Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Economics

Bachelor Thesis

Economic Analysis of Facebook Stock

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CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

BACHELOR THESIS ASSIGNMENT

Evan Conner Clayton

Business Administration

Thesis title

Economic analysis of Facebook stock

Objectives of thesis

The objectives of this thesis is to evaluate Facebook's stock, looking at historical development as well as present and future predictions. Information will be identified and analyzed from the volume of the stock to the prices of the stock from its early stages to its present stages, the influence of various factors that affect the stock. Also social role of Facebook will be examined.
Stock will be compared to others to show a comparison of just how large and powerful facebook and its stock are in the economy and world. Also the effect Facebook has had when it went public and the reaction of investors and the public will be evaluated.

Methodology

All of this research will be done by searching reputable financial sources such as the NASDAQ, Bloomberg, CNN, Reuters, The New York Times and other internet based resources using methods of extraction, induction, synthesis, deduction. This will be worked on gradually, firstly by finding general information about facebooks stock over a period of time to get a general idea about the company. Then after a general outline will be created to be able to stay on topic and focused throughout. Analytical section will make use of methods of financial analysis such as horizontal and vertical analysis, intrinsic value of stock or technical analysis such as moving averages.

The proposed extent of the thesis

40 pages

Keywords

Facebook, stock, investment broker, finance, NASDAQ

Recommended information sources

Hirst, Francis W. The Stock Exchange; a Short Study of Investment and Speculation. New York: H. Holt and;, 1911. Print.

Isaacman, M. (2001). The NASDAQ investor. New York: McGraw-Hill.

Ponzio, Silvia. Facebook. Milano: Sperling & Kupfer, 2009. Print.

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Declaration

I declare that the bachelor thesis called "Economic Analysis of Facebook Stock" has been generated by myself as the result of my own original research. Only sources I used are listed in the references. As the author of the bachelor thesis, I declare that the thesis does not break copyrights of any other person.

In Prague on

Evan Clayton

Acknowledgement

I would like to thank my thesis supervisor, Mr. Prochazka for his guidance throughout the entire thesis process as well as my friend Frantisek Demko for his role in motivating me to study in Europe. Also, and most importantly I would like to thank my parents, Robert and Michele for their never-ending love and support throughout my studies because without them none of my past few years in Prague and at CZU would be possible.

Analysis of Facebook Stock

Summary:

This bachelor thesis was written to discuss and analyze the extremely influential corporation known as Facebook, and to gain relevant and useful knowledge of its stock.

The bachelor thesis is split into two main sections; the theoretical section and the practical section. The theoretical section is mainly to inform the reader about general information related to the topic, for example a brief history about the company, what are stocks and how do they work, and other general information to give the reader a background before the practical section. Then the second section is the practical section which gives an analytical approach to the topic by analyzing and concluding whether Facebook was, is, and will be a good choice as an investment. The information that was found is concluded to help convince the reader whether or not they should invest into Facebook.

Keywords:
Facebook, Stock, Economics, Investing, Social Media, Profits, Influence, Analysis

Analýza akcií Facebooku

Souhrn:

Tato práce byla napsána pro diskutovaní a analyzovaní extrémnych vlivu společností známou jako Facebook a získat relevantní a užitečné znalosti o akciích .

Bakalářská práce je rozdělena do dvou hlavních částí ; teoreticke částí a prakticke částí . Teoretická část je především informovaní čtenáře o obecné informace vztahující se k tématu, například stručnou historii o společností , jaké jsou akcie a jak fungují , a další obecné informace, které mají dát čtenáři přípravu před praktickou části . Pak druhá část je praktickou, která dává analytický přístup k tématu tím, že analyzuje a zjišťuje, zda Facebook byl , je a bude dobrou volbou jako investice. Informace, které bylo zjištěno, je shrnuto pro přesvědčení čtenáře , by měly, nebo ne investovat do Facebooku.

Klíčová slova : Facebook , Akcie , Ekonomika , Investice , Sociální média , Zisk , Vliv , Analýza

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List of Abbreviations

CEO	Chief Executive Officer
DIP	Direct Investment Plans
DJIA	Dow Joes Industrial Average
DRIP	Dividend Reinvestment Plan
E-Business	Electronic Business
E-Commerce	Electronic Commerce
EMH	Efficient Market Hypothesis
Etc	Et cetera
GAAP	Generally Accepted Accounting Principles
IBM	International Business Machines
IPO	Initial Public Offering
NASD	National Association of Securities Dealers
NASDAQ	National Association of Securities Dealers Automated Quotation System
Non-GAAP	Non - Generally Accepted Accounting Principles
NYSE	New York Stock Exchange
S&P 500	Standard and Poor's 500
TV	Television
U.S.	United States

1. Introduction

In almost every modern, civilized country almost everyone knows what Facebook is, or at least has heard about it. With global popularity and an extremely large and expanding social media presence, Facebook is becoming a globally known corporation with vast amounts of influence in culture and society. It has changed the world, arguably for the better or worse. With a large influential company, such as this comes a lot of economic presence.

Hundreds of thousands of investors and hopeful individuals are looking to hopefully profit off a corporation like this and it takes a lot of careful analyzing, patience, and a little bit of luck to make it out with a profit.

In this bachelor thesis, the reader is going to become one of these “investors” and they are going to try to be convinced whether to invest in Facebook or not.

2. Thesis objectives and Methodology

2.1 Objectives

There are two main goals/objectives of this thesis. The first is to give the reader thorough information about the topic (such as information pertaining to Facebook, its stock, and investments in general) so that the reader can get an understanding of the topic before continuing to the second objective of the thesis. The second objective of the thesis is to try to convince the reader whether or not Facebook was, is, and will be a good choice as an investment. This analysis has practical relevance to the field of economics and management as well as business administration so its directly related to the field of study in which the author is enrolled.

2.2 Methodology

The objective will be accomplished by firstly, giving the reader knowledge about the topic such as general information about the company, about stocks, about how to analyze them, etc. so that the reader can have a good understanding of the topic before getting into the more intricate and detailed analysis. Then after the reader has information about the topic and has a general understanding, the reader will be given some criteria which will either be proven to be met or not met which will help to conclude whether or not Facebook was, is and will be a good investment. This will be done by using fundamental and technical analysis, however most of the analysis was done with a fundamental approach rather than technical approach.

3. Theoretical Section

3.1 Stock

As an American myself, the word “stock” brings many things to mind. Some of these thoughts include “wealth, corporation, investment, business, The Great Depression, success, market, and Wall Street. This simple word Stock influences everything around us. It affects so many things, from the food you eat to the cars you drive. Stock can make a person very wealthy and powerful, but can also do the complete opposite, by making a person very poor.

While there are many types of stock the main type is known as “common stock”. Common stock is simply, ownership in part of a company. When you own a share in a company (stock), you essentially own a part of the company. (Petr Prochazka, 2015) Whether that be part of the company cars driven by the employees, salaries paid to the CEO, or the advertising budget of a company. You have a piece of that company.

Along with owning common stock, comes some benefits. The first main benefit is the entitlement to vote at shareholder meetings. The second main benefit is you receive dividends that the company issues. (Paul Mladjenovic, 2016)

Owning stocks are essentially investing in a company and hoping they do better in the future then they are currently. This leads to a profit or loss depending on your investment. (North, Charles, and Charles J. Caes, 2012)

Stocks have many benefits but are also generally risky. Common stock however has good returns and quite reasonable risks. Common stock generally gets between 8-12% per year. (Rodney Hobson, 2012)

The risks of stocks though are generally dependent upon the company. If you purchase stock in a well-known, powerful, and influential company that generally has consistent outputs its generally less risky than an investment in a company that’s just starting out that doesn’t have much of a track record. (Source – Own Self)

When an investor wants to purchase stocks or sell stocks typically a type of middle man is used. This “middle man” is known as a brokerage company. A brokerage company helps connect a buyer and seller to conduct a transaction which the brokerage company then takes a commission out of. (Richard J. Teweles, and Edward S. Bradley. 1998)

So for example: John wants to buy a share of Facebook for 100 dollars and Peter has a share of Facebook stock that he would like to sell for 100 dollars. Brokerage company Donald Financial helps the two with the transaction and takes a commission such as 3%. It works out great for all parties. (Source – Own Self)

In the case that two brokerage companies represent a buyer and seller, which happens quite often, the two companies will then split the commission. (Richard J. Teweles, and Edward S. Bradley. 1998)

Pros of common stock

- There are many choices of public companies to choose from
- Finding information on the company is now easy to find with sources such as the internet
- Common stock is very easy to buy and sell, so its accessible to everyone

Source: (Rodney Hobson, 2012)

“Two of the important characteristics of common stock investment are the large profits that can come with proper handling, and the high degree of skill, knowledge, and judgment required for such proper handling” (Philip A. Fisher, 2003)

Cons of common stock

- Your original investment is not guaranteed. (There is always the risk that the stock you invest in will decline, or you may lose your entire principal.

- Your stock is only as good as the company you invest in (A poor company means stock poor performance)

(Rodney Hobson, 2012)

3.1.1 What are the factors that influence stock to go up and down?

The factors that affect stock and its prices are a very basic concept of economics. It's simply, supply and demand. Demand is the want or need for something and supply is providing it. The more people that want to buy a stock (the demand) then there is supply, then the price goes up. Just as with it going up, it can also go down if more people are selling, than trying to buy it. (Richard J. Teweles, and Edward S. Bradley. 1998)

A simple example to understand this basic concept is:

Apple Computers is about to release a new iPhone that is supposed to be "the next big piece of technology" which causes a lot of stir in the investment world. Apple for example only has 1000 stocks but they are all sold to investors already. This is the supply, and because its already all taken there is none left for sale and because investors are predicting Apples "next big piece of technology" is going to do very well, more investors are trying to get Apple stock. Because they are all already sold the price therefor increases in value, which is caused by the demand. (Source: Own Self)

Besides supply and demand, what are other factors affecting stock and its price? Generally, it's the news of the company, whether its news is positive or negative. If a company has a very good reputation for staying steady and increasing, and has a good track record than likely its price will be high and remain high because confidence is high in the company. A company that has a bad reputation, or has generally in the past been risky will cause investors to look elsewhere for investments or to lose confidence in the company therefore decreasing the value of its stock. (Source: Own Self)

With all this being said about the factors that affect stocks price, its concluded that price is a reflection of what the investors feel what the company they are investing in is worth. (Rodney Hobson, 2012)

With that being said, its important to note a common misconception about stock prices. A common mistake made when considering the value of stock prices by a company's market capitalization. This is wrong because something (in this case a company) is not always the value that it is priced at. (Rodney Hobson, 2012)

For example, a man is in the market to buy a flat. He looks all over and finally finds one for sale at 30,000 euros. He purchases the flat and is quite satisfied. Later, he realizes that similar neighboring flats are selling for 80,000 euros. The price he paid didn't directly represent the value by its price. So while the flat may have a value of 80,000 euros, he only paid a price of 30,000 euros. (Source: Own Self)

Another important factor that influences stock prices greatly is a company's earnings. The earnings, which are the company's profits, shows how well the business is doing. It's quite a simple concept. If a company makes a lot of money, then its assumed the company is doing well. Its stock price generally reflects that. These earning reports are often analyzed very closely by investors and media sources such as the Wall street Journal. The people and media sources that analyze companies and their earnings reports often use the data to predict future values by using the history of the stocks, the current situation of the stocks and the likely future of the stocks. While this is a good strategy its often more meticulous than it seems. These predictions for the future come into play when the company releases its actual earnings report, so that it shows if the predictions were correct or incorrect. Generally, if its predicted that a company will do well and increase its value and it does do that then its prices will increase, and vice versa, but if a company predicts it will do well and doesn't do well then it decreases. (Richard J. Teweles, and Edward S. Bradley. 1998)

For example:

If Apple has released a new iPhone every year in September since 2008, and every year the iPhone has been a success than its assumed that in the coming September that Apple will release a new iPhone and its stock prices will increase in value. But as stated earlier, if every year Apple releases a new iPhone that has been successful since 2008, and this year it happens to not be as successful as before or if it is a complete failure, then Apples stock price will decrease to reflect that. (Source: Own example)

3.1.2 Types of stock

There are three main types of stock:

- Common Stock
- Preferred Stock
- Customized Stock

Source: (Rodney Hobson, 2012)

Common stock

Very simply it's the most "common" form of stock. This type was explained earlier but for a short recap it's a general form of stock that represents ownership in a company and part of the profits (dividends paid out to investors). One share is one vote to elect members of the stocks board who oversee large decisions made. Generally common stock yields higher returns than other types of investments. With great yields comes great risk so while they can make a lot of profit and usually do, they are one of the riskier investments. If a company goes bankrupt or liquidates its assets the shareholders are left to fend for themselves and will not usually get money back out of their initial investment. (Rodney Hobson, 2012)

Preferred stock

It's a stock that's similar to common stock in the way that it's a small ownership in a company but different in the way that it has different voting rights. Usually investors that have preferred stock get a guaranteed fixed dividend forever. Another benefit of preferred stock is if a company would declare bankruptcy and liquidate its assets, a preferred stock holder gets paid back as much as possible before a common shareholder is. A downside though is that a company has the right to purchase shares back from the shareholder at any time for any reason, although for a slightly higher price than the initial amount. (Rodney Hobson, 2012)

Preferred stock generally doesn't have voting rights like common stock do but preferred stock does have some key benefits over common stock. Preferred stockholders have a priority over common stock holders in the way that preferred stock holders receive their dividends before common stock holders do if the company were to declare bankruptcy. For an easy comparison, a preferred stock is similar in many features to a bond. (Paul Mladjenovic, 2016)

Customized stock

It's possible for companies to "customize" different classes of stock in any way they like. This is usually for when a company wants to keep voting rights to a certain group of people often to the company's advantage. (Rodney Hobson, 2012)

When there is more than one class of stock, usually they are designated as Class A and Class B. For example, "Berkshire Hathaway" has two classes of stock. Their ticker initials are (BRK) so to identify the different classes it would be in the form:

BRKa, BRKb

or

BRK.A, BRK.B

Source: Own example but idea from (Investopedia Staff (b), 2003)

3.1.3 Where are stocks generally found?

Stocks are exchanged on platforms known as stock exchanges. These exchanges are usually quite large platforms that have many participants, known as stock brokers who buy, and sell stocks. These exchanges are necessary because they create a concentrated marketplace for buyers and sellers to conduct transactions without difficulties finding other buyers or sellers. (Richard J. Teweles, and Edward S. Bradley. 1998)

There are two major marketplaces for stocks. These marketplaces are both American and they are the NASDAQ, and the NYSE. (Richard J. Teweles, and Edward S. Bradley. 1998)

NASDAQ

Started on February 8th, 1971, NASDAQ was started as part of the National Association of Securities Dealers (NASD), and was formed to create a global electronic marketplace to buy and sell securities, safely as well as provide an index for US based technology stocks. The Nasdaq includes at least 3000 stocks, many of them large American Technological corporations such as Apple, Microsoft and Intel. In 2006 it separated from the NASD and began to operate as a national securities exchange up until 2007 when it combined with a Scandinavian group exchange (OMX) to become what it is at the present day, "Nasdaq OMX group". This group is now the largest exchange group in the world, handling 1 in 10 of the worlds securities transactions. (Rik W. Hafer, Scott E. Hein. 2008)

Based in New York, the Nasdaq OMX group operates in 26 different markets. Generally, they operate in Equities, options, fixed income, derivatives and commodities as well as three clearing houses and five central securities deposits in Europe and the US. The NASDAQ OMX group is so influential in the marketplace that exchanges occur in 70 different exchanges and can take place in 50 different countries. (Rik W. Hafer, Scott E. Hein. 2008)

NASDAQ is widely used because of its different approach to the standard "specialist system" which had been the most widely used model for almost a century. NASDAQ is now the standard trading model for almost all global markets worldwide. (Rik W. Hafer, Scott E. Hein. 2008)

NYSE

The New York Stock Exchange or NYSE is considered the largest equities based exchange in the world because of its market capitalization. With origins dating all the way back to 1792, this is almost like the grandparent of all modern day exchange marketplaces. Its home to most of the world's largest and well-known companies. (Investorwords.com, 2016)

The NYSE was previously a private organization but went public in 2005 after acquiring Archipelago, the electronic trading exchange. (Investorwords.com, 2016)

Trading at the NYSE is done the old fashion way which is on a large trading floor on Wall Street in New York City. Representatives of buyers and sellers, known as Stock Brokers exchange and negotiate prices to make a deal for their clients. This system is called an Outcry System which allows for a fair market. The NYSE is a very good trading place because all of its regulations it has to try to prevent fraud and unfair trading. (Investorwords.com, 2016)

The main difference between the two platforms is that the NASDAQ is an electronic system, so it's not tangible while the NYSE is an actual physical place in New York City. Some other smaller differences are that the NYSE is significantly older (dating back to around 1792) whereas the NASDAQ being an electronic platform is not as old, being started in 1971. (Investorwords.com, 2016)

3.1.4 Stock Indices

What are Indices?

An index is an economic measure calculated with statistics to create an imaginary portfolio of securities for a particular market or partition. Each index is different in its method of calculation but they are usually all expressed by a percent of change. (Charles M. Sutcliffe, 2006)

What is the use of an index?

An index is designed to help quantify large movements of stock prices for large parts of the market or for the entire market. (Charles M. Sutcliffe, 2006)

What are the types of indices?

There are a few major types of indices:

- Price Weight Index
- Market Value Weighted Index
- Broad Based Index

- Composite Index

Source: (Matt Krantz, 2016)

Price Weight Index

Price Weight Index follows changes based on the change in the stock's price per share. (Matt Krantz, 2016)

An example is if you have two stocks; stock A worth $20 and stock B worth $10. With this particular type of index, the larger portion would be with A rather than B. If these were the only two stocks in an index stock, stock A would be 67% and the stock B would be 33%. (Matt Krantz, 2016)

Market Value Weighted Index

Market value weighted index is the type of index that follows the portion of stock based on its market capitalization. (Matt Krantz, 2016)

An example is you have two stocks, stock A being 5 million shares of a $20 stock and stock B being 1 million shares of a $5 stock. The market cap of A is $100 million. The market cap of B is $5 million. With this market value weighted index, stock A represents a much larger portion of the indexes value based on its larger market cap.

Example from self but idea from (Matt Krantz, 2016)

Broad based Index

Broad based index is a type of index that takes a "snapshot" of an entire market to be able to use as a comparison. This is a largely used type of index used by investors to compare their progress. An example is the S&P 500 or the Wilshire 5000 (Matt Krantz, 2016)

Composite Index

Composite index is an index that uses an average that is a combination of several averages or indexes. An example of this would be the NYSE composite. (Matt Krantz, 2016)

Some of the most well-known indexes are:

- The Dow Jones Industrial Average (DJIA)
- The S&P 500
- The Wilshire 5000
- The Nasdaq composite Index
- The Russell 2000

Source: (Kate Shick, 2016)

The Dow Jones

The Dow Jones Industrial Average (DJIA) is a price weighted index that is one of the most famous, old, and widely used indexes in the entire world. It has 30 of the most influential and powerful companies in the United States. It's called an average because it was originally calculated by adding up the price per share of the stock of each company and dividing by the number of companies. However, it's no longer that simple to calculate because of the changing times with more intricate market workings. (Kate Shick, 2016)

The DJIA is so large, it accounts for nearly a quarter of the value of the U.S. stock market. It's important though that even though a percentage should not be misunderstood as the entire market dropping because it's a weighted function system. (Kate Shick, 2016)

For example, if stock A has a $5 change in a $150 stock and stock B has a change of $1 in a $50 stock, the effect will be the same even though the change of A is about 3% while stock B has a change of 2%.

Example from self but idea from (Kate Shick, 2016)

A change in the Down Jones is a representation of the changes of investors feelings about a company's earnings and risks which is shown by the average. Typically, because the Down

Jones lists some of the largest U.S. companies so large fluctuations generally follow the entire market. (Kate Shick, 2016)

The S&P 500

The S&P 500 is an index that gives a good general understanding of the movement of the U.S. Market place. It's much larger and has many more diverse companies than something more specified such as the Dow Jones which lists the major companies only. It accounts for 70% of the total value of the American market place. (Kate Shick, 2016)

The S&P 500 dates all the way back to 1926 but for quite a long time before 1957 the index didn't even have 500 stocks which was quite strange considering its name had the number 500 in it. Then after 1957 it indeed had 500 stocks of which 425 were industrial based stocks, 25 were railroad based stocks, and 50 were utility corporation stocks. (Jeremy Siegel, 1998)

The current list of stocks on the S&P 500 range quite greatly. There are sectors of energy, industrials, consumer corporations, healthcare, financials and more. (Kate Shick, 2016)

The S&P 500 index is market weighted, therefore every stock on the index is based on the total market capitalization. This is a broad based index. Generally, the S&P 500 is considered to be a better index to use to determine the markets performance because portfolios can be compared much better because they are measured in percentages instead of dollars. (Kate Shick, 2016)

The Wilshire 5000

The Wilshire 5000 is considered one of the largest indexes because it has almost all publicly traded companies with headquarters in the U.S. with available data in their index. This index has a very broad range of stocks listed which makes it a near perfect measure of the U.S. market. Even though it's a great index it's still not used as often as the S&P 500. (Kate Shick, 2016)

The Nasdaq Composite Index

The Nasdaq composite Index is a composite index of all the stocks traded on the NASDAQ stock exchange. This index includes not only U.S. companies but also some that are based outside of the U.S. A large portion of the companies listed on this index are technological based companies. However, they also list companies of insurance, transportation, financial and industrial sectors. It includes small and large companies with small market capitalizations so there is quite a range of companies on this index. The movement however of this index, is generally related to the technology sector because most of the companies are technologically based. (Kate Shick, 2016)

The Russell 2000

The Russell 2000 is a partition of the Russell 3000, an index that lists 3000 of the largest publicly traded companies. The difference between the Russell 2000 and the Russell 3000 is that the Russell 2000 lists 2000 of the smallest stocks from the Russell 3000. This index became very popular during the 1990s because many small capitalization stocks increased greatly causing investors to do very well during this period. The Russell 2000 is considered the best index for small companies on the market. (Kate Shick, 2016)

How does a stock index look like?

Below is a graph of how a stock index looks (from the point of view of an investor) This example graph is the entire span of the NASDAQs history so it's quite large. It should be obvious that the trend is that the stock market generally has been increasing, with a few exceptions.

Figure 1: Stock Index Example (of Facebook stock)

Source: (Finance.Yahoo.com (a), 2016) – Own Computation

Table 1: Example of a Stock Index: Nasdaq

Symbol	Name	Last Trade	Change	Volume
AAPL	Apple Inc.	**96.99** 11:19AM EST	↓1.14 (1.16%)	13,621,951
AXP	American Express Company	**53.71** 11:19AM EST	↑0.10(0.19%)	1,987,237
BA	The Boeing Company	**117.39** 11:19AM EST	↑1.05(0.90%)	2,681,099
CAT	Caterpillar Inc.	**65.71** 11:19AM EST	↓1.55 (2.30%)	2,546,460
CSCO	Cisco Systems, Inc.	**26.35** 11:19AM EST	↓0.11 (0.42%)	9,765,021
CVX	Chevron Corporation	**87.57** 11:19AM EST	↓0.74 (0.84%)	3,284,604
DD	E. I. du Pont de Nemours and Company	**59.91** 11:18AM EST	↓0.69 (1.14%)	739,040
DIS	The Walt Disney Company	**94.88** 11:19AM EST	↓0.62 (0.65%)	2,986,600
GE	General Electric Company	**29.09** 11:19AM EST	↓0.25 (0.85%)	8,406,708
GS	The Goldman Sachs Group, Inc.	**148.20** 11:19AM EST	↓2.74 (1.82%)	1,589,652
HD	The Home Depot, Inc.	**120.25** 11:19AM EST	↓0.96 (0.79%)	1,195,089
IBM	International Business Machines Corporation	**133.06** 11:19AM EST	↑6.96(5.52%)	5,466,321
INTC	Intel Corporation	**29.59** 11:19AM EST	↑0.12(0.42%)	5,855,988
JNJ	Johnson & Johnson	**103.99** 11:19AM EST	↑1.49(1.45%)	3,842,926
JPM	JPMorgan Chase & Co.	**57.73** 11:19AM EST	↓1.04 (1.77%)	5,965,905
KO	The Coca-Cola Company	**43.51** 11:19AM EST	↑0.02(0.05%)	3,291,064
MCD	McDonald's Corp.	**117.76** 11:19AM EST	↓0.88 (0.74%)	2,435,529
MMM	3M Company	**156.53** 11:19AM EST	↓0.09 (0.06%)	542,796
MRK	Merck & Co. Inc.	**50.62** 11:19AM EST	↑0.02(0.04%)	2,616,933
MSFT	Microsoft Corporation	**52.46** 11:19AM EST	↑0.04(0.07%)	8,313,633
NKE	NIKE, Inc.	**58.65** 11:19AM EST	↑0.48(0.83%)	2,822,681
PFE	Pfizer Inc.	**29.82** 11:19AM EST	↑0.19(0.64%)	12,250,794
PG	The Procter & Gamble Company	**81.30** 11:19AM EST	↓1.15 (1.40%)	2,592,461
TRV	The Travelers Companies, Inc.	**108.80** 11:19AM EST	↓0.38 (0.35%)	507,942
UNH	UnitedHealth Group Incorporated	**118.26** 11:19AM EST	↓0.04 (0.03%)	1,426,691
UTX	United Technologies Corporation	**88.53** 11:19AM EST	↑0.40(0.46%)	1,582,990
V	Visa Inc.	**71.50** 11:19AM EST	↓0.53 (0.74%)	2,364,417
VZ	Verizon Communications Inc.	**50.62** 11:19AM EST	↑0.30(0.60%)	6,075,426
WMT	Wal-Mart Stores Inc.	**63.30** 11:19AM EST	↓2.81 (4.25%)	13,271,582
XOM	Exxon Mobil Corporation	**82.17** 11:19AM EST	↑0.17(0.21%)	5,818,682

Source: (Finance.Yahoo.com (b), 2016)

3.2 Fundamental and Technical Analysis

Fundamental and technical analysis are the basis for trying to make use of information in the financial world. They are used to help to try to predict as best as possible, future movements of a company to help benefit the investor. Although they are both useful for this, they have quite a lot of differences which divide their users greatly. (Cory Janssen, Chad Langager, and Casey Murphy (a), 2006)

3.2.1 Technical Analysis

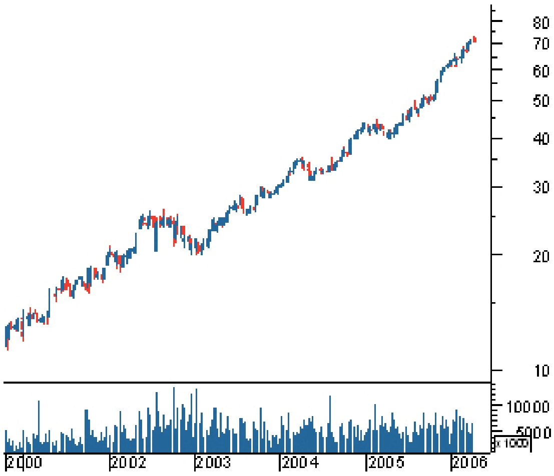
Technical Analysis generally approaches stock pricing from data in their stock history, which are condensed into charts which are used to generate functions such as moving averages to help determine if the time is right according to historical trends, to buy or sell. These type of investors believe that there is no value of fundamental analysis because they believe all important information is found in the company's stock prices and charts. Although there are technical analysts, generally the investing community does not rely on them as much because they are believed to not have validity and are often even mocked. The reason being is that technical analysts are only helpful to trading because of their short term validity because of the data being based on historical prices. This obviously is because the price of a stock can be assumed based on averages but only for so long because in the business world anything can happen, so in theory technical analysis is good especially for short term trading but for long term investing fundamental analysts are better for investing. (Cory Janssen, Chad Langager, and Casey Murphy (a), 2006)

Trend

Regarding to technical, probably the most important method of helping to conduct a technical analysis is a trend. A trend being a general direction that a stock or market is heading in. (Investopedia Staff (c), 2006)

Example of a stock chart with a trend

Figure 2: Example of a trend



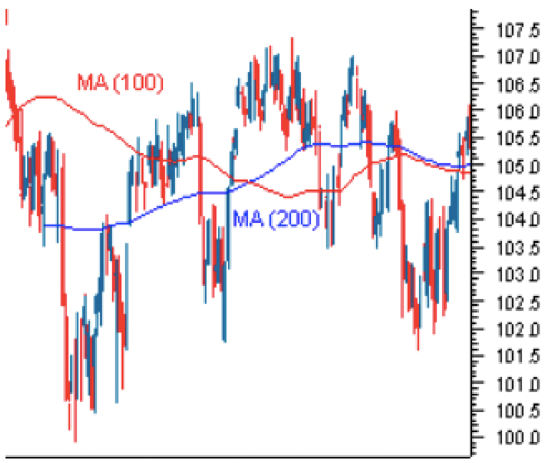
Source: (Investopedia Staff (c), 2006)

As it can be seen the chart is continually increasing at a steady pace. This is quite helpful because it can be assumed with simple knowledge that if the data has been increasing for 6 years at a steady pace that its quite likely that it will continue on this trend and continue increasing.

Although a trend is usually easy to see, there are quite a few instances when it can difficult to understand the general trend because their isn't a clear enough indication if the price is increasing or decreasing. (Investopedia Staff (c), 2006)

Example of a difficult to interpret trend

Figure 3: Example of a difficult to interpret trend

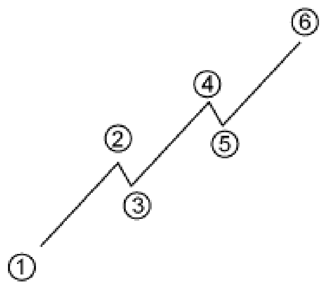


Source: (Investopedia Staff (c), 2006)

As it can be seen above its quite difficult to determine whether the stock is increasing or decreasing. To be able to help determine a more difficult chart as the one above, more components of a trend must be explained.

In trends, almost always the trend is not a straight smooth path. It is generally a general direction but has slight bumps here and there. These bumps are showing a change in the trend but as long as they continue in the trend line and don't fall below the previous bump they are considered to be continuing on the trend. (Investopedia Staff (c), 2006)

Figure 4: Trend line components



Source: (Investopedia Staff (c), 2006)

1 = The starting position of the trend
2 = The first increasing trend of the overall trend line
3 = The slight bump/peak (decrease) in the trend, and even though it slight decreased the overall trend line is still considered to be on a trend because it did not fall below #1.
4 = This increase from #3 is similar in the way that #2 increased from #1. It's an increase in the trend, contributing to the overall trend line.
5 = This is again a bump in the trend line, a slight decrease but because it has not fallen below the previous lowest point, the trend is still considered to be part of the overall trend line.
6 = Continually increasing on the trend line

Source: (Investopedia Staff (c), 2006)

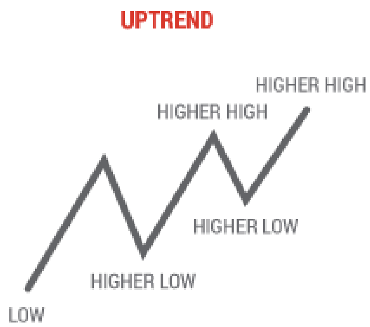
Within trends, there are three main types which are:

- Upwards
- Downwards
- Sideways/Horizontal

Source: (Investopedia Staff (c), 2006)

Upwards Trend or Uptrend

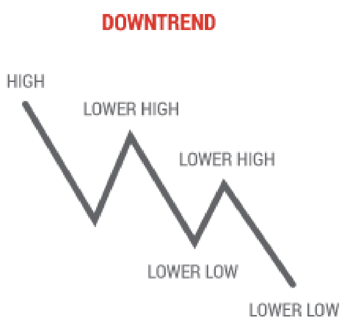
Figure 5: Upward Trend



Source: (Xm.com, 2016)

Downwards Trend or Downtrend

Figure 6: Downward Trend



Source: (Xm.com, 2016)

Sideways and horizontal trend (also can be called range) (Xm.com, 2016)

Figure 7: Sideways/Horizontal Trend example

Source: (Xm.com, 2016)

Along with the three different types of trend lines there are also three different types of lengths of trend lines

These are

- Long Term Trend
- Medium Term Trend
- Short Term Trend

Source: (Investopedia Staff (c), 2006)

Below is an example showing all three combined into one chart

Figure 8: Long/Medium/Short Term Trends

Source: (Investopedia Staff (c), 2006)

The long-term trend is generally over a long period which looks at which direction the stock is moving at over a greater period.

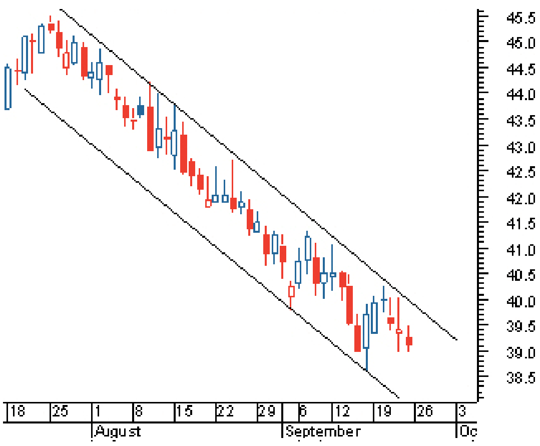
Within the long term are the medium-term trends which are the trends which are not as long as the long-term trend, but are still significant enough to notice and affect the overall trend line. Even though the long-term trend is the most important, these medium trends are still significant because they show how much fluctuation the overall trend line is enduring. (Investopedia Staff (c), 2006)

The short-term trend is not as significant as the other longer trend parts but they still show small amounts of fluctuations. (Investopedia Staff (c), 2006)

Another large part of trend lines that make it quite useful to get an accurate trend are channels. Channels also known as channel lines are two parallel lines that help to support the trend line and show the boundaries of the stocks trading prices. This is done by having the upper trend line connecting a series of highs in the prices, while the lower trend line is connecting a series of the lows in the prices. This boundary is what investors are expecting the stock to trade within. If the price is out of these boundaries, then investors tend to believe the price can change sharply and therefore react accordingly. (Investopedia Staff (c), 2006)

An example of a channel

Figure 9: Example of a trend channel



Source: (Investopedia Staff (c), 2006)

The importance of charts in Technical Analysis

There are 4 main types of charts in technical analysis and they are:

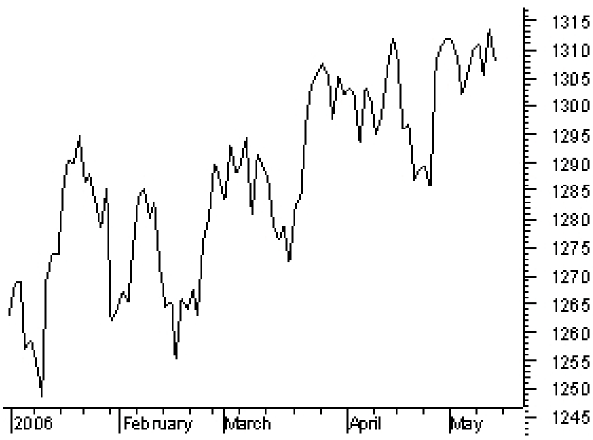
- Line Chart
- Bar Chart
- Candlestick Chart
- The point and figure Chart

Source: (Cory Janssen, Chad Langager, Casey Murphy (b), 2006)

The simplest of the four charts used in technical analysis is the Line Chart. This is because it represents only closing prices for a period of time. Its created by connecting all the closing prices over a period of time. A downside to this type of chart is that part of its simplicity is that it doesn't include important detailed information including visual information such as highs, lows, and opening prices. Although it has that as a big downside, a benefit is that it's simple to understand and even though it only shows the closing price that generally happens to be the most important price in the data anyways. (Cory Janssen, Chad Langager, and Casey Murphy (b), 2006)

Example of a line chart:

Figure 10: Example of a line chart



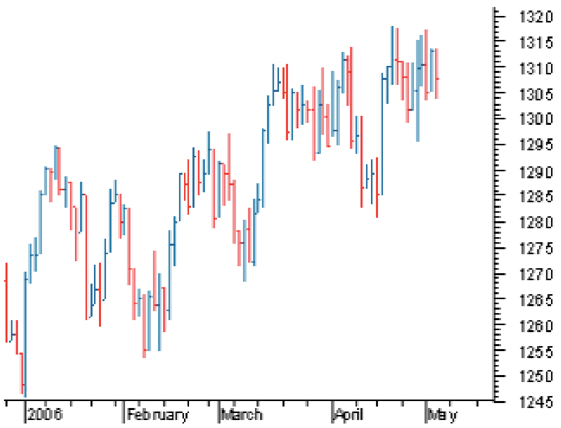
Source: (Cory Janssen, Chad Langager, and Casey Murphy (b), 2006)

Bar Charts

The bar chart is a sort of expansion onto the basic line chart because it adds several of the important missing components that the line chart leaves out. The bar chart is made up of a series of lines that go above and below the price. These lines represent the high and lows for the trading time as well as the closing price. The closing and opening prices are both represented by a vertical line and by a horizontal marking. The opening price is generally represented on the left side while the close is represented on the right side. Additionally, if the opening price (the left mark) is lower than the closing price (the right mark) then the bar will be colored black to represent an increasing period in the stock which means it has increased in value. On the other hand, a line that is red represents that a stock price has decreased in value. (Cory Janssen, Chad Langager, and Casey Murphy, 2006)

Below is an example of a Bar Chart

Figure 11: Example of a bar chart

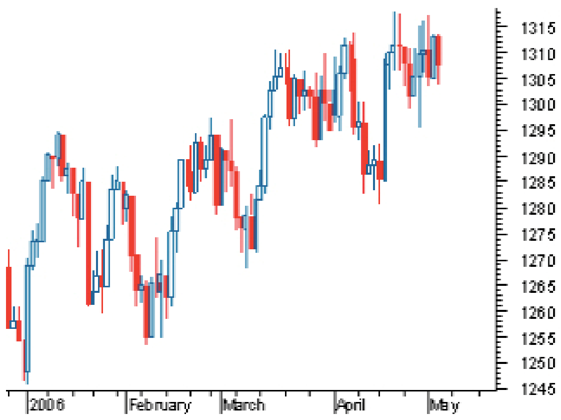


Source: (Cory Janssen, Chad Langager and Casey Murphy, 2006)

Candlestick Chart

The candlestick chart is similar to the bar chart but still has its obvious differences. Its similar in the way that it's made to give a visual representation. They also include thin vertical lines which help with these representations. However, the difference is based on the indicators of the open and close calls. There are two representations for days up and one for days down. When the price of the stock closes above the opening price, it will be represented with a white or clear line. When it's below the opening it will be red or black. (Cory Janssen, Chad Langager, and Casey Murphy (b), 2006)

Figure 12: Example of a candlestick chart

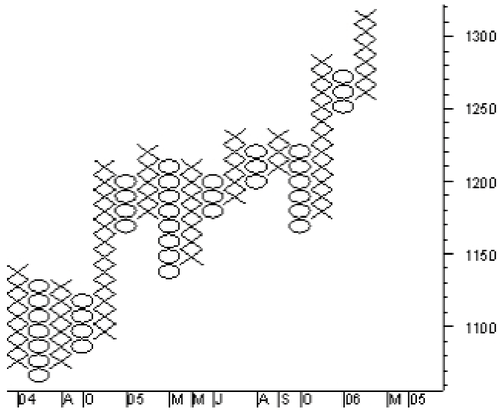


Source: (Cory Janssen, Chad Langager and Casey Murphy (b), 2006)

The point and figure chart

The point and figure chart is relatively unused nowadays but is quite important in the historical side of technical analysis charts. It only shows price movements and isn't concerned about volume or time. This type of chart tries to remove small price changes which are irrelevant for good traders. Point and figure charts also try to neutralize skewing. (Cory Janssen, Chad Langager, and Casey Murphy (b), 2006)

Figure 13: Example of a point and figure chart



Source: (Cory Janssen, Chad Langager, and Casey Murphy (b), 2006)

3.2.2 Fundamental Analysis

Fundamental Analysis generally uses various external sources to help determine a value of a stock based on the company's corporate actions, income statements, balance sheets, and public information such as the transition of major employees such as CEOs. A simplification of this theory is that if a company trades below its believed value then it can be assumed it's a good investment (as its undervalued) and vice versa. A downside to this type of investing is generally relevant information investors use are released quarterly (such as financial reports) and therefore are not very helpful in the short term. In other words, the data calculated from a fundamental analysis is generally much slower then than data used by technical analysts which have almost instant relevant information at their disposal. Compared to technical analysis, fundamental analysis is better in the long run because of its validity. (Ben McClure, 2003)

EMH Theory

Although the two are both used and have many differences they can be used both by companies to help get a variety of information of stocks, both technical and fundamental. However, most companies tend to choose fundamental over technical analysis because of academic theory known as "Efficient Market Hypothesis" or EMH. This academic theory basically says that whatever the market shows as the company's price is always the correct one and any past trading data is irrelevant. This is obviously important because as stated earlier, fundamental analyses are solely based on the companies past market prices. (Ben McClure, 2003)

There are three main forms of this EMH theory.

- Weak form efficiency
- Semi strong form efficiency
- Strong form efficiency

Source: (Ben McClure, 2003)

Weak form efficiency says that technical analysis cannot help when predicting future prices because the data has already been used and is in the past and therefore has no relation with the future prices. In this form, all past price information is included already in the price. (Ben McClure, 2003)

Semi strong form efficiency is similar to weak form efficiency in the way that it also has no relevancy in trying to predict future prices using past prices. (Ben McClure, 2003)

Strong form efficiency is a theory in which neither technical nor fundamentally analysts can help in predicting the future of a stock's price. It's a neutral approach where the investor must rely on other factors rather than fundamental and theoretical analyzations. (Ben McClure, 2003)

Qualitative View

A similarly important factor within fundamental analysis is known as the qualitative view of the company. In other words, simply the qualities that the company has which in theory can be used be people that use fundamental analysis to determine if the stock of a company is simply worth investing in. (Ben McClure, 2003)

The basic principles of this qualitative view are:

- The Business model
- Competitive advantage
- Management

Source: (Ben McClure, 2003)

The business model

The business model essentially answers the question “What does the company do?” It’s how a company makes money. There are many simple business models but also many complicated ones. (Ben McClure, 2003)

A simple business model could be McDonalds. To make money they sell hamburgers, fries, ice cream, soft drinks etc. This model is quite easy for anyone to understand. (Ben McClure, 2003)

A more difficult business model could be the American food company Boston Chicken. They didn’t make their money from selling food they made it from franchisees by charging very large interest rate loans and from royalties. (Ben McClure, 2003)

Competitive Advantage

A company’s long term success is often driven by their competitive advantage which helps maintain an edge over its competitors. Powerful advantages are brand names, for example Coca Cola. The reason being that if a soda has the Coca Cola logo on it and another soda has some lesser known brand logo on it, it’s much more likely the soda with the well-known Coca Cola logo on it will sell more and for a higher price. This is essentially what competitive advantage is all about. (Ben McClure, 2003)

Management

All armies need a leader, which is the general. Companies also need leaders, which are the CEO and his managers. This is so important in a company because they help to steer the company in the right direction in both times of success and times of struggle. A failing company can be resurrected if the CEO and his management team are good enough. (Ben McClure, 2003)

3.3 Facebook

3.3.1 Brief History of the beginning of Facebook

Facebook is one of the world's largest social media websites with a presence in almost every country. It's valued in the billions, with its creator being worth billions himself. With something so influential, valuable and powerful its often wondered how a company like this was be started. Well likely to most people's surprise, this massive company started out very primitively. It was started in theory on October 23rd, 2003 when Mark Zuckerberg (the creator of Facebook) launched a website by the name of "Facemash.com". Facemash allowed visitors of the site to compare student pictures side by side to let them compare who was good looking and who was not. The downside to the website was it was all created from information that was hacked by Zuckerberg from Harvard's database. Although his classmates demanded he shut the site down, one thing was very clear to Zuckerberg, which is that people love to see pictures of their friends online. This observation led to Zuckerberg working on a site called "HarvardConnection.com" which was the very primitive "early" stage of the now Facebook.com. (Daniel Zeevi, 2016)

January 11th, 2004, Mark Zuckerberg registered thefacebook.com as his social media sites domain name. After telling a few friends and numbers slowly growing, a friend suggested putting it on the Kirkland House online mailing list which has three hundred thousand people. Overnight many more people began registering and Facebook was turning into something big. (Daniel Zeevi, 2016)

In an article by the Harvard Crimson, Zuckerberg said *"It is clear that the technology needed to create a centralized website is readily available ... the benefits are many"*- Mark Zuckerberg

Source: (Daniel Zeevi, 2016)

Shortly after the launch Facebook grew and eventually was discovered by Sean Parker who was the co-founder of the popular music sharing computer application Napster. Parker began to advise Zuckerberg and Facebook. Then in 2004, Facebook received its first private investor from

Peter Theil, the founder of PayPal, with a purchase of 10.2% of the stake in the company in exchange for a $500,000 investment. (Daniel Zeevi, 2016)

Fast forward ahead to 2009, Facebook acquires the real time news aggregator site Friendfeed and in April of 2012 acquires the Picture sharing social media application Instagram for approximately 1 billion dollars which was just shortly after its initial public offering (IPO) on February 1, 2012. (Daniel Zeevi, 2016)

Facebook has covered a wide range of platforms from its primitive beginning until its (IPO) **I**nitial **P**ublic **O**ffering. (Daniel Zeevi, 2016)

3.3.2 What makes Facebook so valuable?

Facebook is a company worth billions, but it didn't get that way overnight. Earlier Facebook's history was discussed but now the factors that cause it to be valuable will be evaluated.

- Starting small and rolling out gradually
- Its intangible assets
- Diversified revenue streams

Source: (John Patrick Pullen, 2012)

Starting small and rolling out gradually

Let's look at not only Facebook but also another wildly successful corporation "McDonalds". What do these two things have in common? It might come as a surprise but both started slowly with similar tactics. Facebook started at one university and spread from university to university slowly so that the creator could get a feel for what the users like and dislike. McDonalds previous owner Ray Kroc expanded his locations slowly during the car crazy years in America of the 1960s by building demand and educating his customers for long term stability. (John Patrick Pullen, 2012)

"Growth may be slow and that may actually be a good thing, because you are serving the needs of the audience who needs you at that moment"-Melissa Parrish (An interactive marketing analyst for Cambridge, Massachusetts based Forrester Research)

Source: (John Patrick Pullen, 2012)

Since Facebook has followed this "starting small" method it has seen massive user numbers of over 901 million active monthly users (More than the populations of the U.S., Indonesia, and Brazil combined!) This massive number of users leads to a large amount of advertising potential. (John Patrick Pullen, 2012)

"Its smart data that allows you to effectively and efficiently target very specific audiences" – Melissa Parrish

Source: (John Patrick Pullen, 2012)

Intangible assets

Intangible assets are things that a company owns (asset) but they are intangible which means they aren't physical. Some examples include, copyrights owned by the company, or software owned by the company. Anything that's owned by the company that cannot be touched physically, but is still owned by the company. (John Patrick Pullen, 2012)

Facebook's intangible assets are important because while Facebook has large amounts of tangible assets (5.2 Billion dollars and at least 8 billion dollars of available credit) its intangible assets are still extremely important even if they don't seem to be. These intangible assets include at least 1300 patents purchased from Microsoft and I.B.M. for an undisclosed amount of money. Other intangible assets include acquisitions of small firms that have tools and capabilities not yet under Facebook's ownership. (John Patrick Pullen, 2012)

Of all the intangible assets, the most important is Facebook's storage of data from all of its 900 million monthly users. This data has massive potential for data mining and many companies want part of it. To put it in perspective, 889 million MORE people use Facebook than attend just one of the 405 regular season Major League Baseball games. (John Patrick Pullen, 2012)

It's the scale that makes the site so valuable *"You can reach massive audiences in a single platform"* – Melissa Parrish

Source: (John Patrick Pullen, 2012)

Diversifying revenue streams

For the past few years Facebook has seen tremendous revenue growth. (154% from 2009 to 2010 and 88% from 2010 to 2011). Most of this growth is from its main source of income: Advertising. (John Patrick Pullen, 2012)

Advertising is Facebook's main source of income with 82% of the sites revenue coming alone from it. 82% is a very large number but it has actually decreased from the year before in 2011 at 87%. Other sources of revenue include companies such as Zynga (third party applications in Facebook such as games, e.g. Farmville). (John Patrick Pullen, 2012)

Diversifying revenue streams can give a large company such as Facebook, lots of potential to expand and to maintain its income. For example, as stated earlier, besides Facebook's main income source of advertising, it uses a lot of third party application developers that sell virtual goods for its games and applications. (John Patrick Pullen, 2012)

With all of this said about Facebook's diversification, its left to ask what will its next revenue stream be? It's believed to be something with its mobile application, after all, it hasn't put an ad on a mobile device yet. (John Patrick Pullen, 2012)

3.4 Social Media

3.4.1 What is social media?

Social media is a type of online communication tool that is based on a community of users and their inputs. These inputs are generally interaction among themselves by sharing content. (Margaret Rouse, and Ivy Wigmore, 2016)

Social media can be seen in many different lights as a good thing or bad thing. Looking around during the present day on a walk at the park, the attention unlike 50 years ago is now not on the nature and trees and interaction with the real world but instead with the digital world in the form of social media. This disconnection is often seen as a negative in society because it slowly moves people from interacting with the real world to a more digital world, slowly and more steadily every time they use social media. Instead of sharing a meal with family members, people are now sitting on their phones chatting with friends. The flip side to this is also that it provides instant connections worldwide unlike anything humanity has ever seen before. People can keep in touch with friends, family and even strangers from all around the world in real time. (Margaret Rouse, and Ivy Wigmore, 2016)

Although people are always debating whether social media is good or bad for humanity, there is one thing that is for sure which is that social media has a user base larger than any media in the world. This creates for a very lucrative option for any entrepreneur, as the user base is so large that they can have massive exposure across the globe. This makes social media a very profitable business especially regarding advertising. (Margaret Rouse, and Ivy Wigmore, 2016)

To give a simple example, imagine that a TV show has a viewer base of 1 Million people. Companies that would like to advertise during the TV shows airing and are willing to pay for example 5 million dollars to promote their products. Now take this into comparison where Facebook is currently almost at 1 billion people as monthly users and figure how much companies are going to pay for advertising. It’s very lucrative and many young entrepreneurs are cashing out on this idea. (Margaret Rouse, and Ivy Wigmore, 2016)

3.4.2 Examples of social media

Some current examples of social media and their mechanics.

- Twitter
- Google+
- LinkedIN
- Reddit
- Pinterest
- Facebook

Source: (Margaret Rouse, and Ivy Wigmore, 2016)

Twitter

Twitter is a free microblogging social media platform based on members sharing short posts known as "Tweets" hence the name. These members can also follow other members and interact amongst themselves. (Margaret Rouse, and Ivy Wigmore, 2016)

Google+

Google+ is a social media platform created by the Tech giant Google, that is replicated to more how users communicate offline, a different approach to social media compared to other sites and platforms. (Margaret Rouse, and Ivy Wigmore, 2016)

LinkedIn

LinkedIn is a business related social media site with a purpose of networking amongst professionals. (Margaret Rouse, and Ivy Wigmore, 2016)

Reddit

Reddit is a social media "news" and forum platform which operates by allowing users to post content and other users to discuss these posts. The most popular posts are voted to the top of the site where they gain large amounts of recognition. (Margaret Rouse, and Ivy Wigmore, 2016)

Pinterest

Pinterest is a social media site based on sharing images found online. These pictures are often creative and visual. These images often lead also to external sites where the items can be purchased (for example clothes, hats, etc.). (Margaret Rouse, and Ivy Wigmore, 2016)

Facebook

Lastly but most importantly is Facebook. Facebook is currently the largest social media site and used by people across the globe. Its defined as being a free social networking site that allows users to create profiles and share content with other users such as friends and family. (Margaret Rouse, and Ivy Wigmore, 2016)

4 Analytical Section

4.1 Was, is, and will Facebook be a good choice as an investment?

4.1.1 Was Facebook a good choice as an investment?

To be able to determine whether or not Facebook was a good choice as an investment, first the early history of Facebook must be analyzed.

Facebook's IPO was on May 18th, 2012 and was considered one of the biggest IPO's in history related to technology. It had a peak market capitalization of 104 billion. When the stock opened though it fell drastically and share prices crashed on the next few months. (Smita Nair, 2016)

Why exactly did this happen?

When the share price was originally set between $28 and $35 which was considered conservative, the under writers, Goldman Sachs, JP Morgan, and Morgan Stanley changed the IPO price from a range of $28 to $35 to a much higher price of $35 to $38 with reasoning being large demand. This transition made a statement to many large investors that Facebook was overpriced and overhyped. (Smita Nair, 2016)

Another mistake was before the initial offering, Facebook increased its number of shares by 25% which lead to a final total of 421.2 million. Normally however during an IPO, individual investors or retail investors are allowed up to 20% of the total shares in the IPO which lead to many investors taking this as a sign of mismanagement of the IPO causing an even sharper drop for the already falling stock prices. (Smita Nair, 2016)

To “add more gasoline to the fire”, on the day of the IPO, the electronic trading platform NASDAQ, where Facebook's IPO was being introduced to had many glitches caused by the massive volume of trades. These glitches caused many problems such as not allowing some investors to sell stock during the first day of trading when the prices were falling which caused them to lose even more money than they already would have lost. This lead to a large number of lawsuits against the exchange platform (NASDAQ). (Smita Nair, 2016)

With many doubts during the IPO, there was a major lack of confidence in the stock, especially because 57% of the shares sold in the IPO came from Facebook insiders as well as major companies such as General Motors that had advertising in Facebook that pulled out their investments early claiming the ads were ineffective. (Smita Nair, 2016)

As seen from the IPO during this very early time it was probably not a good time to invest because of the pending lawsuits, as well as the large amounts of volatility, but it’s important to keep in mind this was over just a short period of time so it’s best to look at a larger timeline of events. (Smita Nair, 2016)

To get a larger look at the early moments in Facebooks stock history, a timeline from the IPO to one year later will be analyzed.

May 18th 2012 – Facebook goes public

Facebook goes public with an IPO price of $38. The first day it soars to 18% to reach a price of $45 but then falls back closer to its initial price. The stock gain on the first day is 23 cents. Fluctuating during its first two weeks, it ends by bottoming out, sliding to a price of $28 to $35 per share. (Projects.marketwatch.com, 2012)

July 26th, 2012 – First earnings report

During its first earnings report, Facebook meets Wall Street expectations but the company gives no outlook, which frightens investors. The next day stocks fall 12%. Facebook fails to impress. (Projects.marketwatch.com, 2012)

August 16th, 2012 – First lockup expiration

The first lockup expires, unlocking 271 million shares. Facebook shares fall sharply. (Projects.marketwatch.com, 2012)

In stock and finances, a Lockup is a period of time after a company has initially gone public usually between 90 and 180 days. During these initial days of trading, company insiders or those holding majority stakes in the company are forbidden to sell any of their shares. Once the lock up period ends, most trading restrictions are removed. The purpose of a lock up is so that the market is not flooded with too much of a company's stock, too quickly. (Investopedia Staff (d), 2007)

September 4th, 2012 – Facebook Shares hit an all-time low

After the first lock up expires, Facebook shares continue to decrease in value leading to an all-time low of $17.55 on September 4th. (Projects.marketwatch.com, 2012)

September 27th, 2012 – Facebook Unveils its e-business extension "gifts"

"Gifts" allows Facebook users to send real life gifts (such as gift cards, flowers, chocolate) to friends. It's part of Facebook moving forward in the ecommerce field. (Projects.marketwatch.com, 2012)

October 23rd, 2012 – Mobile gains in the field of advertising

Wall Street is surprised by a report that 14% of Facebook's massive revenue from advertising is coming from its mobile applications. The reason it's a big deal is because when Facebook went public in early 2012 its revenue from advertising on mobile was 0%. This 14% increase within a year gave a lot of confidence to Facebook and its investors that it can build a large revenue platform from its mobile applications. (Projects.marketwatch.com, 2012)

October 31st, 2012 – 229 million shares are unlocked (After Initial Public Offering shares)

As earlier in the year, more shares are unlocked and as before in the year the share prices fall again. (Projects.marketwatch.com, 2012)

November 14th, 2012 – 800 million more shares are unlocked (After Initial Public Offering shares)

800 million shares are unlocked which is the largest amount that has been available since the company went public. As with the past few unlocking shares, usually after an unlock, prices fall, but this time prices maintain and actually increase back up to a price above $30 due to praised reviews on the company's success so far this year. (Projects.marketwatch.com, 2012)

January 23rd, 2013 – Reports of Large gains

In Facebook's fourth quarter earnings reports, gains in sales and earnings are very large. Facebook also announces it plans to do some investing which causes stock to retreat. (Projects.marketwatch.com, 2012)

April 4th, 2013 – Facebook "Home"

Facebook releases its new platform "Home" which turns a users phone screen into a Facebook like page. This release was following the much speculated thought that Facebook will release its own smartphone. After more research it's found that Facebook will NOT be releasing its own smartphone and instead will be partnering with providers such as AT&T, as well as phone makers HTC and Samsung. (Projects.marketwatch.com, 2012)

May 1st, 2013 - (a few weeks short of 1 year of being a publicly traded company-IPO)

Facebook's advertising revenue from mobile has jumped to an all-time high of 30%. This revenue stream causes stock to jump in price even though user base is seen to be declining. (Projects.marketwatch.com, 2012)

To conclude the analysis of the beginning of Facebook's stock, from its IPO until one year later in the first half of 2013, it can be assumed that during this time it was not a good time to invest in Facebook. It can be argued that the volatility could lead to some profit margins with speed trading large sums of stocks quickly hedging off the rises and falls but that is not what the average investor would go by and this strategy would be extremely risky. Otherwise it can be assumed that it was not a good time to invest in Facebook because of its dangerously volatile prices, its pending lawsuits, as well as investors doubt in the future company.

The next question to be answered is a more difficult one because it involves a more difficult analysis which is whether Facebook is currently a good company to invest in.

4.1.2 Is Facebook currently a good choice as an investment?

Before it can be determined whether Facebook is currently a good investment, their needs to be some boundaries set of what makes a stock in general a good one to invest in.

There are some simple questions to ask before investing in the stock of a company:

What does the company do?

The famous billionaire investor Warren Buffett says if he doesn’t understand something he doesn’t invest in it. This sounds simple but makes very good sense because if you own a part of a company and have no understanding of what it does how can you judge on whether or not you should invest? Numbers can be helpful to look at trends but if you don’t understand the idea of the business you cannot predict whether it will do good in the future. An example would be if an old technology such as a dial up internet has a good stock track record but the common person or investor knows that dial up is very outdated and likely to not exist anymore because of the rise of modern high speed internet, it can be assumed that it would not be good to invest currently in dial up internet. (The Street Staff, 2016)

Is the company profitable?

A company’s earnings found within quarterly and annual earnings reports help determine how much net income the company has as well as per share earnings. (The Street Staff, 2016)

What is the company's stock history?

If the company's past stock prices are analyzed, does it show steady growth? Are the prices volatile or not? If the company is a large tech company, can it continue to grow even after it has grown to an unimaginable size? (The Street Staff, 2016)

Who are the company's competitors?

Companies (in a modern, regulated economy) almost always have competitors. For every brand such as Pepsi, there is a competing brand such as Coca Cola. Before investing it must be determined how these stocks stack up against each other and to know the competition before investing. This is important because essential when you invest in a stock, the competitor is also your competitor because they will be competing to make more money which means you miss out on a more profitable stock. (The Street Staff, 2016). With competitors such as Twitter on the rise, that can have so much social connectivity power that they even influence the falling of dictators in the middle east, it's not even a question that Facebook does have some serious competitors. (Nick Bilton, 2013)

Does the investor understand what Facebook does?

Although this question is can be different on a case by case situation, it can be assumed that the typical investor knows about Facebook and what it does. This social media site has massive exposure over multiple platforms as well as is used by people all over the world. If a potential investor didn't know much about the workings of Facebook it would be quite easy to do research about its workings because of the massive amounts of public data as well as the simplest tool of research for the site which is trying it out. If a potential investor doesn't already have a Facebook he/she could simple make a page and figure out the workings and he/she would simply see that Facebook is a social media platform used by almost everyone around the world, that has a large advertising audience. This being said it can be assumed that yes the investor knows what the company does and has a general understanding of the company's workings. (The Street Staff, 2016)

Is Facebook profitable?

Table 2: Facebook 3rd Quarter Income Statement Comparison

	Three months ended Sept. 30		Nine months ended Sept 30	
(In millions, except percentages and per share amounts)	*2015*	*2014*	*2015*	*2014*
Revenue	$4,501	$3,203	$12,087	$8,615
Income from Operations				
GAAP	$1,459	$1,397	$3,665	$3,861
Non-GAAP*	$2,410	$1,820	$6,478	$4,987
Operating Margin				
GAAP	32%	44%	30%	45%
Non-GAAP*	54%	57%	54%	58%
Net Income				
GAAP	$896	$806	$2,127	$2,239
Non-GAAP*	$1,628	$1,149	$4,253	$3,194
Diluted Earners per Share (EPS)				
GAAP	$0.31	$0.30	$0.75	$0.86
Non-GAAP*	$0.57	$0.43	$1.50	$1.22

*Non-GAAP financial measures exclude amortization of intangible assets, share-based compensation and related payroll tax expenses.
Non-GAAP net income and EPS also exclude the income tax effects of these non-GAAP adjustements. See the table below titled "Reconciliation of Non-GAAP Results to Nearest GAAP Measures."

Source: (Investor.fb.com, 2015)

As seen in the data above the net income of Facebook for the 3rd quarter of 2015 was up from $806,000,000 the previous year (2014), to $896,000,000.

Other notable highlights include:

- Daily Active Users increased 17% year over year, to a total of 1.01 billion on Average for September 2015.
- Mobile Daily Active Users increased 27% year over year, to total 894 million on Average for September 2015.
- Monthly Active Users increased 14% year over year, to a total of 1.55 billion for September 2015.
- Mobile Monthly Active Users increased 23% year over year to 1.39 billion for September

2015.

Source: (Investor.fb.com, 2015)

According to this data it can be concluded that Facebook is indeed profitable.

Figure 14: Facebook stock price chart; IPO to Present Day

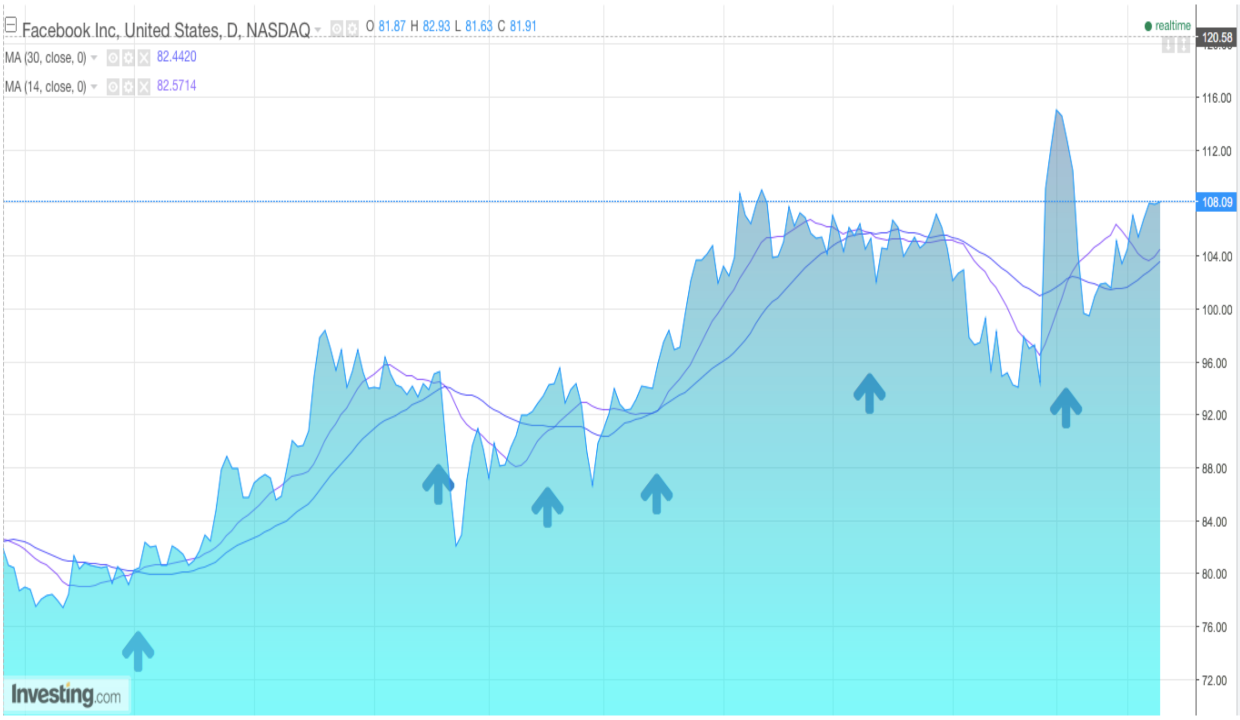
Source: (Nasdaq.com, 2016) Own Calculation

A simple look at the history of Facebook's stock with easily accessible data such as the stock price chart above from NASDAQ makes it quite easy to understand the trend of its stock. As seen in the graph the stock price of Facebook starts out at about half what it is currently. During this period between its introduction and present day it can be seen that during the first year (2012-2013) the prices were extremely volatile and extremely low compared to the present day trend. Then during early 2013-the middle of 2013 the prices increased from the previous year but were still volatile. Then from the middle of 2013 until 2014 there is a very sharp increase in price, as well as steady consistent growth. From 2014 until the present day the trend is increasing at a steady pace and is quite noticeably in-volatile especially when compared to the first year and a half on the market.

From the chart and summary provided it can be concluded that Facebook's stock price has been steadily increasing for the past few years and therefore we can assume it will continue this trend (if we are basing our investing on averages).

For a smaller scale chart (for the present day of February 29th, 2016 for example) the chart below can show specific points in which it would be good to buy or sell Facebook stock.

Figure 15: Facebook stock price chart; Short term



Source: (Investing.com, 2016) Own Calculation

According to the graph we can conclude that the first arrow is indicating to buy stocks. The second arrow is indicative to sell stocks. The third arrow is indicating to buy stocks. The fourth arrow is indicating to buy stocks as well. The fifth arrow is indicating to sell stocks. The sixth and last arrow is indicating to buy stock.

Who are Facebook's competitors?

Facebook's main competitor is the social media website Twitter. Both are quite similar but also have many differences. Twitter is a smaller more primitive social media platform while Facebook is much larger and has much more recognition. (Vikram Nagarkar, 2015)

Some facts to separate the two:

- Facebook has a no. 2 position in global ad spending at 18.4% while Twitter is in 5th place at only 2.6%

- Facebook has a Monthly Active User base of 1.39 billion users compared to Twitters 288 million Monthly Active Users. Facebook is almost 5 times the size!

- Facebook has the larger audience on mobile devices with 86% per of its users accessing the platform via mobile devices compared to Twitters 80% of its users accessing it via mobile devices.

- In Twitter's favor however, 88% of Twitters ad revenue was on its mobile platform while only 69% of Facebook's revenue was on its mobile platform.

Source: (Vikram Nagarkar, 2015)

To conclude this information, although Twitter has the upper hand on a few things, Facebook is dominating the social media market over its main competitor Twitter.

In conclusion to the question, "Is Facebook worth investing in currently?", it's clear that according to the "main questions that should be asked before investing" they have consistently showed that Facebook does qualify as worth investing in.

4.1.3 Will Facebook be a good investment in the future?

The final question to be analyzed about Facebook's stock is whether it will be a good investment in the future. This question is by far the most difficult out of the questions being analyzed for obvious reasons. It's difficult to predict if Facebook is a good investment right now but for farther in the future that is much more difficult. especially with a social media website. Most social media sites get very large and sometime in the future die out (because of the rise of other trendy popular sites). This is inevitable but there can be things to prevent this for quite a long time. So as proved earlier Facebook is steadily growing its stock value which we can use to assume it will continue on that path into the future of investing into the company but now it's the important question of whether Facebook can stay relevant. Because if Facebook starts to lose users and cannot continue to grow then Facebook will not be a good investment in the future.

During the time that Facebook was starting to be created, another social media platform known as MySpace was dominating the social media platform niche market. Although they did not go public, the point of the comparison is how Facebook can avoid dying out as Myspace did.

Facebook is put in comparison with its infamous competitor "MySpace" which has slowly died out over the years. With 75.9 Million users at its peak in December of 2008, to a more recent survey showing just 34.8 million users in May of 2011 its clearly dying out. The logical question of the relationship between these two is that if MySpace's users have declined so rapidly over a relatively short period of time then why hasn't or will Facebook's not do the same? (Daniel B. Kline, 2016)

The first reason is that while MySpace was very famous and had many users, it hasn't come anywhere near close to Facebook's 890 Million users. Even at MySpace's peak of 75.9 Million users, Facebook is at least 10 times bigger. What relationship does a social medias user population have to do with the company staying relevant? (Daniel B. Kline, 2016)

It has to do with the potential for advertising to such a large number of consumers. When there is potential to advertise to almost a billion people, big companies are going to be very interested in advertising which keeps money into Facebooks pockets and allows them to upgrade and improve their platform and purchase other platforms to add on to theirs, therefore keeping itself relevant and preventing a collapse of its users just like what happened with Myspace years earlier. (Daniel B. Kline, 2016)

Mark Zuckerberg (the creator of Facebook) has the answer to keeping the company relevant which is buying up other companies and investing in other projects so that Facebook isn't just focused on social media but with other brands and platforms. For example, the company acquired the messaging platform "WhatsApp" for 19 Billion dollars, which gives it access to almost another billion customers. With multiple purchases like this, Zuckerberg is insuring Facebook stays relevant and its stock stays valuable. (Daniel B. Kline, 2016)

Now is it possible that Facebook could "fade away" just as its similar social media competitors did in the past? The answer is yes of course it can. Generally, every social media platform dies out simply because another one takes its place. In Facebook's case however, it's a little more difficult because as mentioned earlier the brand and the brands owner Mark Zuckerberg are making big purchases and big investments to keep the company relevant. (Daniel B. Kline, 2016)

Another factor that helps keep Facebook from dying out is that it went public. This means that Facebook is not solely owned anymore. Its owned by a vast array of investors now that have a lot of money into the company and they obviously don't want to lose money, they want to make money. This is good for the company because it gives a lot of intelligent opinions to the future of the company that help direct the company in the direction that keeps it alive and makes it even bigger and more profitable than before. In comparison, MySpace was sold by the creator before it could go public but Facebook on the other hand since going public now has a large number of influences to help direct it to a successful future. (Daniel B. Kline, 2016)

All of this can lead to the conclusion that although the future cannot be predicted, the past can be analyzed and similar organizations can be compared to judge whether Facebook is doing a good job of maintaining itself in the social media market. It appears that due to the information provided before, Facebook has been consistently growing and increasing its revenue year by year, and now its relevance has been analyzed to show that it is indeed in good hands and is most likely to stay alive and not die out (at least anytime soon) like previous similar organizations such as Myspace before it had. So it can be concluded that Facebook will be indeed a good investment in the future. (Daniel B. Kline, 2016)

4.2 Findings from analysis

Now the end results of the analysis of whether Facebook was, is and will be a good choice as an investment will now be compiled and concluded.

4.2.1 Was Facebook a good investment in the past?

Regarding whether or not Facebook was a good investment in the past, there were quite a few findings that overwhelmingly pointed to the conclusion that Facebook was NOT a good investment choice (in the past). The first of these findings were that it was found that during Facebook's IPO, there was great belief in the investment world that Facebook's stock was overhyped and overpriced, as well as that during the IPO the platform that was releasing Facebook's stock, NASDAQ, crashed causing investors orders to be delayed causing massive loses resulting in many lawsuits and further decreasing the value of the stock. The second big finding that can lead to the conclusion that Facebook was not a good investment in the past was that during their IPO, Facebook increased its stock percentage to 25% which is quite high for the releasing company to own, which lead investors to believe Facebook was being mismanaged. These findings lead to the conclusion that Facebook was not a good investment in the past.

4.2.2 Is Facebook currently good investment?

Regarding whether or not Facebook is currently a good investment it was found that almost all factors analyzed lead to the conclusion that Facebook currently IS a good choice as an investment. There were three main findings that gave this conclusion. The first was that a list information that is believed to help an investor decide if he/she should choose an investment was analyzed and from this analysis it was concluded that this information certainly points to Facebook being a good choice as an investment. The second finding was that there was data given proving that Facebooks revenue has indeed been increasing from the previous year as well as the past several years as shown in the charts provided. The last finding found that compared to its main competitor, Twitter, Facebook is doing much better as far as growth and financials. All of this leads to a big “Yes” of Facebook being a good choice as an investment currently.

4.2.3 Will Facebook be a good investment in the future?

The last of the three topics analyzed was whether or not Facebook will be a good investment in the future. This part of the analysis was the most difficult because there is no sure way to say if it will be a good choice in the future as the future is unpredictable. However, there was a lot of data found that can be used to find a trend and the likelihood of Facebook following that trend is quite high. It was found Facebook has had a trend of steady growth since its beginning and this can be used to assume that in the future it will be the same. There was one problem found though, that being that almost all social media sites die out eventually. To determine whether Facebook could follow this theory, a very similar social media site was found and was compared to Facebook determine why it died out and if its possible Facebook could follow in its steps. It was found though that Facebook is much larger and has much more influence and capital that it's not likely it will die out at least soon. All of this leads to the conclusion that in the future Facebook will indeed be a good choice as an investment.

Conclusion

This thesis should have helped to educate the reader on the topic of Facebook's Stock as well as its sub topics such as Stocks, Social Media, Business, and Economics. The reader should have been introduced to some new concepts, that were introduced during the literature review section of the thesis and learned all about them. Then the reader was introduced to the analytical section with a practical question of whether Facebook was, is, and will be a good investment. The reader was then given information regarding these three questions and was hopefully convinced enough to make decisions which match the ones the author found.

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