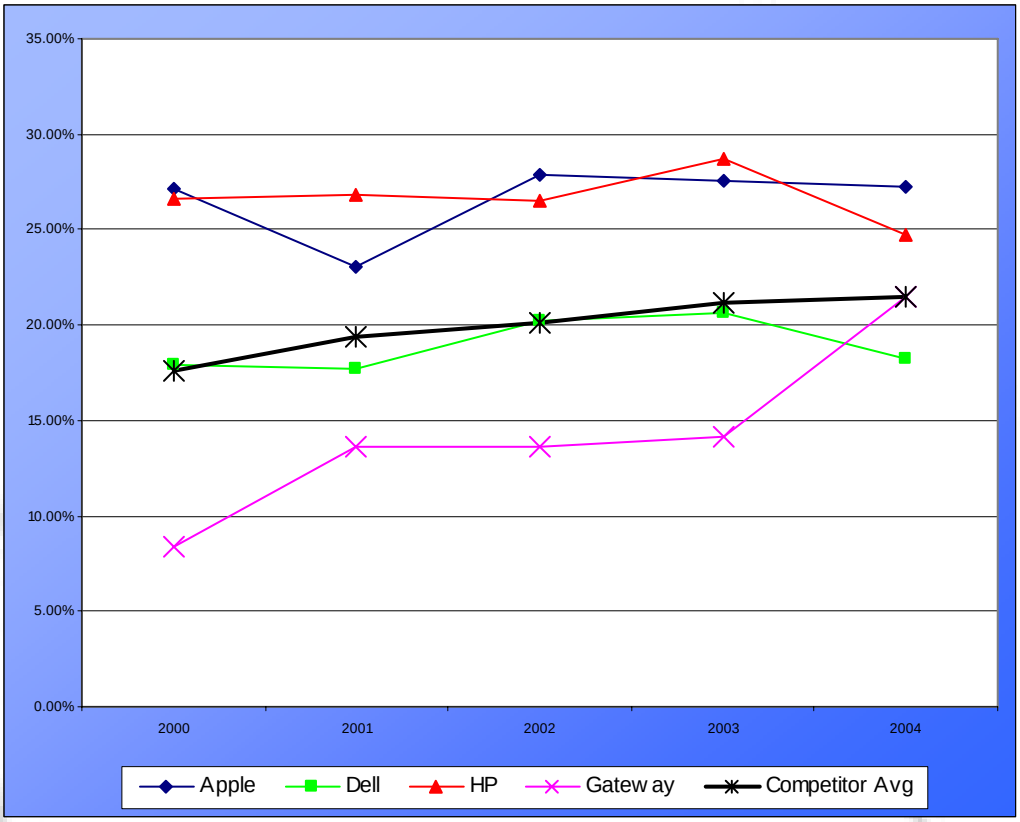
	2000	2001	2002	2003	2004
Apple	2.28	1.48	1.54	1.76	1.89
Dell	N/A	87.06	10.82	10.15	-158
HP	4.72	4.81	6.16	6.07	6
Gateway	13.18	5.12	4.11	6.08	15.79
Competitor Avg	8.95	32.33	7.03	7.43	10.90



Apple's working capital turnover has been increasing at a small rate over the past five years. They experienced a dip in 2001 due to the state of the economy (decrease in sales), but have been climbing ever since. They have been operating rather consistently, where as the industry has seemed to be extremely volatile over the previous years. Apple's 2004 numbers are favorable in terms of the direction the trend of moving and the steady increase relative to years past. While this number still below industry average, Apple has been continuing to pay off liabilities (eliminate debt), which, coupled with growing sales, will mean continued growth of this ratio in future fiscal years.

Gross Profit Margin

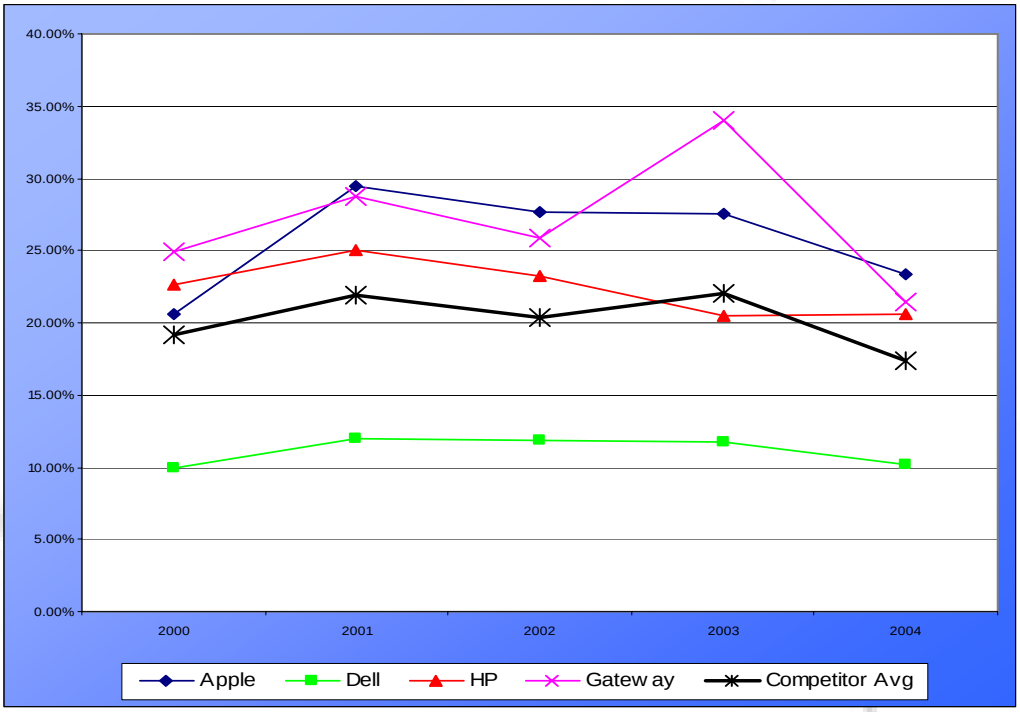
	2000	2001	2002	2003	2004
Apple	27.13%	23.03%	27.92%	27.52%	27.29%
Dell	17.93%	17.67%	20.21%	20.65%	18.20%
HP	26.57%	26.86%	26.46%	28.76%	24.70%
Gateway	8.41%	13.62%	13.57%	14.12%	21.45%
Competitor Avg	17.64%	19.38%	20.08%	21.18%	21.45%



Apple's gross profit margin has been consistently around 27% during the past five years with the exception of 2001, where it dropped to 23.03% due to the decreased sales and increased costs of inventory. Overall Apple has enjoyed higher profit margins as a result of their pricing strategy, not as a result of cost control measures (materials, labor, and overhead). This is primarily a reflection of its key success factors being geared towards creativity and innovation.

Operating Expense Ratio

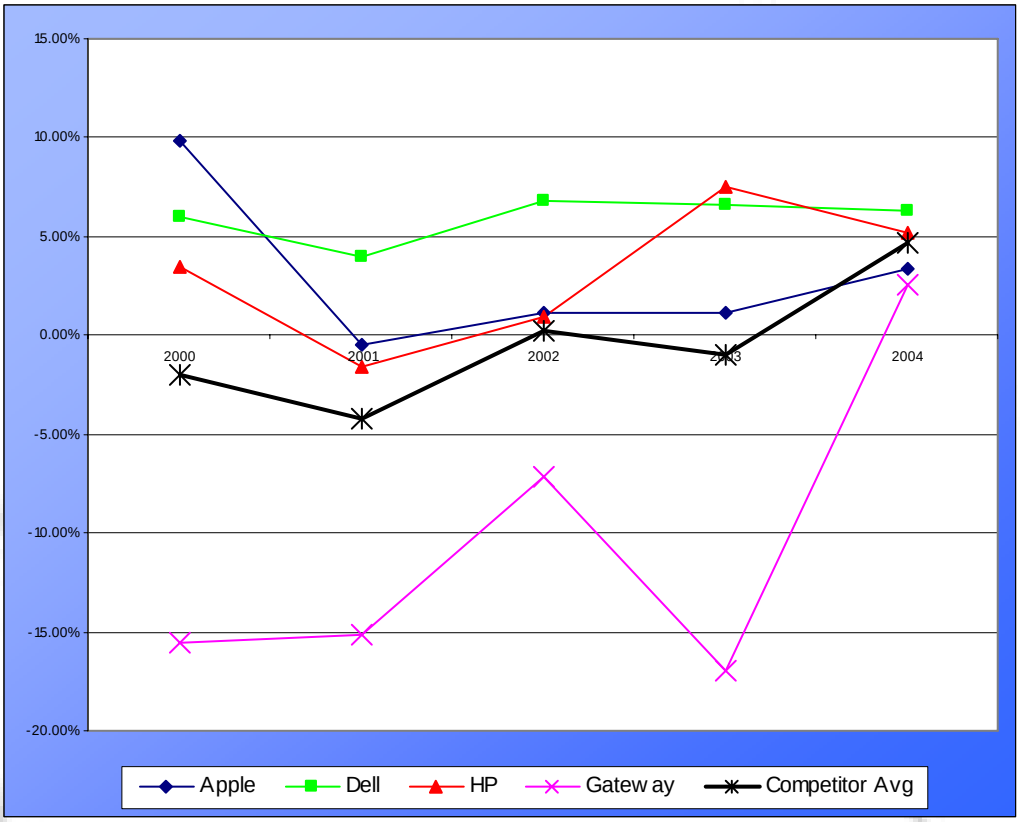
	2000	2001	2002	2003	2004
Apple	20.59%	29.44%	27.62%	27.53%	23.35%
Dell	9.90%	11.93%	11.85%	11.70%	10.13%
HP	22.60%	25.07%	23.28%	20.53%	20.56%
Gateway	24.91%	28.76%	25.83%	34.05%	21.45%
Competitor Avg	19.14%	21.92%	20.32%	22.09%	17.38%



Dell clearly has the upper hand in the area of operating expenses. They are the masters of Just In Time manufacturing, which is responsible for their very low operating expense ratio. Apple has consistently had an operating expense ratio higher than its competitors and that of the industry average. Although this could be viewed as a bad sign, (excluding Dell) Apple deviates from the ratios of its competitors only by a few percentage points in 2004. Also, the effects of their increased operating expenses are somewhat counteracted once again, by its pricing strategy. Over the last five years the trend amongst Apple along with most of its competitors has been a decreasing ratio. If Apple were to implement stricter cost control measures and decrease its overall expenses, it could easily translate into Apple having the highest net profit margins in the industry. (A portion of Apple's elevated operating expenses can be accredited to its high R&D costs, a key success factor for Apple).

Net Profit Margin

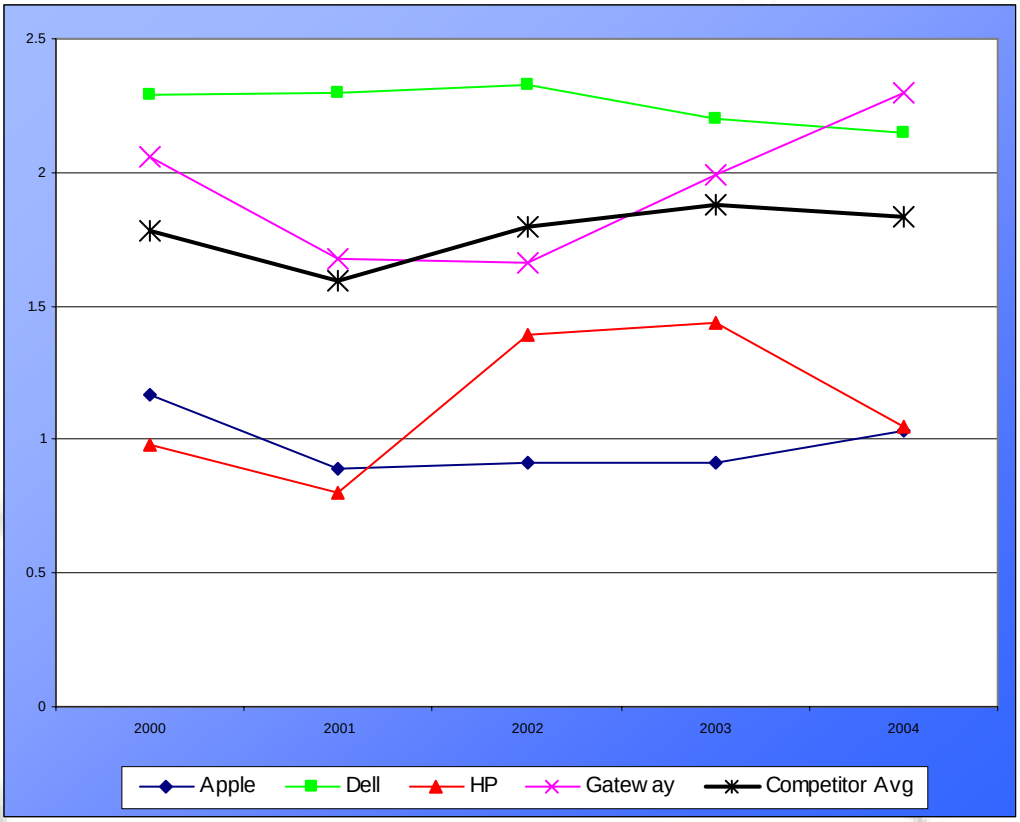
	2000	2001	2002	2003	2004
Apple	9.85%	-0.47%	1.13%	1.11%	3.33%
Dell	5.99%	4.00%	6.83%	6.59%	6.30%
HP	3.48%	-1.60%	.90%	7.56%	5.15%
Gateway	-15.55%	-15.13%	-7.14%	-16.96%	2.52%
Competitor Avg	-2.03%	-4.24%	0.20%	-0.94%	4.66%



Apple's net profit margin has been increasing since 2001, and tripled from 2003 to 2004. Once again Dell's methodical control of expenses is illustrated through their high net profit margin. Apple's high operating expenses results in them having a lower net profit margin than most of its competitors. However, in 2004, Apple's operating expenses ratio was approximately 13 percentage points higher than Dell's, yet there is only a 3 percentage point difference in their net profit margin. This is a direct result of Apple's superior gross profit margin. Apple is in a growth phase, and is utilizing a philosophy of get big fast, and then decrease operating expenses. Also, from 2003 to 2004, as net profit margins of Apple's main competitors decreased, Apple's tripled.

Asset Turnover

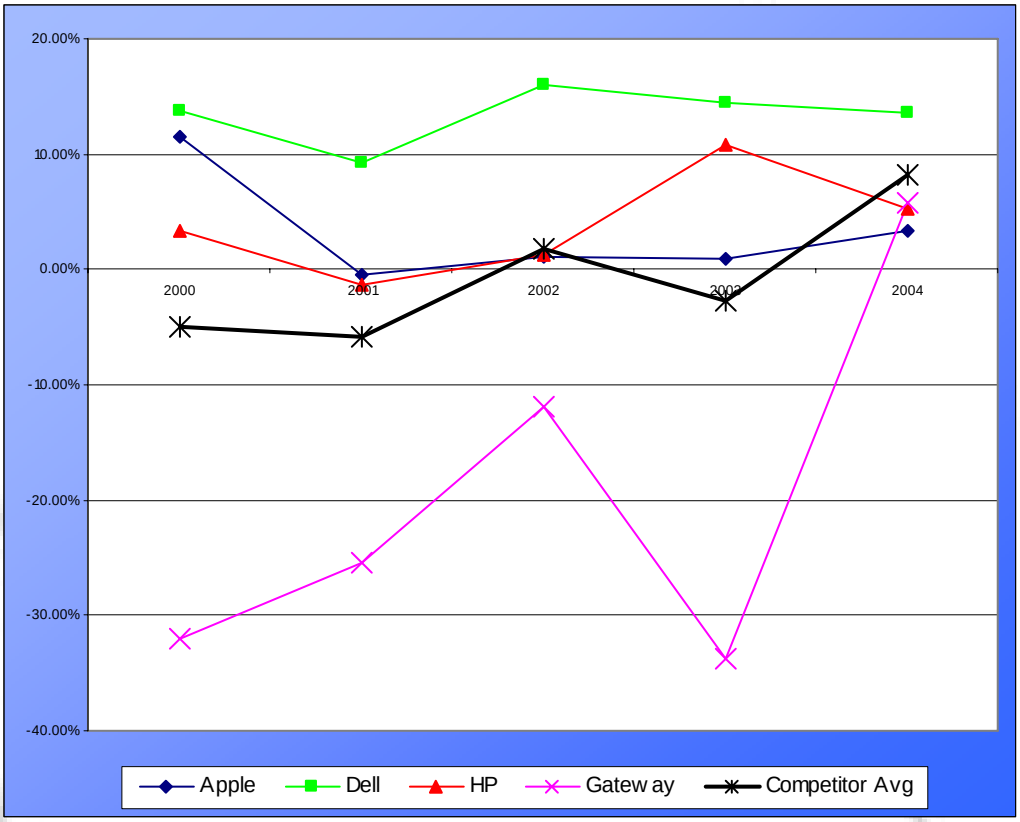
	2000	2001	2002	2003	2004
Apple	1.17	0.89	0.91	0.91	1.03
Dell	2.29	2.30	2.33	2.20	2.15
HP	.98	.80	1.39	1.44	1.05
Gateway	2.06	1.68	1.66	1.99	2.30
Competitor Avg	1.78	1.59	1.79	1.88	1.83



Apple's asset turnover is important as an increase in the ratio can directly effect the maximum sustainable growth, yielding higher growth rates in the future. While the ratio is growing slowly, which is a positive indicator, Apple has very low numbers compared to the competitor average. Additionally, companies with high profit margins tend to have low asset turnover, which can help explain why Apple's numbers are below industry norms.

Return on Assets

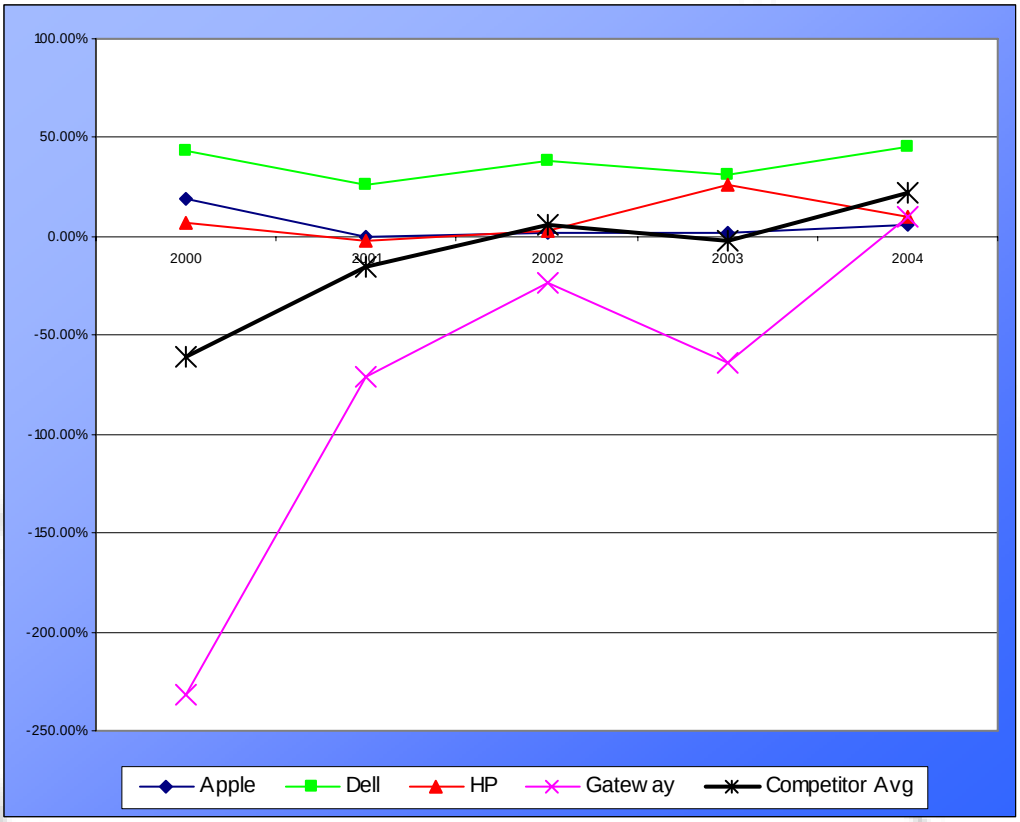
	2000	2001	2002	2003	2004
Apple	11.55%	-0.42%	1.03%	1.01%	3.43%
Dell	13.72%	9.21%	15.93%	14.52%	13.50%
HP	3.40%	-1.28%	1.25%	10.87%	5.21%
Gateway	-32.04%	-25.38%	-11.86%	-33.72%	5.78%
Competitor Avg	-4.97%	-5.82%	1.77%	-2.78%	8.16%



Apple's return on assets ratio is an indication of the company's struggle to recover from a history of losses. The ratio itself shows how well Apple is utilizing its assets after costs are figured in. Dell, the current cost leader in the industry, has glowing numbers which represent what Apple should be striving to achieve in this ratio. While the 2003 to 2004 change in numbers is a positive movement for Apple, there is much work to be done in the cost side to improve this ratio up to par with the likes of Dell.

Return on Equity

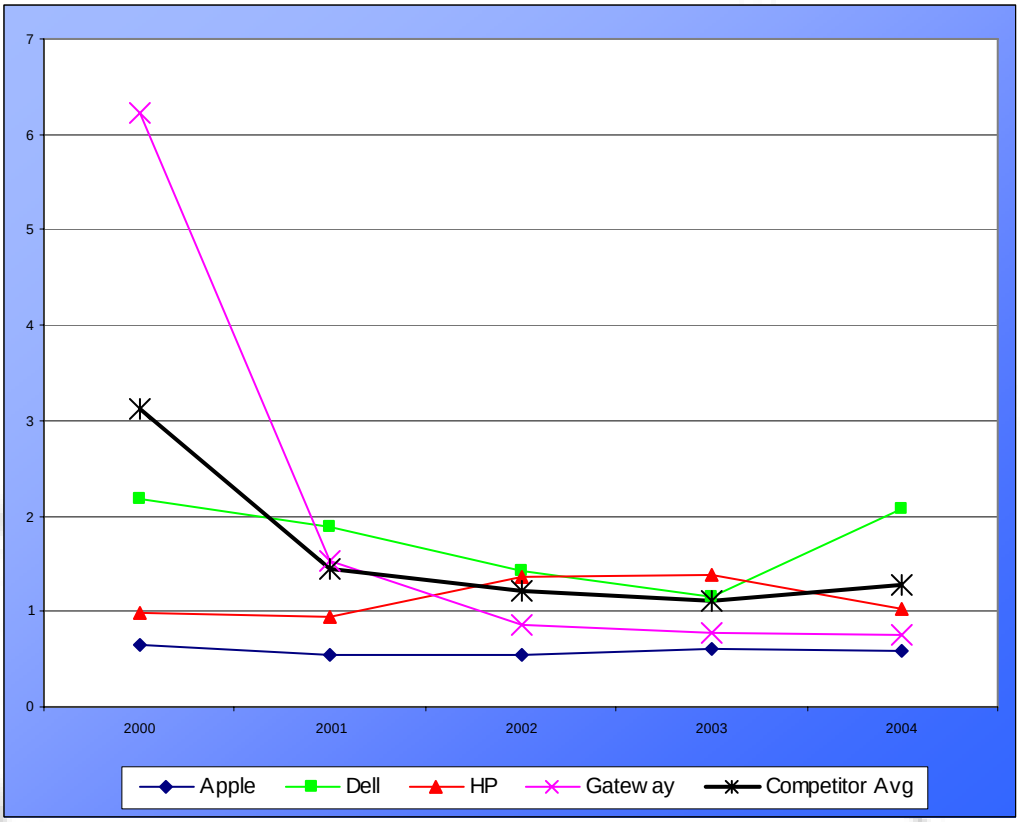
	2000	2001	2002	2003	2004
Apple	19.14%	-0.64%	1.59%	1.63%	5.44%
Dell	43.55%	26.54%	38.72%	31.39%	45.10%
HP	6.73%	-2.49%	2.98%	26.02%	9.92%
Gateway	-231.65%	-71.30%	-23.88%	-64.36%	10.14%
Competitor Avg	-60.46%	-15.75%	5.94%	-2.32%	21.72%



Return on Equity shows how effectively a company is at using investors' money. Again, Dell has glowing numbers in this respect due to its cost leadership, leading the industry with a 37.06% average over the last 5 fiscal years. Apple is only a fraction of Dell's numbers, with its highest recent return on equity at 5.44%. While this could be perceived as dismal, Apple was able to keep its ratio positive in many of the years the industry was suffering from major losses. Overall, the positive movement in the last two years is a good indicator of Apple's business strategy moving forward with relative success.

Debt to Equity Ratio

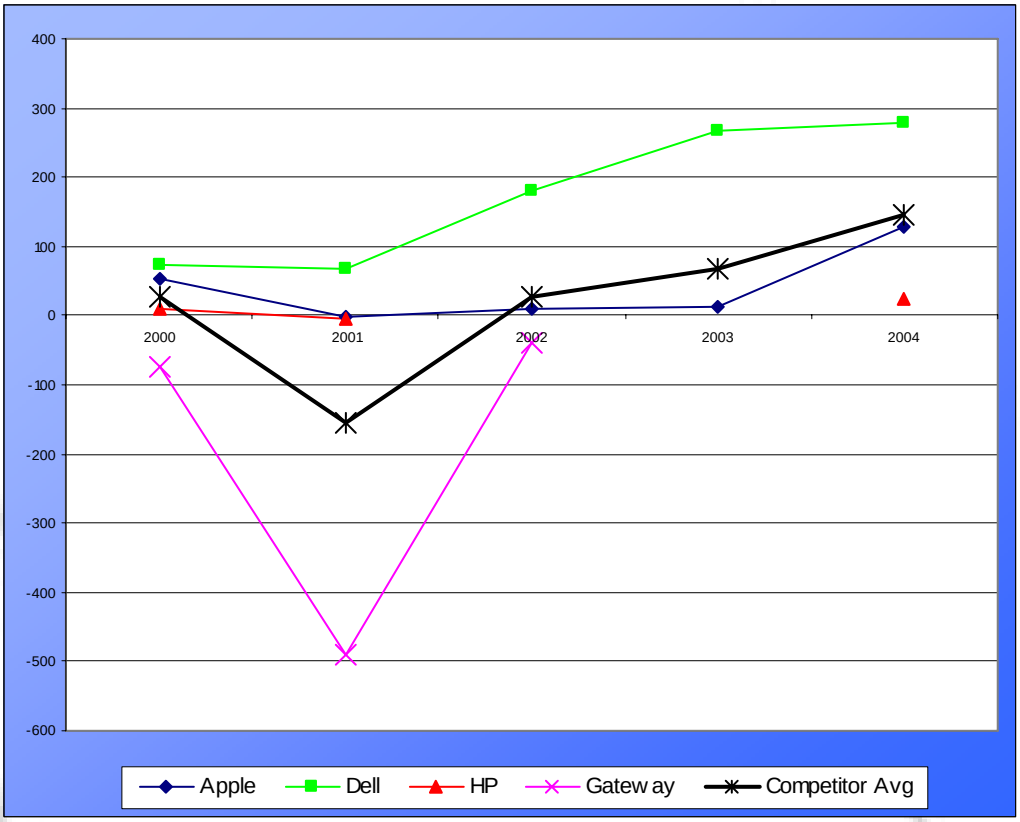
	2000	2001	2002	2003	2004
Apple	0.66	0.54	0.54	0.61	0.59
Dell	2.17	1.88	1.43	1.16	2.08
HP	.98	.95	1.36	1.39	1.03
Gateway	6.23	1.54	0.86	0.79	0.76
Competitor Avg	3.13	1.46	1.22	1.11	1.29



Debt to equity ratio demonstrates the extent to which a firm's capital structure is financed through debt. Excessive use of debt will result in larger ratios, indicating a higher risk due to a lack of overall solvency. Equity holders are also threatened by larger ratios, as the firm will be obligated to pay higher interest payments to debt owners rather than increasing shareholder wealth. Apple's numbers are relatively good as there is little debt compared to the overall equity in the company. This means most of the company is financed through equity. Apple significantly beats the competitor average in all recent years in its debt to equity ratio. If necessary, Apple is allowed more flexibility in acquiring more debt if needed to finance operations.

Times Interest Earned

	2000	2001	2002	2003	2004
Apple	53	-2.25	8.9	12.5	128.67
Dell	73.01	68.96	179.06	267	278.81
HP	10.45	-4.77	N/A	N/A	23.08
Gateway	-72.72	-491.25	-39.65	N/A	N/A
Competitor Avg	27.62	-155.06	27.65	67.56	145.05

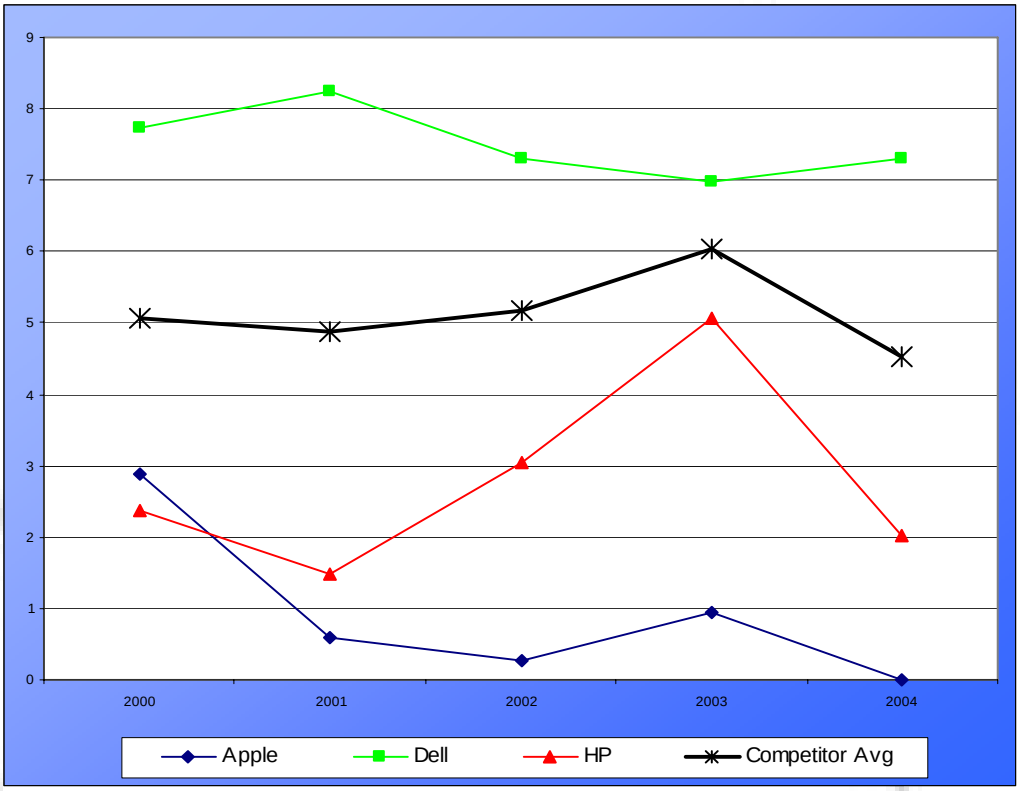


Times Interest Earned ratio indicated the extent to which earnings are available to meet interest payments on debt. Business that can keep current on interest payments can possibly refinance principal and maintain the confidence of creditors. Additionally, firms with a lower ratio are vulnerable to increases in interest rates. Dell sets the benchmark for other companies in the industry, consistently keeping its TIE ratio very high. Apple's numbers previous to 2004 were mediocre at best, but with its high and growing sales, Apple's times interest earned ratio is increasing and is expected to increase further. Regardless of ranking, Apple's ability to cover interest payments is more than adequate as to not raise any concern. With its latest ratio, creditor confidence in Apple should be high and allow debt to be secured at lower-risk interest rates.

Debt Service Margin

	2000	2001	2002	2003	2004
Apple	2.89	.584	.28	.95	0
Dell	7.73	8.24	7.30	6.99	7.30
HP	2.38	1.49	3.04	5.07	2.03
Competitor Avg	**5.06**	**4.87**	**5.17**	**6.03**	**4.53**

*Gateway excluded due to lack of sufficient financial data

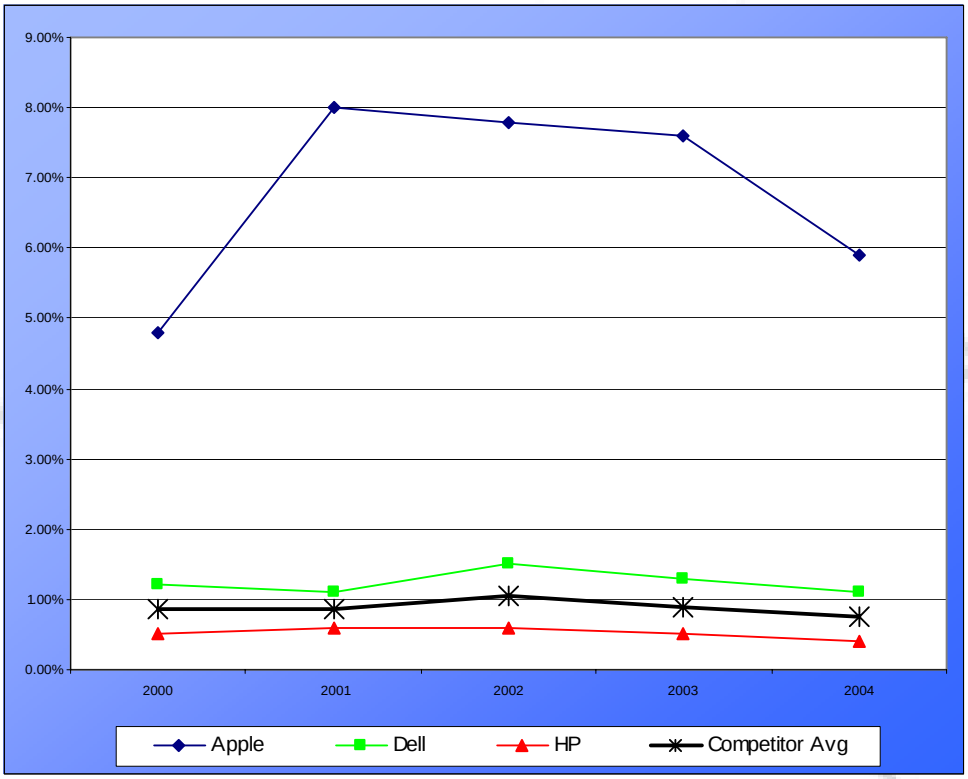


Debt Service Margin is an indicator of how well a company can pay off its short term notes payable. As seen above, the cash flows generated by Apple are meek in terms of being able to pay off its long term obligations through the years of 2001 to 2003. Dell, again, succeeds in leading the industry with a 7.51 average over the past 5 fiscal years. While this could be of great concern, showing a weakness in Apple's ability to meet the current portion of its long term obligations, its recent 2004 ratio indicated no notes payable on the books. This is probably a result of Apple's increasing use of equity to finance operations instead of debt. While the lack of notes payable in 2004 leaves no negative impact on Apple, the previous years show that Apple could have trouble paying off its short term obligations if long term debt were acquired.

R&D Turnover

	2000	2001	2002	2003	2004
Apple	4.8%	8.0%	7.8%	7.6%	5.9%
Dell	1.2%	1.1%	1.5%	1.3%	1.1%
HP	.5%	.6%	.6%	.5%	.4%
Gateway	N/A	N/A	N/A	N/A	N/A
Competitor Avg	.85%	.85%	1.05%	.9%	.75%

*Gateway reported having R&D expenses of less than 1% of net sales. No specific figures were given.



R&D Turnover is an important representation of Apple's key success factor as compared to its primary competitors. The numbers above illustrate the emphasis Apple places in its R&D. Beating out every competitor in large multiples, Apple proves in its numbers that it is a company devoted to its belief in innovation. Apple has recently shown that its R&D philosophy can and will pay off, as indicated by its 33% sales growth in 2004 due particularly to its innovative and differentiated product launches. While its R&D strategy is working in the short term, high costs in this area have led to Apple's higher expense ratio and lower profit margins. It is the company's belief that its high investment in R&D will counteract the increased operating expenses through increased revenues and high gross profit margins.

Forecast Methodology

See: Appendix A – D

- Sales Growth: The forecasting method for sales growth was a combination of different elements. We considered the overall sustainable growth rate of the company, which was very meager, along with its growing asset turnover rate and sales boom following the release of the iPod in 2004. Additionally, information released in the Q1 2005 10-Q showed 3.9 billion in sales and Q2 earnings estimated at 3.16 billion. Using decreased estimates for Q3 and Q4 earnings, along with careful analysis of the ratios mentioned above, it was concluded that there would be a 25% growth in sales in 2005 followed by a decreased growth in the following years down to 7% in 2014. The further out we forecast, the less certain we can be about the accuracy. The stability of the environment is a key factor in determining the future sales growth, as seen in the instability of Apple, among other competitors in the industry, during the 2000-2001 economic recession. Apple is especially sensitive due to the fact they specialize in higher cost goods.

  Although Apple is currently engaged in selling in a relatively untapped portable music market, it is felt that profits will begin to level off within 2-4 years. This is the logic behind the drop to 16% sales growth in 2009 continuing into 2014. We feel this estimate best represents Apple's sales growth following the end of the portable music boom. While Apple will lose significant growth when the portable music market becomes saturated, the iPod halo effect is likely to carry customers to Apple's other products; generating future profits in goods other than the iPod.

Liquidity Analysis

- An average of the current ratio for the past 5 years was used in forecasting the next 10 years. This is accurate in the fact that the current ratio has shown no historical trend in moving a particular direction. The same methods were utilized in the computation of the quick asset ratio forecast.

Operating Efficiency Analysis

- For the operating efficiency ratios, some of the outlying numbers had to be removed to facilitate an accurate forecast. The years 2000 and 2001 were removed in average calculations due to the boom and bust of the economy related to those time periods. Additionally, the ratios analyzed were not expected to grow over time, but instead settle at an average. Therefore, a 3 year average was used on the inventory turnover, accounts receivable turnover, and working capital turnover forecasts.

Profitability Analysis

- Concerning the gross profit margin and operating expense ratios, it was felt that they were best forecasted using a 5 year average. The numbers in these ratios, overall, remained relatively constant and there is no indication that they would subject to any major changes during the forecasted years. This is assuming that Apple does not change its core business strategy from differentiation to cost leadership. If such a change were to occur, these ratios would change substantially.

  Net profit margin was projected using the last available ratio in 2004. The logic encompassing this decision stems from the inability to predict Apple's future policies regarding cost control. The 2004 ratio seems to be a benchmark for future years. Apple's 2004 performance is reflective of what is believed to be the status quo for the foreseeable future. The success of the iPod has shifted Apple into innovating new

products, not necessarily making existing products cheaper. This would mean a relatively stable net profit margin in the future.

Asset turnover, return on equity, and return on assets were all calculated using a 3 year average. This assumption was made in belief that these ratios will go unchanged over time under the current operating strategy Apple is employing. ROE and ROA traditionally and over extended periods of time are not very volatile.

Capital Structure Analysis

- In general, these ratios are a direct result of corporate policy. Debt to Equity was forecasted using a 5 year average due to the stability of the numbers over the past 5 fiscal years. However, times interest earned and debt service margin were not forecasted due to the fact they cannot be accurately predicted because of their direct link to management decision concerning capital structure. In 2004, Apple paid off all of its long term debt, which suggests that the company desires operations and growth to be financed by equity and not debt.

R&D Turnover

- The amount of funding devoted to research and development is determined by corporate policy rather than demand or sales volume. However, historical data suggests that Apple devotes more to research and development during periods of low sales growth. Per sales growth forecasts, this would suggest that R&D would be estimated to be a lower percentage of sales in future years due to high sales growth. R&D was projected to be 5.35% in future years, which is an average of the two years in which Apple experienced its highest sales growth. While we foresee this number changing slightly in the future, there is no indication that future R&D costs would deviate far from the above average.

Forecast of Financial Statements

Income Statement (Appendix A)

- Forecasting of the Income statement was done utilizing a combination of the forecasting assumptions along with other mathematical methods. For net sales, the forecasted sales growth was applied to each year following 2004. The gross profit was projected out to 2014 using the forecasted gross profit margin from the forecasting assumptions. This then left the cost of sales to be the difference between the net sales and gross profit for each of the respective forecasted years.
- Research and development was projected out using a 3% growth rate, SG&A was projected using a 7% growth rate, and total operating expenses was projected using a 13% growth rate. Each of these projections was calculated by finding the average growth throughout the 5 year series (2000-2004).
- Operating income and income before taxes were calculated by finding the difference between the projected gross profit and total operating expenses.
- Provision for income taxes was calculated using the average percent taxed in the previous years.
- Net income was found by finding the sum of the relevant projections.

Balance Sheet (Appendix B)

- Total current assets were projected to 2014 using a straight 85% growth rate. All of the line items within current assets were projected using their relative proportions found from the previous years.
- Total assets were found using a straight growth rate calculated by finding the average of the previous 5 years. Total non-current assets were then calculated by finding the difference between total assets and total current assets.

- Total liabilities and stockholders equity were calculated using the debt to equity and current ratio forecasted assumptions. The remaining line items were then calculated using the sum and differences of these forecasts.

Statement of Cash Flows (Appendix C)

- Cash flows from operations were found by using the projected operating income from the income statement and applying a forecasted cash flow from operations percentage from the forecasting assumptions sheet.
- Cash flows from investment activities were found by finding the change in the PP&E and other assets projected in the balance sheet.

Explanation to Numbers Not Forecasted

- The various numbers in the balance sheet, income statement, and statement of cash flows that were left unforecasted were done so due to the inability to accurately forecast the numbers. An example would be restructuring costs, which is clearly unable to be forecasted along with being a very small percentage of the larger income statement elements.

Limitations to Forecasts

In determining these forecasts, historical data was used to extrapolate the future. The underlying assumption of all the techniques applied is that the forces responsible in creating the past will continue to operate in the future. This assumption is most valid in short and medium term forecasts, but becomes less accurate in long term forecasting.

If Apple were to change its modus operandi regarding cost leadership and the use of debt in financing future operations, profitability and capital structure forecasted ratios will deviate greatly from the numbers current projected. While there is no suggestion that Apple will change its policy regarding these issues anytime soon, it is a significant weakness in the long term forecasts.

One final note is the volatile nature of the portable music industry. With Apple garnering most of its growth and profits from its entrance and success in the portable music industry, Apple will have to continue to maintain its leadership

in this market to continue the projected growth rates. Additionally, a downturn in the economy could greatly hurt Apple's overall forecasted sales growth. If disposable income falls among the general population, Apple's revenues will drop significantly due to the nature of their products.

Valuations Analysis

Summary of Valuation Analysis	
Forward P/E	**$20.67**
Trailing P/E	**$15.61**
Market to Book	**$37.16**
Discounted Free Cash Flows	**$28.95**
Abnormal Earnings Growth	**$23.40**
Residual Income	**$23.22**
Long Run Residual Income Perpetuity	**$20.84**
Discounted Dividends	**N/A**

The purpose of this section is to evaluate the overall value of Apple as compared to its current stock price by utilizing various valuation models. Apple will be analyzed using the method of comparables, abnormal earnings growth, discounted free cash flows, residual income, and long run residual income perpetuity models. By comparing the various models to the actual stock price, a conclusion can be made regarding the nature of the stock (overvalued, undervalued, or fairly-valued).

Method of Comparables Valuation

Method of comparables allows us to compute an industry average of Apple's direct competitors to determine a simple way of evaluating Apple's price per share. Apple's direct competitors include Gateway, Dell, and Hewlett Packard.

Forward Price to Earnings

	PPS	EPS	Forward P/E Ratio
Dell	38.03	1.89	20.12
HP	21.71	1.7	12.78
Gateway	3.99	6.2	15.96
	Industry Average P/E	**Earnings Per Share**	**Expected Share Price**
Apple	16.28	1.27	**20.67**

Apple's forward price to earnings shows a valued price per share of $20.67 a share as compared to Apple's actual price per share of $40.89. This method shows a grossly over-valued market price.

Trailing Price to Earnings

	PPS	EPS	Forward P/E Ratio
Dell	38.03	1.19	31.96
HP	21.71	1.18	18.39
Gateway	3.99	N/A	N/A
	Industry Average P/E	**Earnings Per Share**	**Expected Share Price**
Apple	25.18	.62	**15.61**

Apple's trailing price to earnings gave a valued price per share of $15.61, which is substantially lower than Apple's actual price of $40.89.

Market to Book

	PPS	BPS	Market to Book Ratio
Dell	38.03	14.63	2.6
HP	21.71	1.66	13.08
Gateway	3.99	6.2	0.64
	Industry Average M/B	**Book Value Per Share**	**Expected Share Price**
Apple	5.44	6.83	**37.16**

Apple's market to book valuation yielded a value of $37.16 which is closer to their actual share value of $40.89, but it is still a lower valuation than the market price. We chose to include HP's ratio because we did not want to compute an industry average only using two companies.

Dividend to Price

Apple along with most of its main competitors follows the industry norms and do not pay dividends. The only company in the industry that pays dividends is Hewlett Packard.

Calculation of Cost of Equity and WACC

Cost of Equity and the Weighted Average Cost of Capital are fundamental elements in determining the following valuation models.

To calculate the cost of equity we used the CAPM formula:

Rj=Rf+Bj(Rf-Rm)

In the equation, (Rf-Rm) is also stated as the market risk premium (MRP).

- Rf (risk free rate) = .0321
- Bj (Beta)= 1.14
- MRP= .03
- Rj= .06796

It was decided that a 3 year average would be used as the regression analysis showed that it explained 29.6% of the market (which is higher than the 2 or 5 year average). For the risk free rate we took the average of the 5-year Treasury bill interest rates for the market. We chose this because financial analysts recommend using a forecast of somewhere between 5 to 7 years. The beta is calculated by running a slope of the firm's return and the market risk premium. Finally, historical market risk premium was selected as 3% as supported by recent academic research.

WACC (before tax) = (Vd/Vf)(Kd) + (Ve/Vf)(Ke)

Apple has no long term debt obligations and the only liabilities on the books consist of accounts payable and accrued expenses. Since accounts payable and accrued expenses have no determinable interest rate, we applied the federal funds rate of 2.63%. Cost of equity was determined to be 6.796% using the above CAPM formula.

Discounted Free Cash Flows Valuation: $28.95

The discounted free cash flows valuation model uses forecasted free cash flows and WACC to determine the company's intrinsic value on a per share basis. Apple's WACC is 5.26%. Using this method, our intrinsic value per share is $28.95. Compared to our share price of $40.89, this method shows that Apple has a significantly over-valued share price. This method is extremely sensitive to changes in the growth rate.

Sensitivity Analysis					
	Growth				
		0	0.025	0.05	0.075
WACC	0.02	$82.48	N/A	N/A	N/A
	0.04	$39.23	$93.23	N/A	N/A
	0.0526	$28.95	$49.34	461.88	N/A
	0.08	$17.90	$23.45	$38.25	201.01
	0.1	$13.73	$16.57	$22.24	39.26

Abnormal Earnings Growth Valuation: $23.40

Abnormal Earnings Growth Valuation model incorporates the present value of the investment opportunities of the dividends paid to the shareholders. Since Apple pays no dividends the cumulative dividend earnings is equal to earnings per share. Also, growth rate has no effect on the value per share because the value of our perpetuity is zero. Using this method, our intrinsic value per share is $23.40 which is substantially lower than the market price of $40.89.

Sensitivity Analysis					
	Growth				
		0	0.025	0.05	0.075
K_e	0.02	$112.22	$112.22	$112.22	$112.22
	0.04	$48.50	$48.50	$48.50	$48.50
	0.06796	$23.40	$23.40	$23.40	$23.40
	0.08	$17.58	$17.58	$17.58	$17.58
	0.1	$12.74	$12.74	$12.74	$12.74

*Growth does not matter since the perpetuity was zero

Residual Income Valuation: $23.22

In the residual income valuation model we use a stream of forecasted residual income values (which is the difference between forecasted EPS and normal income), a terminal value, and then discount them back to the present year using the firm's cost of equity. Using these techniques we derived an

intrinsic value of the firm of $23.22 per share, which is similar to the value derived using the AEG method. In both cases, the models have indicated that Apple is over-valued.

Sensitivity Analysis					
	Growth				
		0	0.025	0.05	0.075
K_e	0.02	$112.04	N/A	N/A	N/A
	0.04	$48.33	$91.62	N/A	N/A
	0.06796	$23.22	$26.62	39.51	N/A
	0.08	$18.10	$19.23	$22.24	55.36
	0.1	$12.57	$12.39	$12.03	10.94

Long Run Residual Income Perpetuity: $20.84

$$P = BVE + BVE [(ROE – Ke) / (Ke – g)]$$

The long run residual income perpetuity model is similar to the residual income model except that it is a perpetuity. We used Apple's book value of equity as of FYE 2004 13.66, Ke of .06796, and ROE of .1037. Using this method we derived a value per share of $20.84, which is consistent with the other models, in that it states that Apple's market price per share is very over-valued.

Credit Risk Analysis

Using Edward Altman's Z-score analysis it is clear to say that Apple Computers, Inc. is in no real danger of bankruptcy, since this model has proven up to 72% accurate. Apple's current Z-Score is a 3.4 and according to the model the company is healthy with no potential threats.

Conclusion

From the information gathered from different valuation methods, we conclude that Apple's current stock price of $40.89 is overvalued and it is our best estimate that the true price is in the range of $20-$24.

Appendix A:: Balance Sheet

Apple Computers, Inc. 10-K Balance Sheet

	2000	2001	2002	2003	2004	FORECASTS 2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
ASSETS															
Current Assets															
Cash and cash equivalents	$1,191.00	$2,310.00	$2,252.00	$3,396.00	$2,969.00	$3,035.02	$3,229.26	$3,435.94	$3,655.84	$3,889.81	$4,138.76	$4,403.64	$4,685.47	$4,985.34	$5,304.40
Short-term investments	$2,836.00	$2,026.00	$2,085.00	$1,170.00	$2,495.00										
Total Cash, Equivalent, Investments	$4,027.00	$4,336.00	$4,337.00	$4,566.00	$5,464.00	$5,737.44	$6,104.64	$6,495.34	$6,911.04	$7,353.35	$7,823.96	$8,324.69	$8,857.47	$9,424.35	$10,027.51
Accounts and notes receivable, net	$953.00	$466.00	$565.00	$766.00	$774.00										
Inventories	$33.00	$11.00	$45.00	$56.00	$101.00	$58.83	$62.59	$66.60	$70.86	$75.40	$80.22	$85.36	$90.82	$96.63	$102.82
Deferred tax assets	$162.00	$169.00	$166.00	$190.00	$231.00	$230.85	$245.63	$261.35	$278.08	$295.87	$314.81	$334.96	$356.39	$379.20	$403.47
Other current assets	$252.00	$161.00	$275.00	$309.00	$485.00										
Total Current Assets	$5,427.00	$5,143.00	$5,388.00	$5,887.00	$7,055.00	$7,280.75	$7,746.71	$8,242.50	$8,770.02	$9,331.30	$9,928.51	$10,563.93	$11,240.02	$11,959.39	$12,724.79
Property, Plant and Equipment, net	$419.00	$564.00	$621.00	$669.00	$707.00	$885.38	$942.05	$1,002.34	$1,066.49	$1,134.74	$1,207.37	$1,284.64	$1,366.85	$1,454.33	$1,547.41
Goodwill	$.00	$128.00	$39.00	$85.00	$80.00										
Acquired intangible assets	$.00	$76.00	$119.00	$24.00	$17.00										
Non-Current debt and equity investments	$786.00														
Other Assets	$171.00	$110.00	$131.00	$150.00	$191.00	$200.31	$213.13	$226.77	$241.28	$256.72	$273.15	$290.63	$309.23	$329.02	$350.08
Total Non-Current Assets	$1,376.00	$878.00	$910.00	$928.00	$995.00	$1,284.84	$1,367.07	$1,454.56	$1,547.65	$1,646.70	$1,752.09	$1,864.22	$1,983.53	$2,110.48	$2,245.55
Total Assets	$6,803.00	$6,021.00	$6,298.00	$6,815.00	$8,050.00	$8,565.58	$9,113.78	$9,697.06	$10,317.67	$10,978.01	$11,680.60	$12,428.16	$13,223.56	$14,069.87	$14,970.34
LIABILITIES AND SHAREHOLDERS EQUITY															
Current Liabilities															
Accounts Payable	$1,157.00	$801.00	$911.00	$1,154.00	$1,451.00										
Accrued Expenses	$776.00	$717.00	$747.00	$899.00	$1,229.00										
Current Debt	$.00	$.00	$.00	$304.00	$.00										
Total Current Liabilities	$1,933.00	$1,518.00	$1,658.00	$2,357.00	$2,680.00	$2,493.41	$2,652.98	$2,822.78	$3,003.43	$3,195.65	$3,400.17	$3,617.79	$3,849.32	$4,095.68	$4,357.80
Long-term debt	$300.00	$317.00	$316.00	$.00	$.00										
Deferred tax liabilities and other non-current liabilities	$463.00	$266.00	$229.00	$235.00	$294.00	$306.99	$320.55	$334.71	$349.50	$364.94	$381.07	$397.90	$415.48	$433.84	$453.00
Total Long-Term Liabilities	$763.00	$583.00	$545.00	$235.00	$294.00										
Total Liabilities	$2,696.00	$2,101.00	$2,203.00	$2,592.00	$2,974.00	$3,212.09	$3,417.67	$3,636.40	$3,869.13	$4,116.75	$4,380.22	$4,660.56	$4,958.83	$5,276.20	$5,613.88
SHAREHOLDERS EQUITY															
Series A nonvoting convertible preferred	$76.00														
Common Stock, no par value	$1,502.00	$1,693.00	$1,826.00	$1,926.00	$2,514.00										
Deferred stock compensation	$.00	-$11.00	-$7.00	-$62.00	-$93.00										
Retained Earnings	$2,285.00	$2,260.00	$2,325.00	$2,394.00	$2,670.00										
Accumulated other comprehensive income (loss)	$244.00	-$22.00	-$49.00	-$35.00	-$15.00										
Total Shareholders Equity	$4,107.00	$3,920.00	$4,095.00	$4,223.00	$5,076.00	$5,353.49	$5,696.11	$6,060.66	$6,448.55	$6,861.25	$7,300.37	$7,767.60	$8,264.72	$8,793.67	$9,356.46
Total Liabilities & Shareholders Equity	$6,803.00	$6,021.00	$6,298.00	$6,815.00	$8,050.00	$8,565.58	$9,113.78	$9,697.06	$10,317.67	$10,978.01	$11,680.60	$12,428.16	$13,223.56	$14,069.87	$14,970.34

Appendix B:: Income Statement

	Apple Computers, Inc.10-K Income Statement					FORECASTS									
	2000	2001	2002	2003	2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Net sales	$7,983.00	$5,363.00	$5,742.00	$6,207.00	$8,279.00	$10,348.75	$12,418.50	$14,902.20	$17,882.64	$20,743.86	$24,062.88	$27,912.94	$29,866.85	$31,957.53	$34,194.55
Cost of sales	$5,817.00	$4,128.00	$4,139.00	$4,499.00	$6,020.00	$7,598.05	$9,117.66	$10,941.20	$13,129.43	$15,230.14	$17,666.97	$20,493.68	$21,928.24	$23,463.22	$25,105.64
Gross margin	$2,166.00	$1,235.00	$1,603.00	$1,708.00	$2,259.00	$2,750.70	$3,300.84	$3,961.00	$4,753.21	$5,513.72	$6,395.91	$7,419.26	$7,938.61	$8,494.31	$9,088.91
Operating expenses:															
Research and development	$380.00	$430.00	$446.00	$471.00	$489.00	$503.67	$518.78	$534.34	$550.37	$566.89	$583.89	$601.41	$619.45	$638.03	$657.18
Selling, general, and administrative	$1,166.00	$1,138.00	$1,109.00	$1,212.00	$1,421.00	$1,520.47	$1,626.90	$1,740.79	$1,862.64	$1,993.03	$2,132.54	$2,281.82	$2,441.54	$2,612.45	$2,795.32
Special charges:															
Restructuring costs	$8.00	$.00	$30.00	$26.00	$23.00										
Purchased in-process R&D	$.00	$11.00	$1.00	$.00	$.00										
Executive bonus	$90.00	$.00													
Total operating expenses	$1,644.00	$1,579.00	$1,586.00	$1,709.00	$1,933.00	$2,184.29	$2,468.25	$2,789.12	$3,151.71	$3,561.43	$4,024.41	$4,547.59	$5,138.77	$5,806.81	$6,561.70
Operating income (loss)	$522.00	-$344.00	$17.00	-$1.00	$326.00	$566.41	$832.59	$1,171.88	$1,601.50	$1,952.29	$2,371.50	$2,871.67	$2,799.84	$2,687.50	$2,527.21
Other income and expense:															
Gain (loss) on non-curr. investments, net	$367.00	$88.00	-$42.00	$10.00	$4.00										
Unrealized loss on convertible securities	$.00	-$13.00	$.00	$.00	$.00										
Interest and other income, net	$203.00	$217.00	$112.00	$83.00	$53.00										
Total other income and expense	$570.00	$292.00	$70.00	$93.00	$57.00										
Income before taxes	$1,092.00	-$52.00	$87.00	$92.00	$383.00	$566.41	$832.59	$1,171.88	$1,601.50	$1,952.29	$2,371.50	$2,871.67	$2,799.84	$2,687.50	$2,527.21
Provision for income taxes	$306.00	-$15.00	$22.00	$24.00	$107.00	$158.59	$233.13	$328.13	$448.42	$546.64	$664.02	$804.07	$783.95	$752.50	$707.62
Income before accounting changes	$786.00	-$37.00	$65.00	$68.00	$276.00										
Cumulative effects of accounting changes, net of income taxes	$.00	$12.00	$.00	$1.00	$.00										
Net income	$786.00	-$25.00	$65.00	$69.00	$276.00	$407.81	$599.46	$843.76	$1,153.08	$1,405.65	$1,707.48	$2,067.60	$2,015.88	$1,935.00	$1,819.59

Appendix C:: Statement of Cash Flows

	Apple Computers, Inc. 10-K Cash Flow					FORECASTS									
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Cash and cash equivalents, beginning of the year	$1,326,000,000	$1,191,000,000	$2,310,000,000	$2,252,000,000	$3,396,000,000										
Operating Activities:															
Net income	$786,000,000	($25,000,000)	$65,000,000	$69,000,000	$276,000,000										
Cumulative effects of accounting changes, net of taxes	$0	($12,000,000)	$0	($1,000,000)	$0										
Adjustments to reconcile net income to cash generated by operating activities:															
Depreciation, amortization and accretion	$84,000,000	$102,000,000	$114,000,000	$113,000,000	$150,000,000										
Stock-based compensation expense			$5,000,000	$16,000,000	$33,000,000										
Non-cash restructuring			$8,000,000	$12,000,000	$5,000,000										
Provision for (benefit from) deferred income taxes	$163,000,000	($36,000,000)	($34,000,000)	($11,000,000)	$20,000,000										
Loss on disposition of property, plant, and equipment	$10,000,000	$9,000,000	$7,000,000	$2,000,000	$7,000,000										
Gains on sales of short-term investments, net	($367,000,000)	($88,000,000)	($7,000,000)	($21,000,000)	($1,000,000)										
(Gains) losses on non-current investments, net			$42,000,000	($10,000,000)	($4,000,000)										
Gain on forward purchase agreement			$0	($6,000,000)	$0										
	$0	$13,000,000													
Purchased in-process research and development	$0	$11,000,000	$1,000,000	$0	$0										
Changes in operating assets and liabilities:															
Accounts receivable	($272,000,000)	$487,000,000	($99,000,000)	($201,000,000)	($8,000,000)										
Inventories	($13,000,000)	$22,000,000	($34,000,000)	($11,000,000)	($45,000,000)										
Other current assets	($37,000,000)	$106,000,000	($114,000,000)	($34,000,000)	($176,000,000)										
Other assets	$20,000,000	$12,000,000	($11,000,000)	($30,000,000)	($39,000,000)										
Accounts payable	$318,000,000	($356,000,000)	$110,000,000	$243,000,000	$297,000,000										
Other liabilities	$176,000,000	($60,000,000)	$36,000,000	$159,000,000	$419,000,000										
Cash generated by operating activities	$868,000,000	$185,000,000	$89,000,000	$289,000,000	$934,000,000	$423,800,000	$396,485,425	$582,812,720	$820,319,401	$1,121,050,157	$976,145,712	$1,185,750,434	$1,435,836,695	$1,399,917,671	$1,343,748,730
Investing Activities:															
Purchases of short-term investments	($4,267,000,000)	($4,268,000,000)	($4,144,000,000)	($2,648,000,000)	($3,270,000,000)										
Proceeds from maturities of short-term investments	$3,075,000,000	$4,811,000,000	$2,846,000,000	$2,446,000,000	$1,141,000,000										
Proceeds from sales of short-term investments	$256,000,000	$278,000,000	$1,254,000,000	$1,116,000,000	$801,000,000										
Proceeds from sales of non-current investments	$140,000,000	$339,000,000	$25,000,000	$45,000,000	$5,000,000										
Purchases of property, plant, and equipment	($142,000,000)	($232,000,000)	($174,000,000)	($164,000,000)	($176,000,000)										
Cash used for business acquisitions	$0	$0	($52,000,000)	$0	$0										
Other	($34,000,000)	($36,000,000)	($7,000,000)	$33,000,000	$11,000,000										
Cash generated by (used for) investing activites	($972,000,000)	$892,000,000	($252,000,000)	$828,000,000	($1,488,000,000)	($187,687,668)	($69,484,011)	($73,930,987)	($78,662,571)	($83,696,975)	($89,053,582)	($94,753,011)	($100,817,203)	($107,269,504)	($114,134,753)
Financing Activities:															
Payment of long-term debt			$0	$0	($300,000,000)										
Proceeds from issuance of common stock	$85,000,000	$42,000,000	$105,000,000	$53,000,000	$427,000,000										
Cash used for repurchase of common stock	($116,000,000)	$0	$0	($26,000,000)	$0										
Cash generated by financing activities	($31,000,000)	$42,000,000	$105,000,000	$27,000,000	$127,000,000										
Increase (decrease) in cash and cash equivalents	($135,000,000)	$1,119,000,000	($58,000,000)	$1,144,000,000	($427,000,000)										
Cash and cash equivalents, end of the year	$1,191,000,000	$2,310,000,000	$2,252,000,000	$3,396,000,000	$2,969,000,000										
Supplemental cash flow disclosures:															
Cash paid during the year for interest	$20,000,000	$20,000,000	$20,000,000	$20,000,000	$10,000,000										
Cash paid (received) for income taxes, net	$47,000,000	$42,000,000	$11,000,000	$45,000,000	($7,000,000)										
Noncash transactions:															
Issuance of common stock for conversion of Series A preferred stock	$74,000,000	$76,000,000													
Issuance of common stock in connection with acquisition	$0	$66,000,000													

Appendix D:: Forecasting Assumptions

Ratio Analysis Section						FORECASTS									
	2000	2001	2002	2003	2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Sales Growth		-32.82%	7.07%	8.10%	33.38%	25.00%	20.00%	20.00%	20.00%	16.00%	16.00%	16.00%	7.00%	7.00%	7.00%
Sustainable Growth Rate	19.14%	-0.64%	1.59%	1.63%	5.44%										
Liquidity Analysis															
Current Ratio	2.81	3.39	3.25	2.50	2.63	2.92	2.92	2.92	2.92	2.92	2.92	2.92	2.92	2.92	2.92
Quick Asset Ratio	2.58	3.16	2.96	2.26	2.33	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66
Inventory Turnover	176.27	375.27	91.98	80.34	59.60	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31
Days supply of inventory	2.07	0.97	3.97	4.54	6.12										
Accounts Receivable Turnover	8.38	11.51	10.16	8.10	10.70	9.77	9.77	9.77	9.77	9.77	9.77	9.77	9.77	9.77	9.77
Days supply of receivables	43.57	31.72	35.92	45.04	34.12										
Working Capital Turnover	2.28	1.48	1.54	1.76	1.89	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79
Profitability Analysis															
Gross Profit Margin	27.13%	23.03%	27.92%	27.52%	27.29%	26.58%	26.58%	26.58%	26.58%	26.58%	26.58%	26.58%	26.58%	26.58%	26.58%
Operating Expense ratio	20.59%	29.44%	27.62%	27.53%	23.35%	25.71%	25.71%	25.71%	25.71%	25.71%	25.71%	25.71%	25.71%	25.71%	25.71%
Net Profit Margin	9.85%	-0.47%	1.13%	1.11%	3.33%	1.86%	1.86%	1.86%	1.86%	1.86%	1.86%	1.86%	1.86%	1.86%	1.86%
Asset Turnover	1.17	0.89	0.91	0.91	1.03	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Return on Assets	11.55%	-0.42%	1.03%	1.01%	3.43%	1.82%	1.82%	1.82%	1.82%	1.82%	1.82%	1.82%	1.82%	1.82%	1.82%
Return on Equity	19.14%	-0.64%	1.59%	1.63%	5.44%	2.89%	2.89%	2.89%	2.89%	2.89%	2.89%	2.89%	2.89%	2.89%	2.89%
Capital Structure Analysis															
Debt to equity ratio	0.66	0.54	0.54	0.61	0.59	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Times Interest Earned															
Debt Service Margin															
R&D Turnover	4.80%	8.00%	7.80%	7.60%	5.90%	5.35%	5.35%	5.35%	5.35%	5.35%	5.35%	5.35%	5.35%	5.35%	5.35%
Total Assets		-11.49%	4.60%	8.21%	18.12%	6.40%	6.40%	6.40%	6.40%	6.40%	6.40%	6.40%	6.40%	6.40%	6.40%
Operating Cash Flow as % Op. Inc	79.49%	-355.77%	102.30%	314.13%	243.86%	130.00%	70.00%	70.00%	70.00%	70.00%	50.00%	50.00%	50.00%	50.00%	50.00%
Total Current Assets	79.77%	85.42%	85.55%	86.38%	82.64%	85.00%	85.00%	85.00%	85.00%	85.00%	85.00%	85.00%	85.00%	85.00%	85.00%

Appendix E:: Discounted Free Cash Flow Model

Apple Computer Industry
(Amounts in millions of dollars except per share data)

		1	2	3	4	5	6	7	8	9	10
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Cash Flow from Operations		$423.80	$396.49	$582.81	$820.32	$1,121.05	$976.15	$1,185.75	$1,435.84	$1,399.92	$1,343.75
Cash Provided (Used) by Investing Activities		-$187.69	-$69.48	-$73.93	-$78.66	-$83.70	-$89.05	-$94.75	-$100.82	-$107.27	-$114.13
Free Cash Flow (to firm)		$236.11	$327.00	$508.88	$741.66	$1,037.35	$887.09	$1,091.00	$1,335.02	$1,292.65	$1,229.61
PV Factor		0.950	0.903	0.857	0.815	0.774	0.735	0.698	0.664	0.630	0.599
Present Value of Free Cash Flows		$224.31	$295.14	$436.34	$604.16	$802.80	$652.21	$762.04	$885.89	$814.91	$736.44
Total Present Value of Annual Cash Flows	$4,662.90										
Continuing (Terminal) Value (assume no growth)									$24,575.06		
Present Value of Continuing (Terminal) Value	$16,307.51										
Value of the Firm (end of 2004)	$20,970.41										
Book Value of Debt and Preferred Stock											
Value of Equity (end of 2004)	$20,970.41										
Estimated Value per Share (09/31/04)	$28.22										
Estimated Value per Share (04/01/05)	$28.95										

Earnings Per Share		$0.62
Dividends per share		
Book Value Per Share		
Actual Price per share	$40.89	
g	0	
WACC	0.0526	

Sensitivity Analysis

		g			
		0	0.025	0.05	0.075
WACC	0.02	$82.48			
	0.04	$39.23	$93.23		
	0.0526	$28.95	$49.34	461.88	
	0.08	$17.90	$23.45	$38.25	201.01
	0.1	$13.73	$16.57	$22.24	39.26

Appendix F:: Abnormal Earnings Growth Model

		1	2	3	4	5	6	7	8	9	Perp
		Forecast Years									
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
EPS		$0.55	$0.81	$1.14	$1.55	$1.89	$2.30	$2.78	$2.71	$2.60	$2.45	
DPS		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	
DPS invested at 17%		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	
Cum-Dividend Earnings			$0.81	$1.14	$1.55	$1.89	$2.30	$2.78	$2.71	$2.60	$2.45	
Normal Earnings			$0.59	$0.86	$1.21	$1.66	$2.02	$2.45	$2.97	$2.90	$2.78	
Abnormal Earning Growth (AEG)			$0.22	$0.27	$0.34	$0.23	$0.28	$0.33	($0.26)	($0.29)	($0.33)	0
PV Factor			0.936	0.877	0.821	0.769	0.720	0.674	0.631	0.591	0.553	
PV of AEG			$0.21	$0.24	$0.28	$0.18	$0.20	$0.22	($0.16)	($0.17)	($0.18)	

Core EPS	$0.55		
Total PV of AEG	$0.99		
Continuing (Terminal) Value			$0.00
PV of Terminal Value	$0.00		
Total PV of AEG			
Average Perpetuity	$1.54		
Capitalization Rate (perpetuity)	0.06796		
Value Per Share	pv $22.64	09/31/04	
	fv 23.40	04/01/05	
Ke	0.06796		
g	0		
Actual Price per share	$20.88		

Sensitivity Analysis

		g			
		0	0.025	0.05	0.075
Ke	0.02	$112.22	$112.22	$112.22	$112.22
	0.04	$48.50	$48.50	$48.50	$48.50
	0.06796	$23.40	$23.40	$23.40	$23.40
	0.08	$17.58	$17.58	$17.58	$17.58
	0.1	$12.74	$12.74	$12.74	$12.74

Appendix G:: Residual Income Model

		1	2	3	4	5	6	7	8	9	10
		Forecast Years									
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Beginning BE (per share)		13.66	14.21	15.02	16.15	17.70	19.59	21.89	24.67	27.39	29.99
Earnings Per Share		$0.55	$0.81	$1.14	$1.55	$1.89	$2.30	$2.78	$2.71	$2.60	$2.45
Dividends per share		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Ending BE (per share)	13.66	14.21	15.02	16.15	17.70	19.59	21.89	24.67	27.39	29.99	32.44
Ke	0.06796										
"Normal" Income		0.93	0.97	1.02	1.10	1.20	1.33	1.49	1.68	1.86	2.04
Residual Income (RI)		(0.38)	(0.16)	0.11	0.45	0.69	0.97	1.29	1.04	0.74	0.41
Present Value of RI		(0.36)	(0.14)	0.09	0.35	0.50	0.65	0.82	0.61	0.41	0.21

BV Equity (per share) 2004	13.66
Total PV of RI (end 2004)	3.15
Continuation (Terminal) Value	10.93
PV of Terminal Value (end 2004)	5.66
Estimated Value (09/31/2004)	$22.47
Estimated Value (04/01/2005)	23.220
Actual Price per share	$40.89
Growth	0

10.93

Sensitivity Analysis

Ke \ g	0	0.025	0.05	0.075
0.02	$112.04			
0.04	$48.33	$91.62		
0.06796	$23.22	$26.62	39.51	
0.08	$18.10	$19.23	$22.24	55.36
0.1	$12.57	$12.39	$12.03	10.94

Net Income	$407.81	$599.46	$843.76	$1,153.08	$1,405.65	$1,707.48	$2,067.60	$2,015.88	$1,935.00	$1,819.59
Shares Outstanding	743,180,000									

Appendix H:: Calculation of Cost of Equity

Estimated Beta	R- Squared	Average Risk Free Rate	Yahoo Published Beta	Historical Market Risk Premium
1.71111	0.207471064	0.0409	1.857	0.03
	Estimated Ke	9.22%		
	Estimated Kd	2.63%		
	3 year			
1.141205	0.296197961	0.0337	1.857	0.03
	Estimated Ke	6.796%		
	2 year			
0.710647	0.02854379	0.0326	1.857	0.03
	Estimated Ke	**5.394%**		

Appendix I:: Pro-Forma Income Statement

Pro-Forma (Percent of Sales) Income Statement

	2000	2001	2002	2003	2004
Net sales	100%	100%	100%	100%	100%
Cost of sales	73%	77%	72%	72%	73%
Gross margin	27%	23%	28%	28%	27%
Operating expenses:					
Research and development	5%	8%	8%	8%	6%
Selling, general, and administrative	15%	21%	19%	20%	17%
Special charges:					
Restructuring costs	0%	0%	1%	0%	0%
Purchased in-process research and development	0%	0%	0%	0%	0%
Executive bonus	1%	0%	0%	0%	0%
Total operating expenses	21%	29%	28%	28%	23%
Operating income (loss)	7%	-6%	0%	0%	4%
Other income and expense:					
Gains (losses) on non-current investments, net	5%	2%	-1%	0%	0%
Unrealized loss on convertible securities	0%	0%	0%	0%	0%
Interest and other income, net	3%	4%	2%	1%	1%
Total other income and expense	7%	5%	1%	1%	1%
Income (loss) before provision for income taxes	14%	-1%	2%	1%	5%
Provision for income taxes	4%	0%	0%	0%	1%
Income before accounting changes	10%	-1%	1%	1%	3%
Cumulative effects of accounting	0%	0%	0%	0%	0%
changes, net of income taxes	0%	0%	0%	0%	0%
Net income	10%	0%	1%	1%	3%
Earnings per common share before accounting changes:					
Basic					
Diluted					
Earnings per common share:					
Basic					
Diluted					
Shares used in computing earnings per share (in thousands):					
Basic					
Diluted					

Pro-Forma (Percent Line Item Growth) Income Statement	2000	2001	2002	2003	2004
Net sales		-33%	7%	8%	33%
Cost of sales		-29%	0%	9%	34%
Gross margin		-43%	30%	7%	32%
Operating expenses:					
Research and development		13%	4%	6%	4%
Selling, general, and administrative		-2%	-3%	9%	17%
Special charges:					
Restructuring costs		-100%		-13%	-12%
Purchased in-process research and development			-91%	-100%	
Executive bonus		-100%			
Total operating expenses		-4%	0%	8%	13%
Operating income (loss)		-166%	-105%	-106%	-32700%
Other income and expense:					
Gains (losses) on non-current investments, net		-76%	-148%	-124%	-60%
Unrealized loss on convertible securities					
Interest and other income, net		7%	-48%	-26%	-36%
Total other income and expense		-49%	-76%	33%	-39%
Income (loss) before provision for income taxes		-105%	-267%	6%	316%
Provision for income taxes		-105%	-247%	9%	346%
Income before accounting changes		-105%	-276%	5%	306%
Cumulative effects of accounting					
changes, net of income taxes					
Net income		-103%	-360%	6%	300%

Appendix J:: Pro-Forma Balance Sheet

Apple Computers, Inc.10-K Percent (Asset, Liability, Equity) Balance Sheet

	2000	2001	2002	2003	2004
ASSETS					
Current Assets					
Cash and cash equivalents	17.51%	38.37%	35.76%	49.83%	36.88%
Short-term investments	41.69%	33.65%	33.11%	17.17%	30.99%
Total Cash, Equivalent, Investments	59.19%	72.01%	68.86%	67.00%	67.88%
Accounts and notes receivable, net	14.01%	7.74%	8.97%	11.24%	9.61%
Inventories	0.49%	0.18%	0.71%	0.82%	1.25%
Deferred tax assets	2.38%	2.81%	2.64%	2.79%	2.87%
Other current assets	3.70%	2.67%	4.37%	4.53%	6.02%
Total Current Assets	79.77%	85.42%	85.55%	86.38%	87.64%
	0.00%	0.00%	0.00%	0.00%	0.00%
Property, Plant and Equipment, net	6.16%	9.37%	9.86%	9.82%	8.78%
Goodwill	0.00%	2.13%	0.62%	1.25%	0.99%
Acquired intangible assets	0.00%	1.26%	1.89%	0.35%	0.21%
Non-Current debt and equity investments	11.55%	0.00%	0.00%	0.00%	0.00%
Other Assets	2.51%	1.83%	2.08%	2.20%	2.37%
Total Non-Current Assets	20.23%	14.58%	14.45%	13.62%	12.36%
	0.00%	0.00%	0.00%	0.00%	0.00%
Total Assets	100.00%	100.00%	100.00%	100.00%	100.00%
LIABILITIES AND SHAREHOLDERS EQUITY					
Current Liabilities					
Accounts Payable	42.92%	38.12%	41.35%	44.52%	48.79%
Accrued Expenses	28.78%	34.13%	33.91%	34.68%	41.32%
Current Debt	0.00%	0.00%	0.00%	11.73%	0.00%
Total Current Liabilities	71.70%	72.25%	75.26%	90.93%	90.11%
Long-term debt	11.13%	15.09%	14.34%	0.00%	0.00%
Deferred tax liabilities and other non-current liabilities	17.17%	12.66%	10.39%	9.07%	9.89%
Total Long-Term Liabilities	28.30%	27.75%	24.74%	9.07%	9.89%
Total Liabilities	100.00%	100.00%	100.00%	100.00%	100.00%
SHAREHOLDERS EQUITY					
Series A nonvoting convertible preferred	1.85%	0.00%	0.00%	0.00%	0.00%
Common Stock, no par value	36.57%	43.19%	44.59%	45.61%	49.53%
Deferred stock compensation	0.00%	-0.28%	-0.17%	-1.47%	-1.83%
Retained Earnings	55.64%	57.65%	56.78%	56.69%	52.60%
Accumulated other comprehensive income (loss)	5.94%	-0.56%	-1.20%	-0.83%	-0.30%
Total Shareholders Equity	100.00%	100.00%	100.00%	100.00%	100.00%
Total Liabilities & Shareholders Equity					

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