**Howard University Investment Club**

Stock Recommendations

APPLE INC

Company Overview

Apple Inc. (Apple), incorporated on January 3, 1977, designs, manufactures and markets mobile communication and media devices, personal computers and portable digital music players and sells a variety of related software, services, peripherals, networking solutions and third-party digital content and applications. The Company's products and services include iPhone, iPad, Mac, iPod, Apple TV, a portfolio of consumer and professional software applications, the iOS and OS X operating systems, iCloud and a variety of accessory, service and support offerings. The Company offers a range of mobile communication and media devices, personal computing products and portable digital music players, as well as a variety of related software, services, peripherals, networking solutions and third-party hardware and software products. In addition, the Company offers its own software products, including iOS, the Company's mobile operating system; OS X, the Company's Mac operating system; and server and application software. The Company's primary products include iPhone, iPad, Mac, iPod, iTunes, Mac App Store, iCloud, Operating System Software, Application Software and Other Application Software.

iPhone

iPhone combines a mobile phone, an iPod and an Internet communications device in a single handheld product. Based on the Company's Multi-Touch user interface, iPhone features desktop-class email, Web browsing, searching and maps and is compatible with both Mac and Windows-based computers. iPhone automatically syncs content from users' iTunes libraries, as well as contacts, bookmarks and email accounts. iPhone allows customers to access the iTunes Store to download audio and video files, as well as a variety of other digital content and applications. The Company launched iPhone 5, its latest version of iPhone. In addition to the Company's own iPhone accessories, third-party iPhone compatible accessories are available through the Company's online and retail stores and from third parties.

iPad

iPad is a multi-purpose mobile device for browsing the Web, reading and sending email, viewing photos, watching videos, listening to music, playing games, reading e-books and more. iPad is based on the Company's Multi-Touch technology and allows customers to connect with their applications and content in a more interactive way. iPad allows customers to access the iTunes Store to download audio and video files, as well as a variety of other digital content and applications. In addition to the Company's own iPad accessories, third-party iPad compatible accessories are available through the Company's online and retail stores and from third parties.

Mac

The Company offers a range of personal computing products, including desktop and portable computers, related devices and peripherals and third-party hardware products. The Company's Mac desktop and portable systems feature Intel microprocessors, the OS X operating system and the iLife suite of software for creation and management of digital photography, music, movies, DVDs and Websites. The Company's desktop computers include iMac, Mac Pro and Mac mini. The Company's portable computers include MacBook Pro and MacBook Air.

iPod

The Company's iPod line of portable digital music and media players includes iPod touch, iPod nano, iPod shuffle and iPod classic. All iPods work with iTunes. In addition to the Company's own iPod accessories, third-party iPod-compatible accessories are available through the Company's online and retail stores and from third parties. The iPod touch, based on iOS, is a flash-memory-based iPod with a widescreen Retina display, a Multi-Touch user interface and built-in iSight camera. iPod touch allows customers to access the iTunes Store to download audio and video content, as well as a variety of digital applications. The iPod nano is a flash-memory-based iPod that features the Company's Multi-Touch interface allowing customers to navigate their music collection by tapping or swiping the display and built-in Bluetooth for wireless listening. The iPod shuffle is a flash-memory- based iPod that features a clickable control pad to control music playback and VoiceOver technology enabling customers to hear song titles, artists and playlist names. The iPod classic is a hard-drive based portable digital music and video player.

iTunes

iTunes is an application that supports the purchase, download, organization and playback of digital audio and video files and is available for both Mac and Windows-based computers. iTunes features integration with iCloud, AirPlay wireless music playback, Genius Mixes, Home Sharing and syncing functionality with iOS devices. iTunes is integrated with the iTunes Store, a service that allows customers to discover, purchase, rent and download digital content and applications. The iTunes Store includes the App Store and iBookstore.

Mac App Store

The Mac App Store allows customers to discover, download and install Mac applications. The Mac App Store offers applications in education, games, graphics and design, lifestyle, productivity, utilities and other categories. The Company's OS X operating system software and its iLife, iWork and other application software titles are also available on the Mac App Store.

iCloud

iCloud is the Company's cloud service, which stores music, photos, applications, contacts, calendars and documents and wirelessly pushes them to multiple iOS devices, Mac and Windows-based computers. iCloud's features include iTunes in the Cloud, Photo Stream, Documents in the Cloud, Contacts, Calendar, Mail, automatic downloads and purchase history for applications and iBooks and iCloud Backup. Users can sign up for free access to iCloud using a device running qualifying versions of iOS or OS X. Software Products and Operating System Software The Company offers a range of software products for consumers and for SMB, education, enterprise and government customers, including the Company's iOS and OS X operating system software; server software; professional application software; and consumer, education and business oriented application software. iOS is the Company's mobile operating system that serves as the foundation for iOS devices. iOS supports iCloud and includes features, such as Notification Center, a way to view and manage notifications in one place; iMessage, a messaging service that allows users to send text messages, photos and videos between iOS devices and Maps, with turn-by-turn navigation. iOS supports Siri, a voice activated intelligent assistant, which is available on qualifying iOS devices. OS X, the Company's Mac operating system, is built on an open-source UNIX-based foundation. Application Software iLife is the Company's consumer-oriented digital lifestyle application suite included with all Mac computers. iLife features iPhoto, iMovie, iDigital Versatile Disc (DVD), GarageBand and iWeb. iPhoto is the Company's consumer-oriented digital photo application and iMovie is the Company's consumer-oriented digital video editing software application. iDVD is the Company's consumer-oriented software application that enables customers to turn iMovie files, QuickTime files and digital pictures into interactive DVDs. GarageBand is the Company's consumer-oriented music creation application that allows customers to play, record and create music. iWeb allows customers to create online photo albums, blogs and podcasts and to customize websites using editing tools. iWork is the Company's integrated productivity suite designed to help users create, present and publish documents, presentations and spreadsheets. iWork includes Pages for word processing and page layout, Keynote for presentations and Numbers for spreadsheets. The Company also has a Multi-Touch version of each iWork application designed specifically for use on iOS devices.

Other Application Software

The Company also sells various other application software including Final Cut Pro, Logic Studio, Logic Pro and its FileMaker Pro database software. The Company manufactures the Apple LED Cinema Display and Thunderbolt Display. The Company also sells a range of Apple-branded and third-party Mac-compatible and iOS-compatible peripheral products, including printers, storage devices, computer memory, digital video and still cameras and various other computing products and supplies. Apple TV allows customers to watch movies and television shows on their high definition television. Content from iTunes, Netflix, YouTube and Flickr, as well as music, photos, videos and podcasts from a Mac or Windows-based computer can also be wirelessly streamed to a television through Apple TV.

Bios Of E-Suite

*Key Executives*

Tim Cook, CEO

Tim Cook is the CEO of Apple and serves on its Board of Directors.  
  
Before being named CEO in August 2011, Tim was Apple's Chief Operating Officer and was responsible for all of the company’s worldwide sales and operations, including end-to-end management of Apple’s supply chain, sales activities, and service and support in all markets and countries. He also headed Apple’s Macintosh division and played a key role in the continued development of strategic reseller and supplier relationships, ensuring flexibility in response to an increasingly demanding marketplace.  
  
Prior to joining Apple, Tim was vice president of Corporate Materials for Compaq and was responsible for procuring and managing all of Compaq’s product inventory. Previous to his work at Compaq, Tim was the chief operating officer of the Reseller Division at Intelligent Electronics.

Tim also spent 12 years with IBM, most recently as director of North American Fulfillment where he led manufacturing and distribution functions for IBM’s Personal Computer Company in North and Latin America.  
  
Tim earned an M.B.A. from Duke University, where he was a Fuqua Scholar, and a Bachelor of Science degree in Industrial Engineering from Auburn University.

Jeff Williams, Chief Operating Officer

Jeff Williams is Apple’s Chief Operating Officer reporting to CEO Tim Cook. Since 2010 he has overseen Apple’s entire supply chain, service and support, and the social responsibility initiatives which protect more than one million workers worldwide. He also oversees the development of Apple Watch, Apple’s most personal device yet, and is driving the company’s health initiatives including ResearchKit, which is aimed at simplifying medical and health research.  
  
Jeff joined Apple in 1998 as head of worldwide procurement and in 2004 he was named vice president of Operations. Jeff played a key role in Apple’s entry into the mobile phone market with the launch of iPhone, and since 2010 has led worldwide operations for all products. In 2013, he began leading the Apple Watch project.

Prior to Apple, Jeff worked for the IBM Corporation from 1985 to 1998 in a number of operations and engineering roles. He holds a bachelor’s degree in Mechanical Engineering from North Carolina State University and an MBA from Duke University.

Jonathan Ive, Chief Design Officer

Jonathan Ive is Apple’s Chief Design Officer, reporting to CEO Tim Cook. Jony is responsible for all design at Apple, including the look and feel of Apple hardware, user interface, packaging, major architectural projects such as Apple Campus 2 and Apple’s retail stores, as well as new ideas and future initiatives.

Since 1996, Jony has led Apple’s design team, which is widely regarded as one of the world’s best. He holds over 5,000 patents and has been recognized with numerous design awards, including the Design Museum London's first Designer of the Year in 2003, the Design and Art Direction (D&AD) President's Award in 2005 and the Cooper-Hewitt National Design Museum's Product Design Award in 2007.

In 2012, D&AD named Jony and his team the Best Design Studio of the past 50 years. Their work is featured in the permanent collections of museums around the world, including the Museum of Modern Art in New York and the Pompidou in Paris.

Jony earned a Bachelor of Arts degree at Newcastle Polytechnic. As an undergraduate, he twice won the Royal Society of Arts’ prestigious Student Design Award, and years later the RSA awarded him the title of Royal Designer for Industry. He also holds honorary doctorates from the Royal College of Art, the Rhode Island School of Design and Northumbria University.

A native of London, Sir Jonathan Ive was made a Knight Commander of the British Empire in 2013 “for services to design and enterprise.”

Luca Maestri, Senior Vice President and Chief Financial Officer

Luca Maestri is Apple’s senior vice president and Chief Financial Officer reporting to CEO Tim Cook. As CFO, Luca oversees the accounting, business support, financial planning and analysis, treasury, M&A, investor relations, internal audit and tax functions at Apple. Luca joined Apple in 2013 as vice president of Finance and corporate controller, and has worked closely with Apple's senior leadership since his arrival.   
  
Luca has over 25 years of experience building and leading finance teams in global companies with significant operating scale and complexity. Prior to joining Apple, Luca was CFO at Xerox and previously at Nokia Siemens Networks. He began his career with General Motors and spent 20 years in finance and operating roles in the Americas, Asia Pacific and Europe. While at GM, Luca was part of the team that established GM’s regional Asia Pacific operations, including manufacturing investments in China and Thailand. He later became CFO for all of GM’s operations in Europe, which spanned over 45 countries with annual net revenue of approximately $40 billion.   
  
Luca graduated from Luiss University in Rome with a bachelor’s degree in Economics and earned a master’s degree in Science of Management from Boston University.

Arthur D. Levinson, Ph. D.

is an American businessman and is the current CEO of Calico (an Alphabet Inc. venture) and chairman of Apple Inc. (2011 to present). He is the current chairman of Genentech (1999 to present) and former chief executive officer of Genentech (1995–2009).

In addition to serving on the board of Apple. Inc. (2000–present), Levinson serves on the board of directors of the Broad Institute (affiliated with MIT and Harvard).[2] Previously, Levinson had served on the board of directors at F. Hoffmann-La Roche (2010-2014), NGM Biopharmaceuticals (2009-2014), and Amyris Biotechnologies (2009-2014). He currently serves on the Board of Scientific Consultants of the Memorial Sloan Kettering Cancer Center, the Industrial Advisory Board of the California Institute for Quantitative Biosciences (QB3), the Advisory Council for the Princeton University Department of Molecular Biology and the Advisory Council for the Lewis-Sigler Institute for Integrative Genomics.

Porter’s Five Forces Analysis

Competition in the industry

Competition within the technology industry has always been fierce. Furthermore, by taking advantage of a growing market Apple has been a tribute to success and both their brands and their products have controlled significant market share in each of the subsectors which they function in.

However, companies like BlackBerry, Samsung, LG, and others aggressively compete with Apple. Such aggressiveness is observable in the rapid innovation, strong advertising, and high levels of product imitation. Also, low switching costs means that it is easy for customers to switch from Apple to other brands, thereby making competition even tougher. Thus, this makes rivalry within the industry an extremely strong force. Below is a breakdown of apple’s competition by sub industry.

*Personal Computing*

While they are many users who remained on the Microsoft operating system, the Apple brand and product has been picking up major steam since the 1980s. Two major features of the Apple’s products have been the compatibility and usability of their products which has created huge customer locality and a massive customer base across several platforms. Major competitors in this space include Dell, Hewlett-Packard (HPQ), Acer and Lenovo (LNVGY).

*Mobile computers and Smartphones*

The IPod and now the IPad have been major hits in Apple’s mobile computing business. The Apple business model spurred an entire industry of mobile computing imitators. However, Apple is by far the most profitable and the most influential in this industry. Competitors include Google (GOOG), Samsung, Nokia and Asus.

The smartphone industry was once dominated by Canadian giant Research in Motion with their hit Blackberry mobile phones. That changed quickly with the introduction of the Apple iPhone in 2007. The success of Apple’s iPhone has literally decimated Research in Motion's business model and has caused the company to restructure several times. Google produces the Android operating system, which is installed on most non-Apple phones produced by Huawei, Samsung, Sony ([SNE](http://www.investopedia.com/markets/stocks/sne)), HTC, Lenovo and others. While Google has enjoyed similar success to Apple on the mobile platform, Apple still has a slight edge in terms of profitability and market share, especially in US markets.

*Entertainment Media and Applications*

The two major players in this space are Apple and Google, with the Apple iOS running on its iPhones and iPods, and Google Android running on most competitor phones and tablets. Each operating system interfaces with iTunes and the Google Play Store respectively, allowing users to purchase music, books, applications, movies, and other media.

*Mobile payments*

Apple is a relative newcomer to the mobile payment space after just entering in 2014. According to [CEO Tim Cook](http://www.investopedia.com/ask/answers/032715/how-does-tim-cooks-vision-apple-differ-late-steve-jobs.asp), the company took on more than 1 million users in its first 72 hours, making Apple Pay larger than "all competitors combined." Key competitors in mobile payment are PayPal and Google.

Potential of new entrants into industries

While the competition within the tech space is definitely intense, the potential for new entrants into the industries is relatively weak force. This is mostly due to the high capital requirements needed to compete. However, firms with the financial capacities such as Google and Samsung have made several successful attempt at capturing some of Apple market share.

Secondly, to become successful in the tech space requires huge amounts of brand recognition, something which most companies can’t easily acquire. This is mostly so because of the intimate relationships and brand loyalty most users have with either their IOS devices or their applications.

Power of suppliers

The power of suppliers is a very weak force for Apple’s business due to one simple fact, they have access to a large network of suppliers. Even though Apple has less than 200 suppliers of components for its products, the company has more options because there are many suppliers around the world who make the same products who would love to replace Apple’s current suppliers. This condition makes individual suppliers weak in imposing their demands on firms like Apple. Thus, this part of the Five Forces analysis shows that Apple does not need to prioritize the bargaining power of suppliers in developing strategies for innovation and industry leadership.

Power of customers

Much like the threat of competition within the industry. The power of customers is a huge force in the technology industry. Not only are customers now playing larger roles in the designs and functionality of different products but they also have a huge say on pricing as well. It is easy for customers to switch brands, thereby making them powerful in compelling companies to ensure their customer’s satisfaction. On the other hand, each buyer’s purchase is small compared to Apple’s total revenues. This condition makes customers weak at the individual level. However, because it is easy to shift from Apple to other brands, buyers still exert a strong collective force. Thus, this part of the Five Forces analysis shows that Apple must include the bargaining power of buyers or customers as one of the most significant variables in developing strategies.

Threat of substitute products

With a high number of competitors and low switching costs , Apple faces a great threat from substitute products. However one can assume that Apple’s threat from substitute products is moderate at worst. Apple’s business model has always been built around

promoting continuous innovation and this has lead them to often have the highest performing products in the business.

Substitutes to Apple products are readily available in the market. For example, people can easily use digital cameras instead of the iPhone to take pictures. They can also use landline telephones to make calls. However, these substitutes have low performance because they have limited features. Many customers would rather use Apple products because of their advanced features, familiarity with the products, brand loyalty. Thus, substitution has a weak to moderate force on Apple’s business.

SWOT Analysis

Summary of Apple’s SWOT

Analysis of Apple’s SWOT

Apple is a multibillion dollar firm, its America’s leading mobile phone producer, and the global leader in technology. However, like any other company Apple still has its own challenges. Apple face extreme competition from global companies such as Samsung in its mobile space, Google and Microsoft in the operating system space, and Sony and Lenovo in its computing space. Facing all of this competition is obviously not easy.

Modern day consumers have so many options to choose from when deciding which product they would like to purchase, and to compound on their competition issues Apple is priced higher than its competitors in almost all of its markets. The most recent IPhone 6s started at $650 while the Samsung galaxy S6 was priced $600. While this $50 difference may seem small, compare that to the $200 difference between Apple’s 2015Macbook Pro 2 and the point become clearer. Apple products are not cheap.

With steep prices, another issue Apple currently faces is the threat of current customers switching to their competitors’ products. In the mobile phone and computing industries there are usually very low switching costs which makes it even easier for an Apple consumer to switch a competitor. However, as we would now unravel Apple has very little to worry about.

*Product Design*

Apple has many strengths and opportunities which not only greatly outweigh their threats and weaknesses, but they also combat them. One major strengths which has been a huge pillar in Apple’s success is their product design. The intelligence of Apple’s product design can be examined in two key characteristics physical design, and usability. The physical design of Apple products makes the user feel it as a premium product. More so, the popularity of Apple’s products is largely due to their simplicity and intuitiveness, making them accessible not only to tech-savvy consumers, but also to kids and seniors. Jobs was a stickler on this point. While industrial design is a critical component of any product Apple makes, if it is not easy to use, it is considered worthless to the consumer. This is what drove the company’s user-interface designs from Day 1 and is still the mantra pushed to the software and hardware engineers every day they go to work. All of the products they create have to be intuitive and easy to understand and learn. As technology has become more intricate and users want more features, the task of keeping

things simple is sometimes difficult. And Apple creates tools for power users and rookies, which can mean a broad range of ease-of-use issues. To Apple a critical goal of to creating anything for the market is that ease of usability is more important than the product itself. In my opinion Apple is the only company that does this. While Apple may face heavy competition in its markets, none of its competitors places as much emphasis as they do to ensure that their products are usable, simple, and sleek. Even if competitors have low price points than Apple none of them deliver these levels of product performance and satisfaction. Hence customer readily accept the difference.

*Innovation*

This is the one that scares Apple’s competitors the most. While those competing with Apple are just getting products to market that are competitive, Apple is already working on the products at least two years out. For example, the new iPhone that will most likely go to market in October was designed and signed off on two years ago. The same goes for the iPad. The new iPad that we will most likely see next March was signed off on two years ago. The one that’s being worked on now we will probably see in 2017. This is a nightmare for Apple’s competitors and will continue to be for some time.

Besides having geniuses in design, software and retail, Apple also has the cash to invent components, manufacturing processes and things like that, which almost makes it impossible for the competition to make any real headway against Apple. And don’t let the fact that Android has become the No. 1 smart-phone operating system make you think that it’s the big winner. Yes, Android has gained ground by the sheer numbers of companies and products pushing Android. But the real measure of success is in the profits, and Apple is making as much as 70% of all the profits in smart phones and about 85% of the profits in tablets. Just ask any Android competitor which they would like more, market share or profits. You’ll get the answer relating to the real measure of success in this market.

*Branding*

Apple’s branding has propelled them to be not only one of the most influential names in tech and mobile devices, but to be one of the most recognizable companies world wide. Steve Jobs' insight was that you can never connect emotionally or meaningfully with customers by conceiving great marketing. No segmenting, strategy, technology or psychological insight will deliver a great brand. You must deliver a great business. The brand will be the words and emotions people use to narrate it. Another key component of Apple’s branding which limits the threat of low switching costs is their product loyalty. Apple customers are often loyal ones. Customers also often own several Apple devices due to the great levels of compatibility on multiple platforms.

In fact customers are so comfortable with the Apple brand and performance that they willingly accept higher price points.

*Marketing and Advertising Capabilities*

One major driver on Apple’s branding is their marketing and advertising capabilities. Apple’s annual advertising budget reached US$1.8 billion[1] in 2015, almost doubling from US$933 million in 2011. The company’s advertising budget is certainly not the largest when compared to its competitors’ budgets, but Apple use it the most effectively.

Figure 1. Yearly advertising budget spending by Apple and its competitors (in US$ billions)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2012 | 2013 | Change from 2012 | 2014 | Change from 2013 | 2015 | Change from 2014 |
| Apple | 1 | 1.1 | 10% | 1.2 | 9.1% | 1.8 | 50% |
| Samsung Electronics | 4.3 | 3.8 | (11.6)% | 3.6 | (5.7)% | - | - |
| Microsoft | 1.6 | 2.6 | 38.5% | 2.3 | (11.5)% | 1.9 | (17.4)% |
| Amazon.com | 2 | 2.4 | 20% | 3.3 | 37.5% | - | - |
| Google | 2 | 2.4 | 20% | 3 | 25% | - | - |

As mentioned one key factor to Apple’s success has been their simplicity and they have remained true to this model in their marketing campaigns. It is often said that the most effective way to reach consumers isn’t through elaborate and complex websites, ads or sales copy, but rather through simplifying the decision making process: in other words, presenting exactly what consumers need to know, while leaving out the rest. In fact, they found that companies who simplified and streamlined the decision making process for their customers were 86% more likely to make a sale

*Customer Service*

Apple aims for perfection in every device they manufacture. That’s what its founder Steve Jobs cared  every Apple device to be. Jobs understood one of the major conundrums of technology: even if you create products that are easy to use, the variety of things that people want to use technology for often creates complexity. Because of this, consumers at all levels may need some hand holding from time to time. I was one of the most vocal critics of Apple when it introduced its first retail store in Tokyo in 2002. I thought it was crazy for Apple to try and go into retail. At the time, and even today, tech retail stores are in decline while big-box stores like Costco and Walmart sell products on price and nothing else. I was wrong about.

Apple uses this conundrum to its advantage. Because it keeps product stock keeping units simple, the salespeople inside the stores know the products really well. Notice that when you go into an Apple store and are greeted by one of the sales staff, you’re not asked, “How can I help you?” Instead they ask, “What would you like to do today?” They go right to the heart of any technology user’s question, a question that’s always related to what they want to do with the technology the user is interested in.

And once you explain your needs, they take care of it on the spot in most cases. Or if you need more hand holding, they turn you over to the Apple Geniuses. No wonder 50% of people buying Apple products are new to Apple. Apple’s products are simple to understand and use, but if you do have a problem, Apple can take care of it at their stores or over the phone quickly.

P/E, Profit Margin, & Leverage Analysis

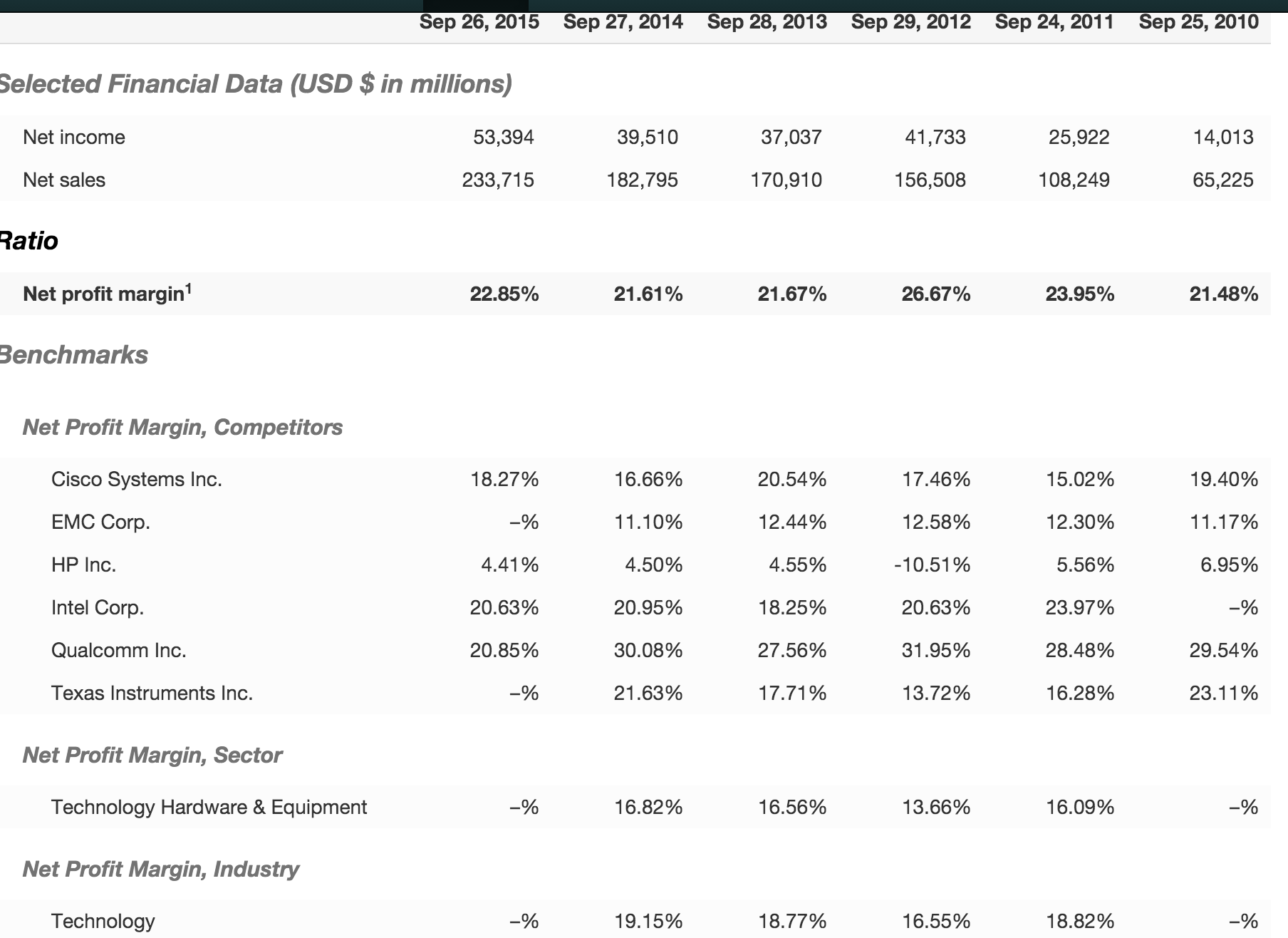
*P/E*

Over the past 15 years Apple’s stock price has risen from $1.47 in 2001 to $103.01 today. Apple’s trailing twelve-month price to earnings ratio is currently $11.60. Two of the many industry competitors who Apple are usually benchmarked against are Google and Hewlett-Packard. Google and Hewlett-Packard have trailing twelve-month price to earnings ratios of $30.13 and $5.38 respectively. From a pure P/E stand point, AAPL seems to be the best value for the price. AAPL exhibits lower TTM and forward P/Es than its peers with the exception of HPQ. However, this discrepancy can be attributed to HPQ’s share price falling rather than earnings growth as reflected by HPQ’s five-year PEG (P/E to growth) ratio of 3.18 vs. APPL’s 1.1. This implies that APPL is a better value when also factoring in its growth rate. implies that APPL is a better value when also factoring in its growth rate.

In terms of its PE ratio Apple provides an extremely unique value proposition for its investors. Due to its low PE ratio Apple can be classified as a defensive stock since is provides extremely high earnings relative to its stock price( Apple produced earnings per share of $9.22 in 2015). However, despite being a defensive stock Apple has also experience tremendous growth in the past 5 years and the company shows no signs of slowing down. Apple experienced average quarterly growth of 28.5% in revenue last year and CEO Tim Cook has been extremely optimistic about 2016’s outlook.

*Profit Margin*

Apple’s net profit margin for 2015 was 22.85% while its gross profit margin in the same period was 40.06%.



This figure shows that Apple has constantly had higher margins than the Technology Hardware & Equipment industry and Technology industry on a whole. Large amounts of Apple’s revenue is driven by its strong IPhone sales which has grown by 50% over the past year.

*Leverage Analysis*

Earnings Growth

