

Spring 2017

# Samsung Technical and Fundamental Analysis

Stephen Janeczko

Merrimack College, [janeczkos@merrimack.edu](mailto:janeczkos@merrimack.edu)

Follow this and additional works at: [http://scholarworks.merrimack.edu/honors\\_component](http://scholarworks.merrimack.edu/honors_component)



Part of the [Corporate Finance Commons](#), and the [Finance and Financial Management Commons](#)

---

## Recommended Citation

Janeczko, Stephen, "Samsung Technical and Fundamental Analysis" (2017). *Honors Program Contracts*. 6.  
[http://scholarworks.merrimack.edu/honors\\_component/6](http://scholarworks.merrimack.edu/honors_component/6)

This Project - Open Access is brought to you for free and open access by the Honors Program at Merrimack ScholarWorks. It has been accepted for inclusion in Honors Program Contracts by an authorized administrator of Merrimack ScholarWorks.

Stephen Janeczko  
5/11/17  
Honors Contract: Samsung Technical  
and Fundamental Analysis  
Merrimack College  
Investments

Author's Note: This paper was prepared for Investments Section A taught by Professor Chen.

## Introduction

The name Samsung is recognizable in all areas of the world. Samsung is on the front of the televisions, washers, etc. the average person uses, and they sponsor professional sports teams. In every household in developed economies, you will see a product by Samsung in the living room, kitchen, or bedroom. Samsung Electronics LTD., founded in South Korea in 1938, is a leading provider of advanced technology, semiconductors, and other innovations in memory and system integration. They are the leading electronics company in South Korea. Their line of commercial products include DVD players, digital TVs, and digital still cameras; computers, mobile phones, color monitors, LCD panels, and printers. Samsung is in the information technology sector and the technology hardware and equipment industry. Their competition includes, including giants like Apple, Panasonic, Sony Corporation and LG Electronics. Samsung stock trades on the South Korean Stock Exchange in dominations of the Korean won under ticker 005930:KS.

## How Stephen Janeczko Capital Management Can Help

With a large company like Samsung, the average investor may have difficulty financially evaluating the company. There are so many financial figures, ratios, ratings, betas, etc. that can be found on the internet, and it can be hard to distinguish what the correct information is. At Stephen Janeczko Capital Management, we have the tools and knowledge of experienced analysts to help you with financially evaluating large companies to make your investment decision process a lot easier. All of the information used in this evaluation of Samsung was derived from Bloomberg terminal's and Stephen Janeczko Capital Management's calculations of liquidity, growth, etc. ratios, and careful analysis of the company's most recent annual reports:

balance sheet 2016, income statement 2016, cash flow statement 2016, first quarter earnings April 21, 2017. In this report, you will find a summary of current events with Samsung, current events in the South Korean economy, financial statement analysis, ratio analysis for Samsung and competitors, and stock recommendations based on current trading history. Looking ahead, we will explain why Stephen Janeczko Capital Management thinks Samsung is not a good investment at this point in time.

### Political Turmoil: Samsung and South Korean Government

The never-ending problems within the executive board at Samsung is a cause for concern for current and future investors. On February 16, 2017, current Samsung vice-chairman and future heir of the company, Lee Jae Young, was arrested on charges of bribery with a campaign leader of former President Park Geun-hye, Choi-Soon—il. Choi Soon-il was responsible for extorting \$69 million from big businessmen in South Korea to financially aide Ms. Park's campaign. Ms. Park was also responsible for other acts of fraudulence and political corruption, which led to her arrest in March and official indictment on April 17, 2017. According to sources, "Prosecutors allege Lee accepted then-President Park Geun-hye's request to support equestrian training for the daughter of a close friend, anticipating it would help secure government support for business deals" (Kim, 2017, Retrieved from <https://www.bloomberg.com/news/articles/2017-04-19/samsung-heir-s-trial-homes-in-on-five-minutes-with-ex-president>). Surprisingly and disturbingly, Samsung has been the culprit of executive scandal in past years. Before Stephen Janeczko Capital Management opened its doors, Samsung chairman Lee Kun Hee was indicted on tax evasion and hiding money in secret stock accounts held by Lee Jae Young, his son, in 2008. At the end of 2009, South Korean President Lee Myung-bak pardoned Lee Kun Hee for his crimes. According to the press, Lee-Myung-bak did this because he feared for the struggling

South Korean Economy, and also so Lee Kun Hee could remain seated as one of the members of the International Olympic Committee for the 2018 South Korea Winter Olympic games.

Samsung's sketchy management control and lack of transparency should alarm investors.

Stephen Janeczko Capital Management believes that on an ethical standpoint, it would be unwise to invest in Samsung given the past decade of corruption in which they have played a major role in.

### Samsung Galaxy Note Phones

The problems with Samsung are not only present in South Korea, but they are across the globe as well. The most popular and recent news story that has gotten the most attention is the exploding batteries and phone cases in the Samsung Galaxy Note 7 phones. In August of 2016, Samsung began selling the devices across the globe, but shortly after, in September of 2016, massive recalls began after concerned customers complained about the batteries and cases of the phones exploding and setting on fire. After being sued from a man in Florida, who was severely burnt from an exploding battery in his Samsung Galaxy Note 7, Samsung began the process of recalling up to 96% of the Galaxy Note 7 phones they had sold up to September (Reuters, 2016, Retrieved from <http://finance.yahoo.com/news/timeline-samsung-electronics-galaxy-note-7-recall-crisis-005434511--finance.html>). On January 22, 2017, Samsung issued an expanded recall on all Samsung Galaxy Note 7 devices. The statement claimed that customers could exchange their devices for a new device of their choosing. Stephen Janeczko Capital Management is concerned that future Samsung products, particularly mobile devices, may have some issues like the Samsung Galaxy Note 7. As shown in the picture below, the battery issues are not simple but complex. It will take much research and development to find out the problem with the batteries (See a picture of exploding Samsung Galaxy Note 7 battery below).



In April 2017, Samsung announced the official release of the new Samsung Galaxy Note 8 mobile devices in the second fiscal quarter of 2017. Samsung has much competition in this area, as companies are planning to release phones around the same time like the Nokia 3310 by Nokia, the 2017 Blackberry and most importantly, the iPhone 8 by Apple coming out in September 2017. Unlike its predecessor, the new Samsung Galaxy Note 8 has an Infinity Screen that allows users to take pictures and film in an expansive display. The phone also features Bixby, an artificial intelligence device and Gear 360. Given the disaster Samsung had with the Galaxy Note 7's it is good that their newest phones have more features and amenities for customers. However, it is uncertain as to whether the engineers at Samsung have fixed the problems they had with the batteries in the Samsung Galaxy Note 7's, the same batteries that are to be used in the Samsung Galaxy Note 8's. Investors should be optimistic about the mass sales of the new Samsung phones come August, but they must be aware of the past. If the Samsung Galaxy Note 8 phones becomes busts like its predecessor, Samsung could be in huge financial trouble. (Khan, 2017, Retrieved from <https://www.tapscape.com/samsung-galaxy-note-8-release-date-specifications-design/>).

Summary of Current News

Needless to say, the arrest of the vice-president of Samsung, the demise of the Galaxy Note 7's, the uncertain future of the Galaxy Note 8's have brought about discord and confusion for everyone. Investors wonder if big businessmen like Lee Jae Young are running operations to benefit themselves with lavish financial and political rewards. They wonder if the leaders of Samsung have no concern for their customers. In South Korea, people have begun to grow tired of the white collar crime that has occurred over the past year with Samsung and the South Korean government. And although the newly inducted South Korean President, Moon Jae-in promises to create more jobs and boost the growth potential of the economy with a stimulus package, there is still uncertainty and unrest, meaning Samsung may have difficulties in the future. Moreover, consumers are becoming more annoyed with having to return their devices to Samsung.

### Earnings Report

Yet shockingly, despite all of the problems and speculation, the stock price of Samsung has hit new records. 2017 first quarter earnings for Samsung were fantastic and surpassed all expectations and forecasts. On April 27, in South Korea, Samsung announced that revenue increased by 0.77 trillion Korean Won from the previous quarter. According to their website, "In the first quarter, sales for the memory and display businesses increased, owing to high ASPs and strong sales of premium products. However, revenue from the mobile business decreased due to a decline in flagship product sales" (Samsung, 2017, Retrieved from <https://news.samsung.com/global/samsung-electronics-announces-first-quarter-results-3>). Even better is the future outlook for Samsung's second quarter earnings, as Samsung expects continuous growth in its sectors dedicated to memory research, and they forecast

large sales on their Samsung Galaxy Note 8's. Since the beginning of April, Samsung's stock, 005930:KS, has seen an increase from 2,005,000 won per share to 2,231,000 won per share at the end of April 2017. This is 11.3% increase in the price of their stock over the course of April, should not come as a surprise to an investor given their recent earnings report. (See graph below).



But the fact that Samsung's stock price has not reached a peak like this since the summers of 2013 and 2016 should be a little concerning. The general rule with trading stock is that as volume and stock price increase, stocks tend to become overvalued and investors will begin to sell, driving down the price. The important question investors should ask is if Samsung can continue this growth in stock price. By analyzing their 2016 financial statements and their financial ratios compared to other companies in their industry, we can see if this is feasible.

(RTT News, 2017, Retrieved from <http://www.rttnews.com/2767492/samsung-q1-profit-climbs-sees-higher-earnings-ahead-stock-up.aspx>).

### Introduction to Fundamental and Technical Analysis

For the fundamental analysis of Samsung Electronics Co. LTD., Stephen Janeczko Capital Management will compare financial ratios from the 2016 fiscal year end with four large companies in the information technology and technology industries across the globe: Apple, Sony, LG Electronics, and Lenovo LTD. Additionally, the most attention grabbing figures from Samsung's financial statements will be incorporated within the comparison of the ratios of the five companies mentioned above. All information was retrieved from Bloomberg Market Laboratories and other financial information giants like Morningstar, Reuters, and YAHOO! Finance.

### Current Ratio Analysis

As is standard, investors, especially those who may not be used to foreign investment, should go top to bottom on the financial statements when deciding to purchase or sell stock. On the balance sheet, this means looking at a company's current assets and current liabilities. The current ratio is one of the most important ratios to consider when evaluating an information technology company, and it is easy to calculate. In the information technology industry and technology hardware sector, the current ratio is used to measure the ability of a company to meet short term obligations. Since technology companies like Samsung rely heavily on investors for capital rather than assets, the current ratio is an important metric to the financial health of the company. As of December 31, 2016, Samsung Electronics LTD. has a current ratio of 2.59. Other competitors have the following current ratios as of December 31, 2016: Lenovo Group

LTD 0.82, Apple 1.35, Sony Corporation 0.83, and LG Electronics 1.08. As one can see, Samsung's current ratio is significantly higher than its competitors. Also, this ratio is slightly above the current information technology industry average of 2.48. The first positive of Samsung's current ratio is that it is not below one, which would indicate a negative working capital. Moreover, the ratio proves that Samsung is able to use their short term assets to meet their current liabilities. However, just because the current ratio of Samsung is high does not mean that all of the short term assets that Samsung has are highly liquid. In fact, by looking at the most recent balance sheet of Samsung, you can see that, trade receivables, marketable inventory, and short-term financial instruments, account for 75% of Samsung's current assets in the year 2016. Additionally, 35% of Samsung's assets go into property plant and equipment. More importantly, current assets consists of more than 50% of the total assets of Samsung. This being the case, how is Samsung trying to fulfill its needs long-term using its assets? Through data analysis, Stephen Janeczko Capital Management has determined that Samsung, given the amount of projects it is undertaking, should be investing more in long term assets. Furthermore, this could potentially stunt the growth in the earning power and stock price of Samsung.

### Debt to Equity Analysis

The debt to equity ratio is the most important ratio for determining the long-term solvency of an information technology company. It measures how these companies use leverage, or how they used borrowed money to increase the company's intrinsic value. Along with other technology companies, Samsung relies on taking up debt and investing in other technology firms, mainly for purposes of product development. As of 2016, the debt to equity ratio of Samsung was 7.92 in US dollars. Other companies in the information technology industry had the following debt to equity ratios: Apple 67.86, Lenovo LTD 107.42, Sony Corporation 38.26,

LG Electronics 64.83. The S&P 500 industry average for debt to equity in the information technology industry as of April 19, 2017 was 57.45. Compared to top competitors and US industry averages, Samsung has the smallest of short term debt to equity ratios. As an investor, there are a few things to consider about these statistics. First off, Samsung's lower debt to equity ratio means that they are using less debt and have stronger equity positions. If you were to look at their total liabilities in 2016, they amounted to \$57,294.6 US dollars (in millions), compared to their shareholder's equity at \$159,738.9. Although this is a positive signal for investment, it is important to consider that 80% of Samsung's liabilities used in calculating their debt to equity ratio were current liabilities. This being the case, it is imperative that investors ask how much debt is being used to support long-term investments. In 2016, of all of Samsung's long term liabilities, 50% of them were deferred tax liabilities, which basically are taxes not paid with the years that they match. This principle goes back to the basic matching principle. Thus, it is alarming to Stephen Janeczko Capital Management that difference between deducting tax for accounting and tax purposes is so high for Samsung, and also that long term debt is not being used heavily in the company. We believe that this could result in the increase of the debt to equity ratio in years' time, and over the next couple of decades, Samsung could become too reliant on debt financing. Currently though, it an excellent ration compared to its competitors, and as of now, should be looked at optimistically when it comes to investment decisions.

### Gross Profit Margin Analysis

Gross profit margin, the profit margin that measures the gross profit earned on sales, is another important metric to examine when financially analyzing an information technology company. The ratio shows the capability of a company to become more profitable in the future, and gauges how much revenue a company retains after all the direct cost associated with making

a product. Unlike many information technology companies, Samsung produces a variety of products, so this ratio is effective when determining how much the direct costs/cost of goods sold factor into the revenue that Samsung makes. In 2016, Samsung had a gross profit margin ratio of 0.6, meaning that Samsung retains 60 cents for each dollar of revenue made. The S&P 500 information technology industry average gross profit margin at the end of 2016 was 0.22. Clearly, Samsung has a better outlook on its gross profit margin than other major competitors in its industry. However, as mentioned early, they lack of long-term investment in the financial statements of Samsung is concerning to Stephen Janeczko Capital Management. We wonder that because of this, Samsung's gross profit margin may go down in the near future.

#### Cost of Debt Analysis

Any rational investor should consider the implications of the cost of debt and the cost of equity of Samsung at this point in time. Stephen Janeczko calculated the cost of debt for shares in Samsung by taking the rate of a five year non risky South Korean Government bond, 1.844%, multiplied it by the current tax rate in South Korea, 24.2%, and multiplying the credit spread of a 5 year bond in Samsung and a 5 year treasury bond in South Korea, 0.17 (Trading Economics, 2017, Retrieved from <http://www.tradingeconomics.com/south-korea/corporate-tax-rate>). From these figures, the calculated cost of debt before tax is 1.861% and the after tax cost of debt is 1.41%. Competitors of Samsung had the following cost of debt figures as of April 2017: Lenovo LTD 4.5%, Sony Corp 0%, LG Electronics 1.2%, and Apple 1.8%. The average cost of debt of information technology and electronic companies like Samsung is 4.05% as of 2016. Simply put, this is an incredible number because it shows that compared to the market, Samsung uses less debt financing to support short term and long term operations. This also explains why Samsung's debt to equity ratio is much lower than any of the competitors mentioned in this report. It shows

that Samsung is able to make most of the assets it has to raise capital. The opposite of financing a company with debt is to issue shares of stock, called equity financing. Companies who typically use equity financing are either start-ups or companies who are struggling financially. This cost of debt figure can also explain why Samsung's bond ratings are A grade.

### Cost of Equity Analysis

Cost of equity is figure that represents the compensation the market demands in exchange for owning the asset and bearing the risk of ownership. Like cost of debt, the cost of equity of Samsung is important to analyze because helps investors recognize the required rate of return they should expect from their investment. As of April, the cost of equity of Samsung Electronics is 11.1%. Competitors of Samsung had the following figures: Lenovo LTD 7.5%, Sony Corp 9.5%, LG Electronics 9.9%, and Apple 10.9%. Paired with the lowest beta of the five competitors being benchmarked, the cost to equity figure of Samsung, which is the highest of all of the figures, would statistically be the most attractive investment.

### CAPM Analysis

Another important model to consider is the capital asset pricing model. This metric measures the expected returns of any stock that would have some level of risk investing in. As calculated, when finding Samsung's cost of debt, the risk free rate of Korean treasury bonds is 1.844%. Given that Samsung has the low beta of 0.47, it has lower risk than the market, which is good for conservative investors. Finally, as of the end of April, the average 1 year return in the South Korean Stock Exchange is 12.63%. Taking all of these figures into consideration, the CAPM for Samsung stock is 6.91342% at the end of April. From this, Stephen Janeczko Capital Management has concluded that the return on Samsung stock is not as high as stocks in the

Korean Stock Exchange or any other U.S. stock markets simply because of the risk. As mentioned, the beta is half of one basically. This number is great if the stock markets in South Korea and the U.S. go down because for every 1% the market falls in that country, Samsung will only fall by 0.5%. However, the same cannot be said the other way around. If the market goes up in South Korea, Samsung will only gain half of what the market is gaining. If you are a risk tolerant investor who likes to make cash quickly, this is not a good investment, but if you are risk averse, this return would not bother you as much. On another note, the low number calculated through the CAPM model could also explain the dramatic decrease of sustainable growth rate at Samsung. According to Investopedia, sustainable growth rate is “the maximum rate of growth that a firm can sustain without having to increase financial leverage or look for outside financing”. Going back to 2013, Samsung had a sustainable growth rate close to 19%, which was unheard of in the last decade of the company’s history. As of April 2017, the sustainable growth rate is only at 9%. Stephen Janeczko Capital Management begs to ask if there will be any expansion of opportunity for Samsung investors in the next 5 to 10 years. With the low after tax cost of debt, the low CAPM and beta, and the dramatic decrease in the sustainable growth rate from 2013, Stephen Janeczko Capital Management doesn’t think that Samsung would be a good investment for those who are looking for high volatility, risk, and reward. Furthermore, all of these signs indicate a chance of Samsung’s stock price going down.

### ROE Analysis

Another ratio that Stephen Janeczko Capital Management finds critical to examine is the return on equity. Return on equity is a measurement that shows how much profit a company makes with the investment of shareholders. As of December 31, 2016, Samsung’s return on equity in US dollars was 10.94. Their competitors had the following ROE figures as of

December 31, 2016: Apple Inc. 36.90, Lenovo -3.62, Sony 2.95, LG Electronics 0.95. The industry's average ROE in the year 2016 was 21.09. Although the ROE of a company is not the end all be all of a company's attractiveness to investors, this is a potentially significant warning sign to investors. Samsung does not make as much money off of the investments of shareholders compared to other companies in their industries, specifically Apple, one of their major competitors. Like most capital management firms, Stephen Janeczko Capital Management puts a 15-20% ROE as a quality number for an investor. From 2010 to 2013, Samsung had met this range. There are many theories that Stephen Janeczko Capital Management has as to why the ROE had decreased 19.82 in 2013 to 10.94 in 2016. High tax rates can cause return on equity to decrease gradually. From 2010 to 2017 the South Korean corporate tax rate has increased by 2.4% (Trading Economics, 2017, Retrieved from <http://www.tradingeconomics.com/south-korea/corporate-tax-rate>). Low asset turnover ratios typically are a sign of operational deficiency and therefore can have an impact on return on equity. As of 2016, Samsung's asset turnover ratio was 0.80. This low ratio means that per asset, Samsung is not generating as much revenue. Less revenue results in less net income, which lowers return on equity. When looking at the income statements from previous years at Samsung, Stephen Janeczko Capital Management sees a steady decline in revenue. Samsung's 2013 total revenue in US dollars was \$209,026.50M. Samsung's 2014 total revenue in US dollars was \$195,918.1M. Samsung's 2015 revenue in US dollars then dropped even further to 177,404.2M and \$174,075.6M in 2016. Clearly this 20% drop in revenue over the course of four years should be a warning sign to investors. For some reason, Samsung cannot generate as much revenue as it could in previous years, which in hindsight has lowered their asset turnover and return on equity ratios over the years. Once again, it is another sign that the future movement of Samsung's stock could go down.

### P/E Ratio Analysis

Price to earnings ratio is another important ratio Stephen Janeczko Capital Management must compare amongst Samsung and its competitors. Price to earnings ratio or earnings multiple ratio gives investors an idea of how the market will pay for a company's earnings by taking the current stock price and dividing it by earnings per share. As of April 2017, Samsung's price to earnings ratio was 14.12. Competitors had the following price to earnings ratios as of April: Lenovo 11.61, Apple Inc. 17.54, Sony Corp 46.96, LG Electronics 167.54. The average price to earnings ratio for companies in the information technology industry in April 2017 is 23.85. As of Samsung is beating the current price to earnings ratio in their industry. Having a strong price to earnings ratio means a few things for a company like Samsung. First off, a high price to earnings ratio can show optimism for the future of the stock price. However, Stephen Janeczko Capital Management questions this for multiple reason. For one, as stated before, their sustainable growth rate and revenue have been decreasing since 2013. Corporate board corruption has also led to investors to mistrust the company and their intentions. Additionally, some of Samsung's main competitors such as Apple, Sony Corp, LG Electronics have higher price to earnings ratios, signifying that their stock prices have more room to grow compared to Samsung. Stephen Janeczko Capital Management advises investors to be warned.

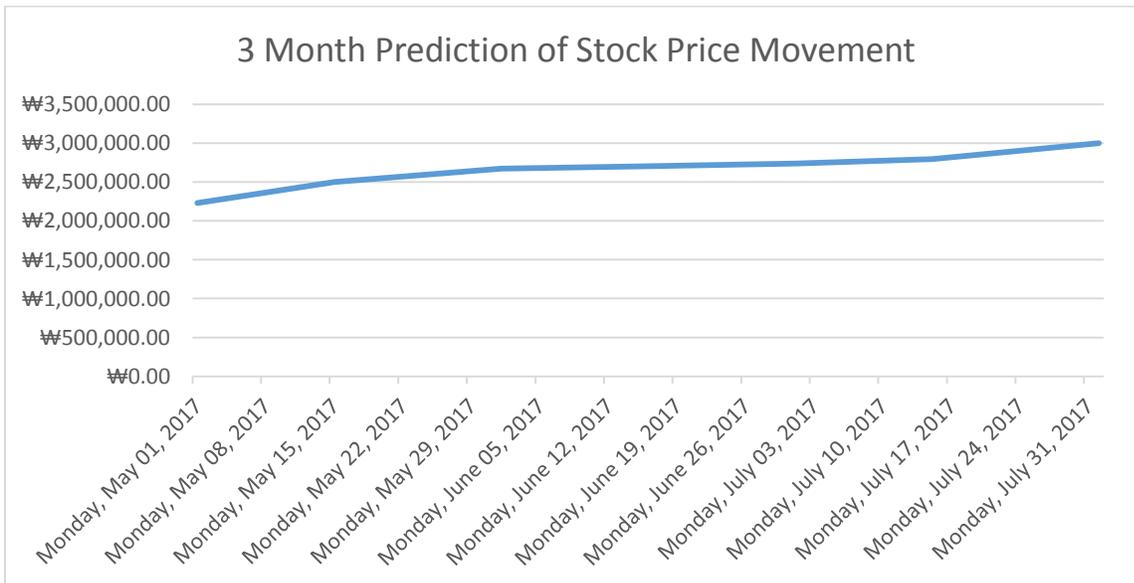
### Candlestick Patterns 02/09/17 to 5/09/17 3 Months



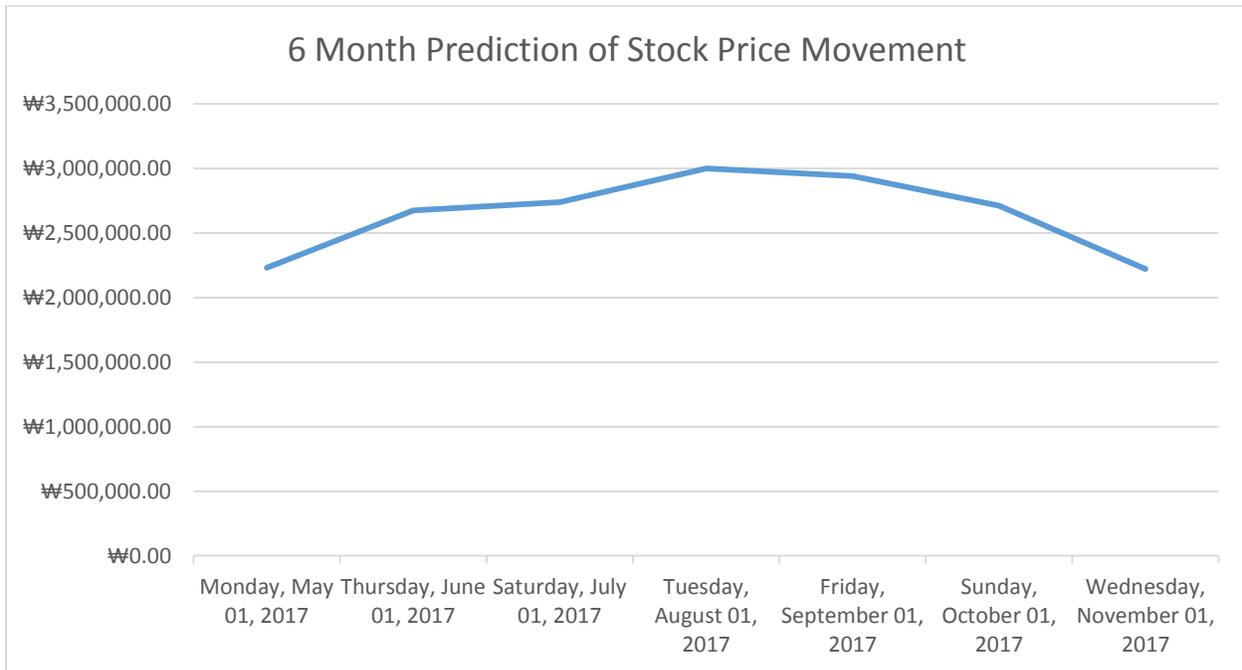
Candlestick Pattern 05/09/12 to 05/09/17 5 Years



Prediction of Stock Price Next 3 Months



Prediction of Stock Price Next 6 Months



Candlestick Chart Analysis – Bullish or Bearish

Above are four charts that show current price, historical price, volume, and bullish and bearish feelings of investors in Samsung stock and Stephen Janeczko Capital Management’s predictions for the stock movement. Although most of Samsung’s financials are above average, and the fact that Samsung stock has reached its highest quarterly profits since 2013, after their first quarter earnings announcement on April 27, Stephen Janeczko Capital Management does not see more room for growth. In fact, Stephen Janeczko Capital Management argues that because of their superb financials and the drama in Samsung’s headquarters and the South Korean government, Samsung’s stock will drop below the opening price before the spike in stock price in late April. By looking at Samsung’s most recent candlestick analysis during the past three months, high volatility and weaker closing prices have occurred. Since earnings on April 27<sup>th</sup>, it is easy to see why investors may have been acting sporadically with buying stock in

Samsung. Uncertainty of the future leadership of Samsung and anticipation for the Samsung Galaxy Note 8's may also explain this high volatility too. Given this, Stephen Janeczko is predicting a drop in the number of shares (volume) and price in Samsung stock. Our forecasted figure can be seen above in the excel graphs. Clearly, Stephen Janeczko Capital Management has bearish feelings towards the stock price of Samsung. We recommend that at this point in time, investors sell short shares they have before the stock price drops in order to save any gains they may have had from the earnings spike.

### Conclusion

There is no doubt that Samsung, despite the corporate governance and agency problems, is a great and powerful company. Although financial statements and earnings are above standard, good things must come to an end at some point. Given the evidence written in this report, Stephen Janeczko Capital Management does not see how Samsung's stock can continue to rise over the next three to six months. The current financial health of Samsung is good, but not sustainable. It is best investors get out of the situation and keep their gains before losses start to occur.

Chart of Financial Figures and Ratios

Noteworthy Statistics (M = Millions) 2016 & 2017	Samsung USD	Lenovo USD	Sony (USD)	LG Elec. USD	Apple
Cash	\$26,582.5396M	\$2,685.2M	\$18,071.9M	\$2,537.4M	\$256,841.0M
Accounts/Trade Receivables	\$20,098.851M	\$4,534.2M	\$8,569.0M	\$5,844.3M	\$15,754.0M
Short Term/Current Liabilities	\$45,285.2217M	\$15,760.3M	\$46,911.7M	\$13,033.4M	-\$79,006.0M
Long Term/Noncurrent Liabilities	\$12,009.3676M	\$6,146.9M	\$83,580.9m	\$7,247.0M	-\$114,431.0M
Revenue	\$174,075.5515M	\$42,588.8M	\$70,333.3M	\$49,351.7M	\$220,457.0M
Number of Employees	325,677	48,975	125,300	77,176	116,000
Basic EPS	136.2195	0.05	0.54	0.36	8.60
Diluted EPS	136.2195	0.05	0.53	0.36	8.55
Total Cash Flows from Investing	-\$25,575.536M	-\$475.6M	-\$11,599M	-\$2,061.6M	-\$45,191.0M
Total Cash Flows from Financing	-\$25,575.5M	-\$746.8M	\$4,307.0M	-\$240.4M	-\$27,505.0M
Market Capitalization	\$288,967.3M	\$8,650.8M	\$44,538.3M	\$11,089.9M	\$802,879.2M
Price to Earnings Ratio	14.88	11.53	64.85	122.27	18.01
Price to Book Ratio	1.55	2.35	1.90	0.71	5.98
Net Income	\$18,933.2M	\$753.1M	\$678.0M	\$593.6M	\$45,730.0M
Debt to Equity	7.92	107.42	38.26	64.83	67.86
Long Term Debt to Equity	0.68	82.78	21.73	52.47	58.81
Debt to Assets	5.83	13.04	6.79	22.87	27.05
Debt to Capital	7.34	51.79	27.67	39.33	40.43
Enterprise Value	\$228,358.7M	\$9,912.3M	\$43,027.1M	\$16,830.1M	\$644,560.2M
Gross Profit Margin	11.78	14.10	3.76	1.32	20.84
Operating Margin	14.49	0.14	7.11	2.42	27.84
Current Ratio	2.59	0.82	0.83	1.08	1.35
Leverage Ratio	1.40	7.39	6.92	3.16	2.47
Quick Ratio	2.06	0.42	0.57	0.64	1.05
CAPM Beta	0.47	1.45	1.79	1.00	1.44
Return on Assets	8.89	-0.49	0.43	0.21	14.93
Return on Equity	10.94	-3.62	2.95	0.59	36.90
Net Debt/EBITDA	-1.60	1.54	-2.85	4.12	-2.51
Accounts Receivable Turnover	8.16	8.91	8.41	7.82	13.23
Inventory Turnover	6.47	13.69	8.55	8.29	58.64
Accounts Payable Turnover	18.91	8.50	10.31	6.53	3.60
Cost of Debt	1.41%	4.5%	0.00%	1.2%	1.8%
Cost of Equity	11.1%	7.5%	9.5%	9.9%	10.9%
Sustainable Growth Rate	9.00	12.66	1.94	0.03	27.24
Dividends Paid	-\$2,685.9M	-\$379.4M	-\$25.3M	-\$101.2M	-\$12,413.0M

Altman Z Score	4.82	2.93	0.73	2.25	3.74
Average Credit Rating	A+	A-	A-	BBB-	A-

### References

#### Bloomberg Terminals

Bloomberg. (2017). Bloomberg Markets: Korea Stock Exchange KOSPI Index Retrieved from <https://www.bloomberg.com/quote/KOSPI:IND>

Financial CBONDS Information. (2012, April 4). Samsung issues dollar bond with record low yield spread. *Financial CBONDS Information*. Retrieved from <http://em.cbonds.com/news/item/560303>

Gurufocus. (May 2017). Samsung Electronics Co LTD SSNLF. *Gurufocus*. Retrieved from <http://www.gurufocus.com/term/wacc/SSNLF/Weighted%252BAverage%252BCost%252BOf%252BCapital%252B%252528WACC%252529/Samsung%2BElectronics%2BCo%2BLtd>

Investing.com. (2017). South Korea 5-Year Bond Yield. *Investing.com*. Retrieved from <https://www.investing.com/rates-bonds/south-korea-5-year-bond-yield>

Investopedia. (2017). Investopedia. Retrieved from <http://www.investopedia.com/>

Investors Relations. (2017). Audited Financial Statements. Samsung. Retrieved from <http://www.samsung.com/global/ir/>

Jun, K. (2017, May 10). How Moon Jae-in Aims to Kick-Start South Korea's Economy. *The Wall Street Journal*. Retrieved from <https://www.wsj.com/articles/how-moon-jae-in-aims-to-kick-start-south-koreas-economy-1494418580>

Khan, A. (2017, April 27). Samsung Galaxy Note 8 Release Date, Specifications and Design (Updated). Tapscape. Retrieved from <https://www.tapscape.com/samsung-galaxy-note-8-release-date-specifications-design/>

Kim S., and Hooyeon Kim. (2017, April 19). Korea Bribery Trial Focuses on Samsung Heir Talks With President. *Bloomberg Terminals*. Retrieved from <https://www.bloomberg.com/news/articles/2017-04-19/samsung-heir-s-trial-homes-in-on-five-minutes-with-ex-president>

Lee, Se Young. (2017, April 13). As Samsung's profit surges, some investors worry about peaking growth. *YAHOO! Sports*. Retrieved from <http://sports.yahoo.com/news/samsungs-profit-surges-investors-worry-peaking-growth-065817828--finance.html>

Milton, A. (2016, August 2). How to Read a Candlestick Chart. *The Balance*. Retrieved from <https://www.thebalance.com/how-to-read-a-candlestick-chart-1031115>

Morningstar. (May 2017). Samsung Electronics Co LTD SSNLF. *Morningstar*. Retrieved from <http://quicktake.morningstar.com/stocknet/bonds.aspx?symbol=ssnlf>

Reuters. (2017). Technology Overview. *Reuters*. Retrieved from <http://www.reuters.com/assets/curtainMainContentLoader?view=RSM-US-Curtain-MainContent-Sector-Technology>

Reuters, (2016, October10). Timeline: Samsung Electronics' Galaxy Note 7 recall crisis. *YAHOO! Finance*. Retrieved from <http://finance.yahoo.com/news/timeline-samsung-electronics-galaxy-note-7-recall-crisis-005434511--finance.html>

Robertson, T. (2017). How to Improve Return on Equity. *Chron*. Retrieved from

<http://smallbusiness.chron.com/improve-return-equity-59183.html>

RTT News. (2017, April 27). Samsung Q1 Profits Climb, See Higher Earnings Ahead; Stock Up.

*RTT News Corporate News*. Retrieved from <http://www.rttnews.com/2767492/samsung-q1-profit-climbs-sees-higher-earnings-ahead-stock-up.aspx>

Samsung. (2017). Samsung Website. *Samsung*. Retrieved from

<http://www.samsung.com/us/aboutsamsung/corporateprofile/history06.html>

Samsung. (2017). Investors Relations Stock Chart. *Samsung*. Retrieved from

<http://www.samsung.com/global/ir/stock-info/stock-chart/>

Samsung Newsroom. (2017, April 27). Samsung Electronics Announces First Quarter Results.

*Samsung*. Retrieved from <https://news.samsung.com/global/samsung-electronics-announces-first-quarter-results-3>

Sang-Hun, C. (2017, April 17). Park Geun-hye, Ousted President of South Korea, Is Formally Indicted. *The New York Times*. Retrieved from

<https://www.nytimes.com/2017/04/17/world/asia/park-geun-hye-south-korea-president-indictment.html>

Sang-Hun, C. (2008, April 17). Samsung's chairman is indicted for tax evasion in corruption case. *The New York Times*. Retrieved from

<http://www.nytimes.com/2008/04/17/business/worldbusiness/17iht-samsung.4.12107507.html>

Sang-Hun, C. and Paul Mozar. (2017, March 4). Samsung Bribery Scandal Threatens South Korea Success Story. *The New York Times*. Retrieved from <https://www.nytimes.com/2017/03/04/business/south-korea-samsung-bribery-lee.html>

Sang-Hun, C. (2016, October 31). Choi Soon-Sil, at Center of Political Scandal in South Korea, Is Jailed. *The New York Times*. Retrieved from <https://www.nytimes.com/2016/11/01/world/asia/south-korea-park-geun-hye-choi-soon-sil.html>

Sang-Hun, C. (2017, February 16). Lee Jae-Young, Samsung Heir, Is Arrested on Bribery Charges. *The New York Times*. Retrieved from [https://www.nytimes.com/2017/02/16/world/asia/korea-samsung-lee-jae-yong.html?\\_r=0](https://www.nytimes.com/2017/02/16/world/asia/korea-samsung-lee-jae-yong.html?_r=0)

Tarver, E. (2015, August 26). Key Financial Ratios to Analyze Tech Companies. *Investopedia*. Retrieved from <http://www.investopedia.com/articles/active-trading/082615/key-financial-ratios-analyze-tech-companies.asp>

Trading Economics. (2017) South Korea Corporate Tax Rate. *Trading Economics*. Retrieved from <http://www.tradingeconomics.com/south-korea/corporate-tax-rate>