

Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Economics



Bachelor Thesis

Economic analysis of Microsoft Corporation

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BACHELOR THESIS ASSIGNMENT

Yurii Poliakov

Economics and Management

Thesis title

Economic analysis of Microsoft Corporation

Objectives of thesis

Provide a detailed analysis of Microsoft Corporation. (Financials, Stocks, Technical analysis, etc.) To demonstrate where Microsoft Corporation started and where they are now. Provide correlation analysis between Microsoft and Apple stock price and between Microsoft and Google stock price. Show detail information about stock price of Microsoft Corporation.

Methodology

Bachelor thesis is divided in two main parts: theoretical and practical.

Theoretical part: history of technologies and history of Microsoft Corporation, theoretical aspects of enterprise analysis, the concepts of analysis are examined, and the information base for analysis.

Practical part: PESTLE and SWOT analyzes, correlation analysis, Bollinger Bands, RSI, SMA, gross margin, net margin, Technical analysis and evaluation of the activities of Microsoft and it comparison with other firms.

Practical part (analysis) will be done by using methods of comparative analysis as well as methods of regression and correlation analysis.

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Keywords

Analysis, Microsoft, Research, Technology, Financials, Management, etc.

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Declaration

I declare that I have worked on my bachelor thesis titled " Economic analysis of Microsoft Corporation" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the bachelor thesis, I declare that the thesis does not break copyrights of any their person.

In Prague _____

Signature

Acknowledgement

I would like to thank my supervisor Ing. Petr Procházka, Ph.D., MSc, for his expert suggestions, recommendations, assistance and comments, which contributed to improve my bachelor thesis.

Further acknowledgement belongs to my wife and my family for supporting me throughout my education.

Yurii Poliakov

Ekonomická analýza Microsoft Corporation

Souhrn

Tématem této bakalářské práce je ekonomická analýza společnosti Microsoft Corporation, která je jednou z největších amerických nadnárodních technologických společností, většinou známá pro jejich operační systém "Windows". Tato práce se zabývá hodnocením finanční a ekonomické výkonnosti vybrané společnosti na trhu. Bakalářská práce se dělí na dvě části: praktické a teoretické. Teoretická část poskytuje přehled definic a vysvětlení základních pojmových teorií a metod technické analýzy, finanční analýzy, SWOT analýzy, analýzy PESTLE, popisné statistiky a korelační analýzy.

Praktická část zobrazuje profil společnosti, kde důležitá část vychází z finančních a technických analýz společnosti Microsoft Corporation. Jednoduchý klouzavý průměr (SMA), index relativní síly (RSI) a Bollingerovy pásy se používají pro technickou analýzu. Pro korelační analýzu byli vybráni dva hlavní konkurenti: Apple a Google.

Klíčová slova: Analýza, Microsoft, výzkum, technologie, finance, management, technická analýza, sklad, jednoduchý pohyblivý průměr apod.

Economic analysis of Microsoft Corporation

Summary

Topic of this Bachelor Thesis is Economic analysis of Microsoft Corporation, which is one of the biggest American multinational Technology company, mostly known for their Operation System “Windows”. This thesis is focused on evaluation of the financial and economic performance of selected company on the market. Bachelor Thesis divided into two parts: practical and theoretical. Theoretical part provides an overview of definitions and explanations of basic concept theories and methods of technical analysis, financial analysis, SWOT analysis, PESTLE analysis, descriptive statistics and correlation analysis.

Practical part shows profile of the company, where important part is based on financial and technical analyses of Microsoft Corporation. Simple moving average (SMA), relative strength index (RSI) and Bollinger Bands are used for Technical analysis. For correlation analysis was chosen two main competitors: Apple and Google.

Keywords: Analysis, Microsoft, Research, Technology, Financials, Management, Technical analysis, Stock, Simple Moving Average, etc.

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1. Introduction

Microsoft Corporation is a one of the biggest American multinational Technology company. It was found by Bill Gates and Paul Allen April 4th, 1975 in Albuquerque, New Mexico. Microsoft Corporation is leader in their field. The aim of this Bachelor Thesis to show general information about it. This thesis is divided into two parts: theoretical and practical.

Theoretical part consists of history and growth of Microsoft Corporation, technological history in general, and stock exchange history. Also, theoretical part describes chosen analysis: PESTLE analysis, SWOT analysis, technical analysis and general financial analysis. Technical analysis consists of Simple Moving Average (SMA), Relative Strength Index (RSI) and Bollinger Bands. All these technics describe Microsoft stock price.

Practical part provides brief information about Microsoft corporation and Company portfolio. Correlation analysis calculated in Microsoft Excel 2016 using correlation tools to shows if there is correlation between Microsoft competitors Google and Apple Inc. In financial analysis used annual report to shows Net income, revenue and gross margin.

2. Objectives of thesis and Methodology

2.1.Objectives

Provide a detailed analysis of Microsoft Corporation. (Financials, Stocks, Technical analysis, etc.) To demonstrate where Microsoft Corporation started and where they are now. Provide correlation analysis between Microsoft and Apple stock price and between Microsoft and Google stock price. Show detail information about stock price of Microsoft Corporation.

2.2. Methodology

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Practical part (analysis) will be done by using methods of comparative analysis as well as methods of regression and correlation analysis.

3. Theoretical part

3.1. The development of information technology in the period from XIV to XVIII century

History production of digital computing started from XIV century. It is fascinating and instructive, some many names connected with this. In Leonardo da Vince diary's (1452-1519), nowadays was found so many pictures, which were mechanical calculator worked on cogwheel, it could summary 13-bit decimal numbers. Specialists of famous company IMB reproduced machine in metal and made sure of the full consistency of the idea of a scientist. His summing machine can be considered the initial milestone in the history of digital computers. It was the first digital adder, a kind of embryo of the future electronic adder - the most important element of modern computers. In those years far from us, the brilliant scientist was probably the only person on earth who understood the need to create devices to facilitate labor when performing calculations.

However, needed of this was to small that only more than hundred years after Leonardo da Vinci death found another European - the German scientist Wilhelm Schickard (1592-1636), who did not naturally read the diaries of the great Italian who offered his solution to this problem. The reason that prompted Schickard to develop a counting machine for adding and multiplying six-digit decimal numbers was his acquaintance with the Polish astronomer I. Kepler. After reviewing the work of the great astronomer, associated mainly with calculations Schickard set about trying to assist him in the hard work. In a letter addressed to him, sent in 1623, he gives drawing machine and tells how it is arranged. Unfortunately, the history of the car did not preserve the history. Apparently, the early death of the plague that swept Europe, has prevented scientists to carry out his plan.

The inventions of Leonardo da Vinci and Wilhelm Schickard became known only in our time. They were unknown to contemporaries.

At beginning of XVII century everything changed. From 1642 to 1642 nineteen years old Blaise Pascal (1623-1662) created working calculating machine. In the beginning he was building it with only one purpose - to help his father in the calculations performed in the

collection of taxes. In the next four years, he created more sophisticated machine designs. They were six and eight bits, built on the basis of cogwheels, could produce summation and subtraction of decimal numbers. About 50 samples of machines were created by B. Pascal received a royal privilege to produce them, but they did not receive practical application of the "Pascalines", although much has been said and written about them (mainly in France).

In 1673 Another great European, German scientist Wilhelm Gottfried Leibniz (1646-1716), created a counting machine (an arithmetic device, according to Leibniz) to add and multiply twelve-digit decimal numbers. To the cogwheel he added a stepped roller, which allowed for multiplication and division. "... My machine makes it possible to multiply and divide over huge numbers instantaneously, without resorting to consistent addition and subtraction," W. Leibniz wrote to one of his friends.

In digital electronic machine (Electronic computers), which appeared more than two centuries later, the device performing arithmetic operations (the same ones as Leibniz's arithmetic apparatus) was called arithmetic. Later, as the addition of a number of logical operations, it became known as arithmetic logic. It has become the primary device of modern computers. Thus, two geniuses of the XVII century, established the first milestones in the history of the development of digital computers. The merits of V. Leibniz, however, are not limited to the creation of an "arithmetic device". Beginning with his student years and until the end of his life, he studied the properties of the binary number system, which became later, the main thing when creating computers. He gave it a certain mystical meaning and believed that on its basis it is possible to create a universal language for explaining the phenomena of the world and use in all sciences, including in philosophy. The image of the medal, painted by V. Leibniz in 1697, is preserved, which explains the relationship between the binary and decimal systems of the calculus.

In 1799 in France, Jozef Mari Zhakar (1752 - 1834) invented a loom in which to set the pattern on the fabric used punch cards. The necessary initial data were recorded in the form of punches in the corresponding places of the punch card. So, there was the first primitive device for storing and inputting the software (controlling the weaving process in this case) information.

In 1795, the same mathematician Gaspard Proni (1755 - 1839), who was commissioned by the French government to carry out works related to the transition to the metric system of measures, for the first time in the world developed a technological scheme of calculations that involves the division of labor of mathematicians into three components. The first group of several highly qualified mathematicians determined (or developed) the numerical computation methods necessary to solve the problem, which made it possible to reduce the calculations to arithmetic operations-add, subtract, multiply, divide. The task of determining the sequence of arithmetic operations and determining the initial data necessary for their implementation ("programming") was carried out by a second group of mathematicians. To follow up on "program" consisting of a series of arithmetic operations, there was no need to attract highly qualified professionals. This, the most time-consuming part of the work, was entrusted to the third and most numerous group of calculators. This division of labor has made it possible to significantly accelerate the receipt of results and increase their reliability. But the main thing was that gave an impetus to the further automation process, the most laborious (but also the simplest!) Third part of the calculations - the transition to the creation of digital computing devices with software control of the sequence of arithmetic operations.

This final step in the evolution of digital computing devices (mechanical type) was made by the English scientist Charles Babbage (1791 - 1871). A brilliant mathematician who perfectly knows numerical methods of computation, already having experience in creating technical means to facilitate the computational process (the difference machine of Bebbage for tabulating polynomials, 1812 - 1822), he immediately saw in the computing technology proposed by G. Proni, the possibility of further development of his works. An analytical machine (as Babbage called it), the project of which he developed in 1836-1848, was a mechanical prototype of computers that appeared a century later. It was supposed to have the same five main devices in the computer: arithmetic, memory, control, input, output. For the arithmetic device C. Bebbage used cogwheel, similar to those used before. On them, C.Babbage intended to build a memory device out of 1000 fifty-digit registers (50 wheels each). The program for performing calculations was recorded on punched cards, the initial data and the results of the calculations were also recorded on them. The number of operations, in addition to four arithmetic operations and conditional branching operations with command codes included. The automatic execution of the calculation program was

provided by the control device. The addition time of two fifty-digit decimal numbers was, according to the scientist's calculations, 1 second, multiplication - 1 minute.

The mechanical principle of constructing devices, the use of the decimal number system, making it difficult to create a simple element base, did not allow C.Babbage to fully realize his far-reaching intent, he had to confine himself to modest mock-ups. Otherwise, the size of machine would have caught up with the locomotive, and to set in motion its device would need a steam engine.

Computation programs on the Babbage machine, compiled by Byron's daughter Ada Augusta Lovelace (1815 - 1852), are strikingly similar to the programs compiled, subsequently, for the first computers. It is no accident that a wonderful woman was named the first world programmer.

Despite all the efforts of C. Babbage and A.Lavleys, the machine could not be built ... Contemporaries, not seeing a concrete result, were disappointed in the work of the scientist. He was ahead of his time. And he knew that, "probably take place half a century Before someone takes on such a promising task without the instructions that I left behind. And if someone, who is not cautious by my example, assumes this task and achieves the goal in real designing a machine that embodies the entire executive part of mathematical analysis with the help of simple mechanical or other means, I will not be afraid to pay my reputation in his favor, since he alone can fully understand the nature of my efforts and the value of their results. ". After death of C. Babbage, the Committee of the British Scientific Association, which included the major scientists, considered the question of what to do with an unfinished analytical machine and why it could be recommended. To the credit of the Committee it was said: "... The possibilities of the analytical machine extend so far that they can only be compared with the limits of human capabilities ... Successful implementation of the machine can mean an era in the history of computing, equal to the introduction of logarithms."

Another prominent Englishman was misunderstood, it was George Bull (1815 - 1864). He developed the algebra of logic (Boolean algebra) has been applied only in the next century, when the mathematical apparatus needed for the design of computer circuits that

use the binary number system. "Connected" mathematical logic with the binary system of numbers and electrical circuits American scientist Claude Chenon in his famous thesis (1936).

3.2. History of MS Windows

Microsoft (Microsoft Corporation) - the biggest multinational company producing software for all kinds of computers - personal computers, game consoles, PDAs, mobile phones and others. Also produces some accessories for personal computers (keyboards, mice, etc.). The company's headquarters is located in Redmond (Redmond) (a suburb of Seattle), Washington.

For many years, Windows takes the world's overwhelming market share in operating systems. February 2009 Windows share was more than 88.41%. Its closest competitor, the Mac OS operating system installed on Apple's computers, got 9.61%, and the Linux operating system - a pathetic 0.88%. In other words, when we say "home" or "working" computer, we clearly mean the computer on which this or that version of Windows is installed.

But Windows is not only an environment for playing solitaire or working with Word. In parallel with the operating system for home computers in Microsoft developed a server version of Windows, designed for companies and corporations. This version is called Windows NT, and then Windows Server. This family of operating systems has gained considerable popularity and seriously pushed the former server king - the UNIX operating system.

The history of Windows resembles a victorious procession, which began in the distant 1985, when the first Windows with the number 1.01 came out. However, the history of Microsoft begins even earlier, already in 1975, when a young student Bill Gates created a version of the BASIC programming language for one of the first personal computers, the Altair 8800. Actually, the story of one of the richest people in the world (and for many years he led this pedestal) is undoubtedly of great interest and is described in numerous books.

Several films have been shot, tens of thousands of articles have been written, and all these attempts to explain the phenomenon of Microsoft in general and Windows in particular.

We will not delve into the affairs of far days. If you're wondering how Bill Gates, from a shy student-botanist, turned into what he is now, just start the computer, go online and find all the necessary information. Significantly, to perform this action, you will most likely use a personal computer with one of the versions of Windows. And the Internet itself has become so popular, not least because personal computers have become as much a part of our life as teapots, cars and sneakers. In this respect, Windows is indisputable.

The history of the development of Windows versions is beyond doubt a curious topic that deserves a separate book. Therefore, we will not turn over the dusty volumes of history carefully and only briefly get acquainted with the key events in the life of Microsoft Windows.

Contrary to popular belief, the first version of Windows was not at all an independent operating system. In fact, Windows was a graphic "superstructure" over the DOS operating system and was designed to simplify the work with a dark and gloomy command line. Many users of DOS do not understand this change. Until now, the Internet is "walking" a famous excerpt from the book of Soviet engineers, released in 1989. The book is called "Personal computers in engineering practice", and severe engineers responded as follows about the product Microsoft.

Nowadays, of course, cannot read this paragraph without a smile. "Cumbersome and useless superstructure" has become a real window into the world of information, but it did not happen immediately.

The history of Windows begins in 1986, when the first version of the system appeared. It was a set of programs that extend the capabilities of existing operating systems for greater ease of use. A few years later, the second version came out, but did not win much popularity.

3.2.1. Windows 3.0

However, in 1990 a new version was released - Windows 3.0, which was used on many personal computers.

The polarity of the new version of Windows was explained by several reasons. The graphical interface made it possible to work with data not with the help of commands entered on the command line, but with visual and understandable actions on graphic objects that denote this data. Also, significantly increased the convenience and efficiency of the ability to simultaneously work with several programs.

Moreover, the convenience and ease of writing programs for Windows led to the emergence of more and more diverse programs running on Windows. It was better organized with a variety of computer equipment that, in the end, also determine the popularity of the system. The next version of Windows provides extra reliability, and support for multimedia (in Windows 3.1), and work on computer networks (version 3.11).

3.2.2. Windows 95

In 1995 came the famous Windows 95, which has become a new stage in the history of Windows and all personal computers. In comparison with Windows 3.1, the interface has changed significantly, the speed of the programs has increased. The new operating system allowed you to automatically configure additional computer devices to eliminate conflicts when interacting between them. In addition, Windows 95 took the first steps to implement the support of the then just emerging Internet.

Windows 95 interface is fundamental to all of the Windows family, and 1996 appears a reworked version of the server operating system Windows NT 4.0, which has the same interface as Windows 95.

3.2.3. Windows XP

The operating system Windows XP is based on the core of Windows NT and therefore has a high stability and performance compared to previous versions of Windows. It also seriously redesigned the graphical interface, introduced new functions and programs. Surprisingly, Windows XP was so successful that even at the end of 2008 it occupied almost 70% of the market for operating systems. For Windows XP, three Service Packs were released, the latest of which was released in April 2008. Each of the packages expanded the capabilities of the operating system, eliminated errors, made the system more reliable and secure.

In 2003, a new version of Windows Server 2003 was released, which replaced Windows 2000. After a while, there was an update called Windows Server 2003 R2. The Windows Server 2003 operating system has set a new standard in terms of reliability and performance, becoming one of Microsoft's most successful server systems.

Even before the release of Windows XP, Microsoft was actively developing a new version of the operating system, code-named Windows Longhorn. Then the name was changed to Windows Vista. The new operating system appeared in 2007. According to already established tradition, the operating system for home users was based on the productive and reliable core of Windows Server 2003 SP1 (similar to how Windows XP was based on the core of Windows NT). Even before the release of Windows XP, Microsoft was actively developing a new version of the operating system, code-named Windows Longhorn. Then the name was changed to Windows Vista. The new operating system appeared in 2007. According to already established tradition, the operating system for home users was based on the productive and reliable core of Windows Server 2003 SP1 (similar to how Windows XP was based on the core of Windows NT).

Initially, Windows was not developed as an operating system, as we are accustomed to seeing its modern versions, but as a graphical shell of MS-DOS. It should be noted that the concept of the graphic interface was not developed by Microsoft. Already a few years before the introduction of Windows, there were Apple Macintosh computers with a graphical operating system (MacOS), the interface of which was more friendly and understandable to

the ordinary user, unlike the MS-DOS command line. Strictly speaking, Windows is not the only attempt to rid the user of the command line on IBM-compatible computers. Very well-known, at one time was a pseudo-graphic (actually worked in text mode), the shell Norton Commander Corporation Symantec. It accelerated several times the process of navigating the disk space, moreover, more naturally represented the hierarchy of directories in the form of a tree. However, Windows appeared earlier Norton, Norton was even more popular, particularly because of low system requirements.

3.2.4. Windows Vista

After the grand success of Windows XP, Microsoft released Windows Vista. The release of the system took place in 2007. The new OS was a kind of attempt to make a revolution in the design of the graphical interface. Also, in Microsoft tried to eliminate the security flaws, so annoying users of XP. However, the new system came out extremely mediocre. This is indicated at least by the fact that the OS took first place in the competition "The failure of the year" in 2007.

Users were also disappointed in the new product from Microsoft. The most prominent is a problem with the speed which is incompatible with many older programs, as well as excessive system requirements that exceed the stated. The new Aero interface also did not appeal to users. After the release of Windows 7 in 2009, Vista, and so not popular, almost completely "extinct". For 2015, the share of the Windows Vista market is less than 2%.

3.2.5. Windows 7

The next operating system of Microsoft - Windows 7 - was presented on October 22, 2009. It should have removed all the shortcomings that were in Vista. The design of Aero has been greatly refined, support for old programs that are not available for launch on Windows Vista is implemented. Also, in Windows 7 appeared the mode Windows XP mode, which allows running old applications in a virtual machine Windows XP, which provides almost full support for old applications.

An important feature of the new system is a closer integration with the driver manufacturers: most are automatically determined. As a result, from the pen of Microsoft came the operating system, which pleased the large number of users: in the first eight hours, the number of pre-orders exceeded the demand that Windows Vista had in the first 17 weeks.

But here was not without a spoon of tar. The main disadvantage of the system are again high system requirements, because of which the autonomy of laptops in some cases was reduced to 30%. Despite this, the system remains popular to this day: in September 2015, the share of Windows 7 takes more than 55% of the market.

3.2.6. Windows 8

In October 2012, Microsoft presents the next product - Windows 8. The new system has received a radically new interface, more "sharpened" for use on tablets. So, in Windows 8, the button "Start", on the place of which the access to the Metro interface was located, disappeared.

The interface was a tiled area. Also, in the new system, there was a Windows Store application store, similar to the Play Store and the App Store. The main innovations of Windows 8, in addition to the new interface, can be considered native support for USB 3.0, advanced search and a new task manager.

However, most users did not appreciate the system: Microsoft made too much bias towards touch control. This affected the convenience of managing the system on desktops.

The new version of Windows 8.1 was an attempt to fix the flaws. The "Start" button returned to its rightful place and it became possible to set the launch of the standard desktop by default. Despite the attempt to correct the errors made in Windows 8, the update was also received without enthusiasm.

3.2.7. Windows 10

The latest Microsoft operating system at the moment is Windows 10, introduced in July 2015. Windows 10 should unite all devices, including embedded systems, smartphones, tablets, laptops, PCs and game consoles. Upgrade to Windows 10 is available for Windows 7, 8.1 and Windows Phone 8.1 device users for free during the year.

The main innovations of the system are the improved Start menu, the voice assistant Cortana, as well as the ability to interact simultaneously with the touch interface and with the traditional on hybrid devices.

In Windows 10, Microsoft collects a lot of data about using a computer. Examples of such data are name, e-mail address and others. Because of this, a flurry of criticism hit Microsoft. Part of the criticism also relates to the fact that Windows shares passwords from Wi-Fi with other users. In any case, the collection of data can be turned off at any time, all instructions are searched on the Internet.

Windows can rightly be called an integral part of a generation of PC users. Thanks to the OS from Microsoft, millions of people have discovered information technology and access to a global network. And no matter how it hated, it in any case remains relevant for more than one year.

3.3. Financial Analysis

Financial analysis is led from the choice of fitting information, assessment and understanding of aftereffects of money related examination and other applicable data keeping in mind the end goal to quantify the working execution and the monetary state of the organization. These two estimations are thought to be vital. The working execution speaks to the capacity of the organization to utilize its assets - its advantages, both unmistakable and elusive, to deliver an arrival on its speculation. The monetary condition is a measure of how well the organization meets commitments, for instance the installment of enthusiasm on its obligation in general way (Peterson Drake and Fabozzi, 2018)

For financial analysis usually use different sources. Basic inputs are accounting information, balance sheet, income statement or overall economic data. Tools for making financial planning and prediction are statistical methods and computer knowledge. (Lee, Lee and Lee, 2018)

Financial analysis can be described with three main function - selection, evaluation and interpretation of financial data.

3.3.1. Financial Statement

3.3.1.1. The Income Statement

The Income Statement demonstrates the monetary consequences of an organization's activities for the present announcing period. (Taparia, 2004) Income Statement has three essential components Revenues, Expenses and Net salary, their connection can be depicted by condition:

$$\text{Net Income} = \text{Revenues} - \text{Expenses}$$

3.3.1.2. Revenues

Revenues are also constructed in Financial section. Among Operating Revenues have a place Revenues from item, administrations, profits or salary from speculation, stock et cetera. (Lörinczová, 2016)

3.3.1.3. Net Income

Taxable income minus income tax expense. This is viewed as the organization's "bottom line" as it speaks to how much the business made. Net salary has bunches of different names, including "net profit," "earnings" or "net profit from continuing operations." (Taparia, 2004)

3.4.SWOT Analysis

SWOT analysis examination is a procedure that recognizes an association's qualities, shortcomings, openings and dangers. In particular, SWOT is an essential, logical system that evaluates what a substance (more often than not a business, however it can be utilized for a place, industry or item) can and can't do, for factors both interior (the qualities and shortcomings) and in addition outside (the potential openings and dangers). Utilizing natural information to assess the situation of an organization, a SWOT investigation figures out what helps the firm in achieving its destinations, and what obstructions must be overcome or limited to accomplish wanted outcomes: where the association is today, and where it might be situated later on. (STAFF, I., 2018)

3.5.PESTLE Analysis

PEST Analysis (Political, Economic, Social, and Technological) is a technique whereby an association can evaluate real outer elements that impact its activity so as to end up more focused in the market. As portrayed by the acronym, those four zones are integral to this model.

A mainstream minor departure from the PEST Analysis arrange, particularly in the UK, is the PESTLE key arranging approach, which incorporates the extra parts of Legal and Environmental. (HARVEY, I., 2018)

3.6.Correlation analysis

Correlation, in the finance and investment industries, is a statistic that measures the degree to which two securities move in relation to each other. Correlations are used in advanced portfolio management. Correlation is calculated into what is known as the correlation coefficient, which has value that must fall between -1 and 1. (Staff, 2018)

A perfect positive correlation means that the correlation coefficient is exactly 1. This implies that as one security moves, either up or down, the other security moves in lockstep,

in the same direction. A perfect negative correlation means that two resources move in inverse ways, while a zero correlation implies no relationship at all. (Staff, 2018)

3.7.Descriptive Analysis

Descriptive statistics are short descriptive coefficients that summarize a given data, which can be either a given by entire population or a sample of it. Descriptive statistics are broken down into measures of central tendency and measures of variability or spread. Measures of central tendency include the mean, median and mode, while measures of variability include the standard deviation or variance, the minimum and maximum variables, and the kurtosis and skewness. (Staff, 2018)

Descriptive statistics, in short, help describe and summarized the features of a specific data set, by giving short summaries about the sample and measures of the data. The most recognized types of descriptive statistics are the mean, median and mode, which are used at almost all levels of math and statistics. However, there are less-common types of descriptive statistics that are still very important. (Staff, 2018)

People use descriptive statistics to repurpose difficult to-comprehend quantitative bits of knowledge over an expansive informational index into chomp measured portrayals. An understudy's review points normal (GPA), for instance, gives a decent comprehension of expressive insights. The possibility of a GPA is that it takes information focuses from an extensive variety of exams, classes and grades, and midpoints them together to give a general comprehension of an understudy's general scholarly capacities. An understudy's close to home GPA mirrors his mean scholarly execution. (Staff, 2018)

3.8.Technical analysis

Technical analysis is a trading tool employed to assess securities and endeavor to estimate their future development by investigating insights assembled from exchanging action, for example, value development and volume. Dissimilar to key experts who endeavor

to assess a security's characteristic esteem, specialized examiners center around outlines of value development and different explanatory instruments to assess a security's quality or shortcoming and figure future value changes. (Staff, 2018)

3.8.1. Simple moving average

A simple moving average (SMA) is an arithmetic moving average calculated by adding the closing price of the security for a number of time periods and then dividing this total by the number of time periods. (Staff, 2018)

A simple moving average is adaptable in that it can be figured for an alternate number of eras, essentially by including the end cost of the security for various eras and after that partitioning this aggregate by the quantity of eras, which gives the normal cost of the security over the day and age. A basic moving normal smoothest out unpredictability and makes it simpler to see the value pattern of a security. In the event that the straightforward moving normal focuses up, this implies the security's cost is expanding. In the event that it is pointing down it implies that the security's cost is diminishing. The more drawn out the time allotment for the moving normal, the smoother the basic moving normal. A shorter-term moving normal is more unstable, however its perusing is nearer to the source information. (Staff, 2018)

3.8.2. Relative strength index

The relative strength index (RSI) is a force marker created by noted specialized expert Welles Wilder, that looks at the greatness of late picks up and misfortunes over a predetermined era to gauge speed and change of value developments of a security. It is principally used to endeavor to distinguish overbought or oversold conditions in the exchanging of an advantage. (Staff, 2018)

The relative strength index is calculated using the following formula:

$$RSI = 100 - 100 / (1 + RS)$$

Where $RS = \text{Average gain of up periods during the specified time frame} / \text{Average loss of down periods during the specified time frame}$

The RSI gives a relative assessment of the quality of a security's current value execution, hence making it a force pointer. RSI esteems run from 0 to 100. The default time span for contrasting up periods with down periods is 14, as in 14 exchanging days. (Staff, 2018)

3.8.3. Bollinger Bands

A Bollinger Band®, developed by famous technical trader John Bollinger, is plotted two standard deviations away from a simple moving average. (Staff, 2018)

In this case of Bollinger Bands®, the cost of the stock is sectioned by an upper and lower band alongside a 21-day simple moving average. Because standard deviation is a measure of volatility, when the markets become more volatile, the bands widen; during less volatile periods, the bands contract. (Staff, 2018)

3.9. Stocks of Exchange

3.9.1. The System of the Stock of Exchange

Just expert members of the securities advertise (representatives and merchants individuals from the stock trade) can purchase and offer securities on the stock trade. Not all securities can be exchanged on the trade. There is an exceptionally strict method of confirmation of securities to exchanging that is called posting. Additionally, only one out of every odd representative can be a certify individual from the trade. Stock trades force strict necessities to its individuals concerning the budgetary condition. All exchanging activities of the trade are amassed in one place and are liable to nitty gritty principles. These principles set up the individuals from the trade. (J. Dalton, 2001).

Enrollment on the stock trade, in the USA is exceptionally costly. To end up an individual from the trade, for instance, an American, an individual or firm should possess or lease a "seat", or place on the trade. Trade individuals are partitioned into a few gatherings as per what they do. The greater part of them are tasks with securities in the interest of their customers (the intermediaries), yet some complete exchanges for the benefit of other trade individuals. Merchants bear without anyone else tasks. Authorities or market creators make a customary and organized arrangement of exchange for the particular securities designated to them do manage deficient parcels for alternate individuals from the trade. Masters are required to keep up specific costs for the paper when the stream of requests on the paper is intruded. With a specific end goal to complete exchanges on the stock trade it is likewise important to have an uncommon permit. (J. Dalton, 2001).

A tangible articulation of a trade (for instance, the New-York stock trade) is the place (building) where exchanges are led. At the point when a client chooses to purchase or offer a stock, he calls a neighborhood dealer and the nearby intermediary sends the request to the representative on the trade. The representative, thus, transmits directions to his intermediary in the room and if the market has the contrary offer, the dealer goes into the exchange. It's hard to believe, but it's true the arrangements in the exchange lobby "by recording uncommon characters" - exchanges on the New York stock trade. (J. Dalton, 2001).

Another stock exchanging alternative is electronic. Applications are sent here from remote traders by means of a devoted correspondence channel or through frameworks of Internet-exchanging from various parts of the nation. (J. Dalton, 2001).

After the exchange, a genuine exchange of cash and securities must happen. Present day innovation has improved this technique. Presently the application can continue to the trade inside only a small amount of a moment. Everything happens consequently. Day by day data is transmitted to PCs of members after the finish of the closeout and the treatment of submitted exchanges. (J. Dalton, 2001).

3.9.2. Stock Market

Two main Market of stocks:

1. The Primary Market
2. The Secondary Market

(Investopedia.com, 2003)

3.9.3. Types of Stock Exchange

1. Stock exchange (bourse) gives a high volume of exchanging securities went for keeping up high liquidity and market estimation of securities, change of demonstrable skill of members of trade trades. Two significant stock trades are:

- NYSE (The New York Stock Exchange)
- NASDAQ (National Association of Securities Dealers Automated Quotation)

(Investopedia.com, 2003)

2. Foreign exchange market is where purchasing and offering of national monetary forms at a predetermined rate, which is framed available in light of free market activity at a particular point in time. (Investopedia.com, 2003)
3. Futures provide services to purchasing and offering of fates contracts. When in doubt, as the hidden resource of the prospects are securities, monetary standards and products.

Biggest stock exchanges of the world are:

- CME
- NYMEX (Investopedia.com, 2003)

4. Practical part

4.1. Description of Microsoft

Microsoft Corporation is a one of the biggest American multinational Technology company. It was found by Bill Gates and Paul Allen April 4th, 1975 in Albuquerque, New Mexico. Microsoft headquarter located in Redmond, Washington, U.S. The Company's segments include the both North and South Americas, Europe, Grater China, Japan and Rest of Asia Pacific. Microsoft Corporation doesn't have that much stores because mostly they sell their product to other companies or to the stores. Nowadays Microsoft Corporation take a leading place of selling Operation Systems in the world.

Picture 1: Logo of Microsoft Corporation



Source: (WIKIPEDIA.org, 2018)

4.2. Product portfolio

Nowadays products portfolio of Microsoft Corporation is so big that's why here will be show 13 most important Microsoft Corporation products lines.

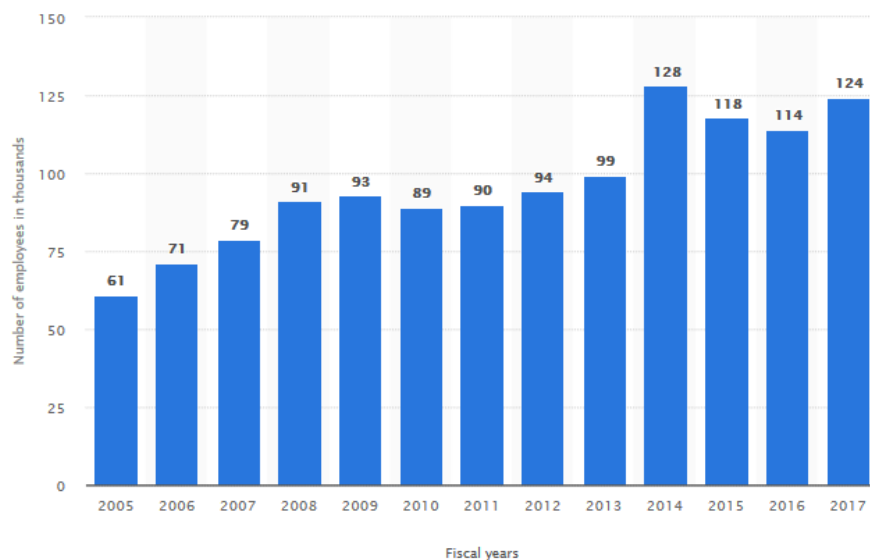
- Windows - operation system
- Office 365 – software
- Exchange – mail serves
- SharePoint – content management system
- SQL Server – relational database management system
- Windows Server – operating system

- Visual Studio – integrated development environment
- Xbox – video game console
- Bing – search engine
- Dynamics – ERP and CRM
- System Center - suite of individually sold systems management products
- Skype – telecommunications application software
- Windows Azure - cloud computing service

4.3. Employees

Nowadays Microsoft Corporation has 124000 employees. In the Figure 2 shows number of employee from 2005 to 2016. In the Figure 1 shows that Microsoft not so stable with their employee. Microsoft Corporation has a good and bad years with employees, but if compare it with Apple Inc. from 2005 to 2015, every year Microsoft Corporation has more employees.

Figure 1: MSFT Corp. employee number 2005-2016



Source: (STATISTA.com, 2018)

4.4.Evaluation of Microsoft Corporation

The modern high-tech sector has reached a very deep level of development. In the sector are concentrated dozens of different industries and thousands of segments. However, the key area for the whole sector is software development, which makes a normally functioning device out of an iron box. The world leader in software development is Microsoft Corporation, whose shares are traded on the St. Petersburg Stock Exchange under the ticker MSFT. Thus, henceforth, there is no need to open a trading account with a broker with direct access to the American market, to perform certain trade operations to Russian residents.

4.4.1. Worldwide Smartphone Shipment

Table 1: Worldwide Smartphone Shipment by OS

Worldwide Smartphone Shipment by OS, Market Share, and Annual Growth (shipment in million)							
Platform	2016 Shipment Volume*	2016 Market Share*	2016 Y/Y Growth*	2020 Shipment Volume*	2020 Market Share*	2020 Y/Y Growth*	5 Year CARG*
Android	1,246.2	85.3%	6.7%	1,507.1	85.7%	4.4%	5.2%
IOS	203.8	13.9%	-12%	249.2	14.2%	3.4%	1.5%
Windows Phone	7,2	0.5%	-75,2%	1,7	0.1%	-23,2%	-43,4%
Others	3,9	0.3%	-56,5%	0.8	0%	-3,9%	-38,7%
Total	1,461.2	100%	1.6%	1,758.8	100%	4,2%	4,1%

Source: (ANDROIDAUTHORITY.com, 2018)

Table 1 shows worldwide shipment of smartphones by OS and it's clearly shows that for the last couple of years sells of smartphones with Microsoft OS is nor that popular as their competitors like Apple OS and Android OS. Also, Table 1 shows that Market Share of

smartphones with Microsoft OS on 75,2% and in 2020 prediction of Microsoft market share will be equal to 0%.

Table 2:2016 Shipment volume (in million)

Mean	Median	Standard Deviation	Minimum	Maximum
365.225	105.5	594.6	3.9	1246

Source: Own calculation, data from (ANDROIDAOTHORITY.com, 2018)

In the software development segment, Microsoft remains the largest player. Until now, developed in the mid-80's. the operating system Windows remains dominant - this OS uses more than 85% of all computers. The main product of the company is Microsoft Office, a software package that includes applications for editing text files, creating presentations, sending e-mail messages, etc. Attention is paid to the Excel program, which is unique and has no competitive analogues in the world. In fact, Microsoft is a monopolist in its segment of the software market, which is why even anti-monopoly lawsuits have been filed against the company.

4.4.2. Worldwide Traditional PC Shipment

Table 3 shows Top 5 Vendors, Worldwide Traditional PC Shipment for the first Quarter of year 2017. It's clearly shows that all these vendors except of Apple using Microsoft OS. Only 7.00% of all market share takes Apple OS and the rest 93.00% of market share is companies which use Microsoft OS.

Table 3: Top 5 Vendors, Worldwide Traditional PC Shipment

Top 5 Vendors, Worldwide Traditional PC Shipment, First Quarter 2017					
(Shipments are in thousands of units)					
Vendor	1Q17 Shipment	1Q17 Market Share	1Q16 Shipment	1Q16 Market Share	1Q17/1Q16 Growth
HP Inc.	13,143	21.80%	11,621	19.40%	13.10%
Lenovo	12,322	20.40%	12,121	20.20%	1.70%
Dell	9,573	15.90%	9,017	15.00%	6.20%
Apple	4,201	7.00%	4,036	6.70%	4.10%
Acer Group	4,121	6.60%	4,006	6.70%	2.90%
Other	16,967	32%	19,140	31.90%	-11.40%
Total	60,328	100%	59,942	100%	0.60%

Source: (TWITTER.com, 2018)

Table 4: First Quarter 2017 Shipment

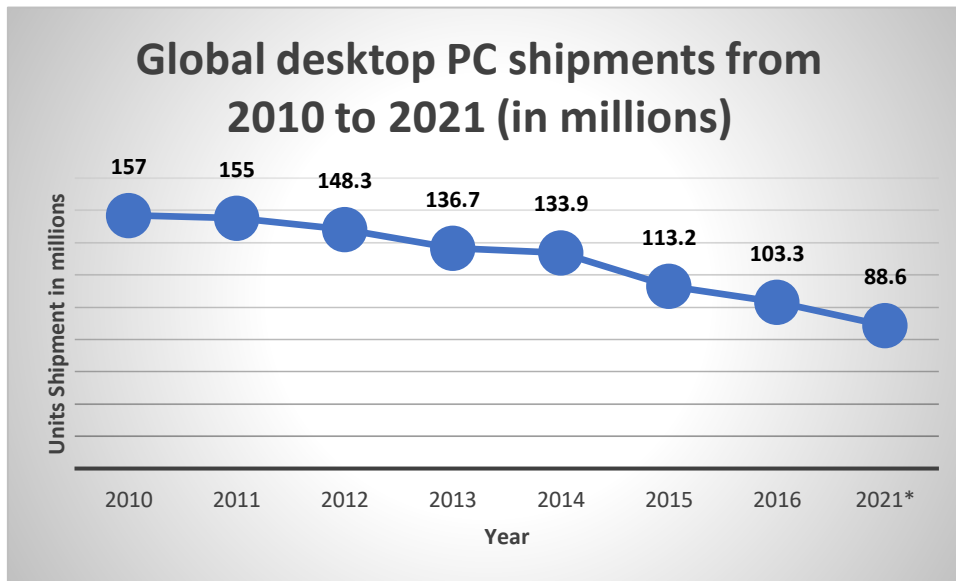
Mean	Median	Standard Deviation	Minimum	Maximum
10,0545	10,9475	5,14	4,121	16,967

Source: Own calculation, data from (TWITTER.com, 2018)

4.4.3. Computers (world market)

In January 2018, the analytical company Gartner summed up the results of the past year on the world market of personal computers. According to a preliminary assessment of specialists, manufacturers released in 2017, more than 262.5 million devices, including desktop PCs, laptops, ultraportable premium PCs and hybrid devices based on Windows. The indicator is 2.8% less than in 2016, thus, the negative dynamics on the market has been observed for six consecutive years.

Figure 2: Global desktop PC shipments from 2010 to 2021 (in millions)



Source: Own calculation, data from (STATISTA.com, 2018)

Researchers pay attention to the ongoing consolidation of the PC industry. In 2017, four of the largest PC vendors controlled 64% of the market, which significantly exceeds the indicator of 2011, when the share of the four leading players accounted for only 45% of the total volume of PC shipments.

The largest PC manufacturer by the end of 2017 was HP Inc., which supplied more than 55 million computers or 21,80% of the global volume. Compared with 2016, shipments from HP increased by 13.10%, and the share grew by 2.4%, which allowed the American vendor to bypass its Chinese competitor Lenovo, which in 2016 headed the rating.

Lenovo dropped to the second line with an annual result of 54.7 million PC-devices and a 20.40% share. For comparison, in 2016, Lenovo computer shipments reached 55.95 million units, and the share was 20.20%. Dell increased shipments by 0.90%, to 39.87 million units, corresponding to a 15.90% share. Next on the list follows Apple: shipment of its computers increased by 4.1%, to 19.3 million units, and the share increased from 6.70% to 7.00%. The worst dynamics in the top 5 was demonstrated by Acer Group, whose supplies in 2017 sank by more than 12%. As a result, under the control of the Taiwanese vendor, only 6.60% of the market remained, compared with 7.6% in 2016.

4.5. Microsoft's growth by product or service

In Table 5 we can clearly see how MSFT products and services increased in comparison with previous year. Azure revenue wasn't broken out since it's lumped into commercial cloud. Commercial cloud run rate is calculated by taking revenue from the last month of the quarter for Office 365 commercial, Azure, Dynamics 365, and other cloud properties and multiplying it by 12.

Table 5: Selected products and services revenue

	Percentage Change Y/Y	Constant Currency Impact	Percentage Change Y/Y Constant Currency
Office commercial products and cloud services	7%	1%	8%
Office 365 commercial	45%	0%	45%
Office consumer products and cloud services	15%	-1%	14%
Dynamics products and cloud services	10%	1%	11%
Dynamics 365	81%	1%	82%
Azure	93%	1%	94%
Windows OEM	5%	0%	5%
Windows commercial products and cloud services	6%	0%	6%
Gaming	4%	2%	6%

Source: (ZDNET.com, 2018)

4.6. Financial Data

Microsoft's financial results remain very positive. For the fiscal year 2017, total revenues amounted to more than \$ 89.950 billion, which is 5.14% more than a year earlier.

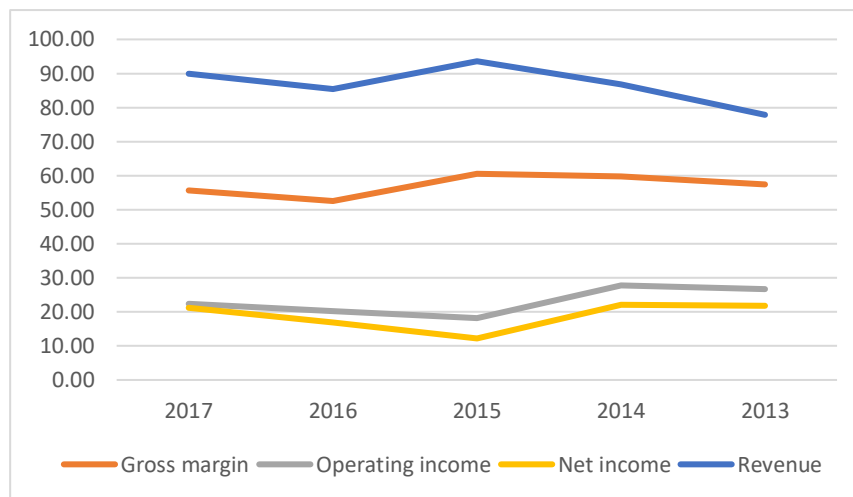
Table 6: Financial Highlights

Year	2017	2016	2015	2014	2013
	\$	\$	\$	\$	\$
Revenue	89,950	85,320	93,580	86,833	77,849
Gross margin	55,689	52,540	60,542	59,755	57,464
Operating income	22,326	20,182	18,161	27,759	26,764
Net income	21,204	16,798	12,193	22,074	21,863

Source: (MICROSOFT.com, 2018)

True, net income grew by only 20.77% to \$ 21.204 billion (in fiscal year 2013 this figure was \$ 21.86 billion), which is associated with high costs for M & A transactions. At the same time, in the last quarter financial indicators turned out to be weaker: revenue increased by 6% to \$ 21.7 billion, while net profit fell by 12% to less than \$ 5 billion.

Figure 3: Financial Highlights



Source: Own calculation, data from annual report 2013-2017

Nevertheless, the data proved to be better than investors' expectations - on average, revenue forecasts amounted to 21.1 billion dollars, and on net profit - less than 4.9 billion. As a result, after publication of the report, the capitalization jumped by more than 3%. In

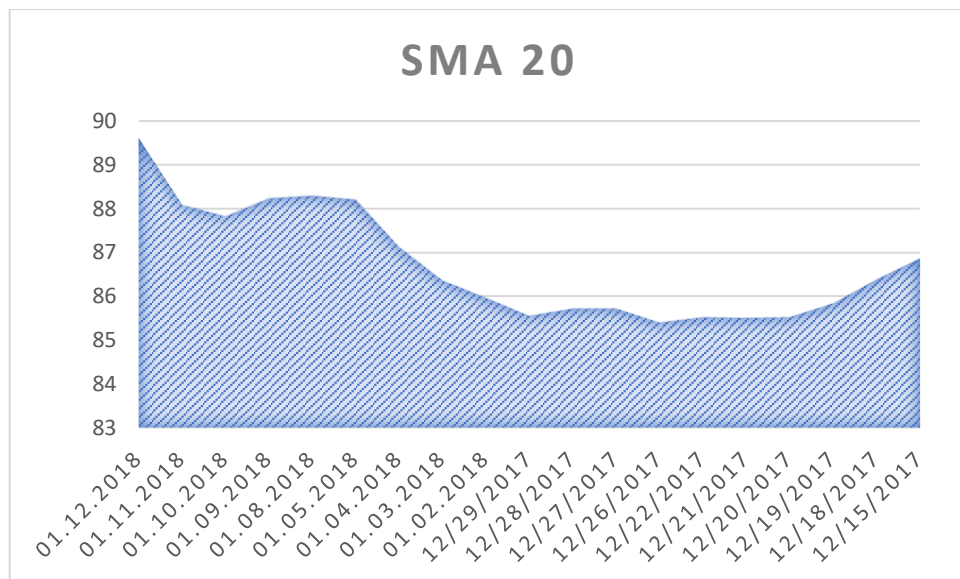
general, the issuer's position is more than stable and despite several difficulties the development is progressive and very dynamic.

4.7. Stock price analysis

4.7.1. Simple moving average

Figure 5 shows Microsoft's moving average with a 20-day moving average. This method takes into account the importance of each digit measured in the calculation. The 20-day moving average shows a short-term review and shows signals when buying and selling shares.

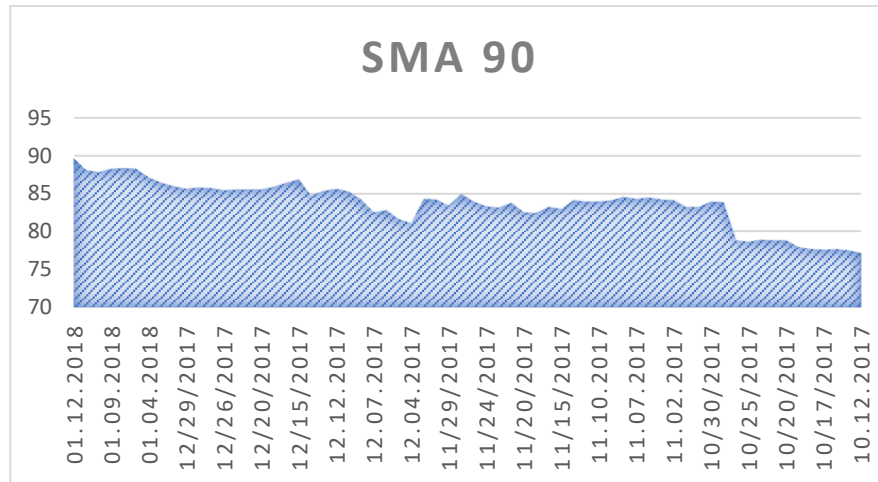
Figure 4: SMA (20)



Source: Own calculation, data from NASDAQ

When development is reduced on the average from the downside, which is a signal for the sale of shares. Figure 5 shows this comparison with a short-term investment objective.

Figure 5: SMA (90)



Source: Own calculation, data from NASDAQ

Considering the 90-day period gives more accurate information for such a long period with almost the same result. Even using a short observation period of 7.5 years is a bit complicated.

4.7.2. Relative strength index

RSI is another indicator showing the relative change in price that describes the price of security compared to its past performance in order to determine its internal strength. Values move in the area between 100 and 40, the upper value indicates resale. The advantage of this method is the comparison of the price trend, which, if in the peak, and the RSI is not higher than in the previous peak, which is an indicator of the pending reversal. Microsoft registers higher volatility, which is why a range of 20 to 80 is used. Figure 7 shows the apparent time delays between peak RSI values and a decline in the stock price in the 1-2-month range.

Figure 6: Microsoft Relative strength index



Source: (NASDAQ.com, 2018)

4.7.3. Bollinger Bands

Figure 7 shows usage of Bollinger Band with Relative strength index(RSI). Which improves bands justifiable in a better way without wrong flags. In Figure 7 used Bollinger Bands to forecast when it would be better buy or sell shares. Also Figure 7 shows RSI indicator, which help to understand correct signal. October 10th, 2017 stock price of MSFT increase upper limits and it's called "Bull Market" and it's go till 11th of November 2017.

This shows that it's the best time to sell stocks. From November 13th, 2017 stock price was pretty quiet till January 11th, 2018. From 17th of January 2018 Stock price increase upper limit again till February 1th, 2018. Nowadays, stock price is on their upper limit. It's shows that MSFT stock price was almost above Bollinger Band median which mean that stock price was on the "Bull Market" and sometimes it was more than Bollinger Band Top.

Figure 7: Microsoft's Bollinger Bands (Period 20, Deviation 2)



Source: (YAHOO.com, 2018)

4.8. Stock Price Growth

March 01, 1986 Microsoft Corporation came on a share market. It became public and people started to buy Microsoft stocks. Their price was 0.09\$ per share. In two years their price was 0.41 per share and they decided to split them 2/1. It means that they created from 1 stock 2 stocks. In the next three years price increased to 0.76\$ per share and they split them again 2/1.

Figure 8: Stock price Growth (MSFT)



Source: Own calculation, data from YAHOO.com

From April 16,1990 to 21th of June 1991 price increased to 1.52\$ per share and Microsoft split their stocks again, but for this time they made 3/2 stock split. Year after next stock split 3/2. In next three-year stack price increased mostly twice and Microsoft Split again 2/1 stock split. This shows us that people were interesting in buying their stocks because Microsoft was innovator in their field. The last split Microsoft made 18th of February 2003. From 2016 till 2018 was a stack price boom for Microsoft and nowadays price of on stock is 93.99\$ per share.

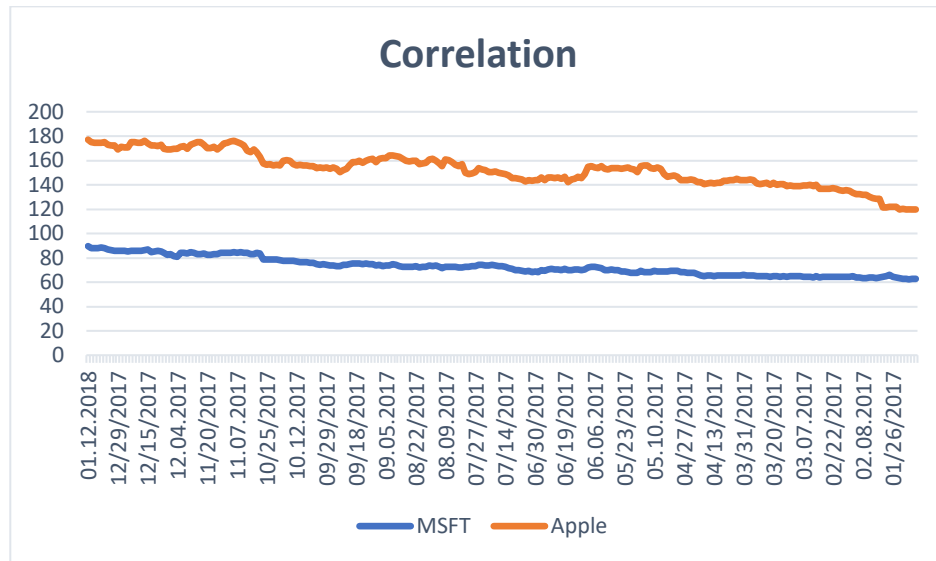
4.9. Correlation Analysis

Correlation analysis - the statistical relationship of at least two arbitrary factors (or amounts that can be viewed all things considered by an acceptable level of precision). For this situation, an adjustment in the estimation of at least one of these amounts goes with an orderly change in other or different amounts. This investigation indicates positive or negative connection between at least two factors.

4.9.1. Stocks correlation between MSFT and Apple Inc.

Correlation analysis was calculated in Microsoft Excel 2016 using correlation tools. Data stock of Microsoft Corporation and Apple Inc., were use period from 17th of January 2017 till 12th of January 2018. Stock price were taking from NASDAQ.com.

Figure 9: Correlation between MSFT and Apple Inc.



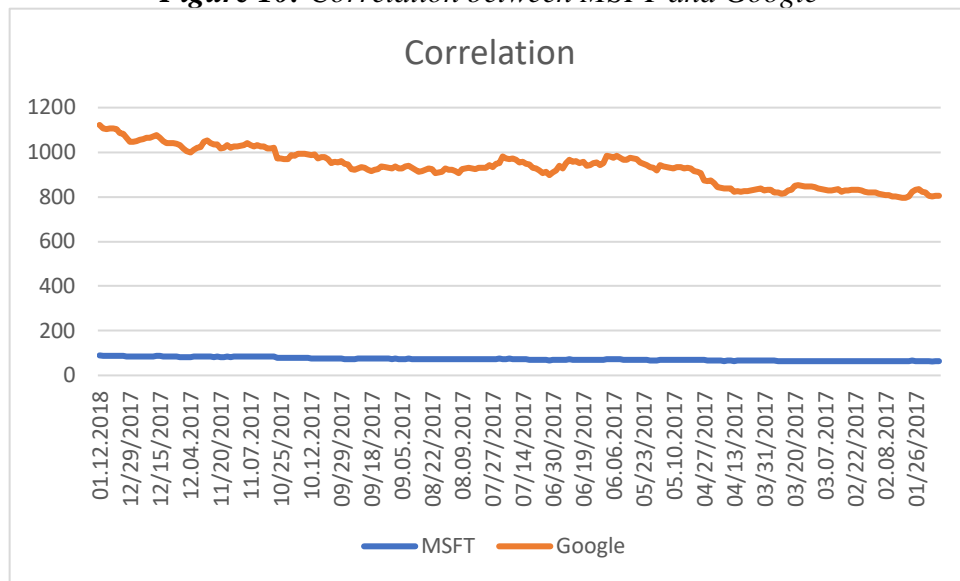
Source: Own calculation, data from NASDAQ

The result of Correlation analysis is 0.921784 which mean that there is a strong positive correlation between them.

4.9.2. Stocks correlation between MSFT and Google

Correlation analysis was calculated in Microsoft Excel 2016 using correlation tools. Data stock of Microsoft Corporation and Google, were use period from 17th of January 2017 till 12th of January 2018. Stock price were taking from NASDAQ.com.

Figure 10: Correlation between MSFT and Google



Source: Own calculation, data from NASDAQ

The result of Correlation analysis is 0.941473 which mean that there is a strong positive correlation between them.

4.10. PESTLE analysis

4.10.1. Political Factors

This field of the PESTLE examination manage government impacts on the remote or full-scale condition of the PC equipment and programming business. On account of Microsoft, the accompanying political outside components are noteworthy in key basic leadership:

- Political stability in the majority of markets (opportunity)
- Increasing governmental support for automation (opportunity)
- Increasing international trade agreements (opportunity & threat)

(Ferguson, 2018)

4.10.2. Economic Factors

The business impacts of the financial circumstance on the remote or large-scale condition are considered here of the PESTEL/PESTLE investigation show. Microsoft must incorporate the accompanying financial outside components in techniques for the PC equipment and programming business: Considerable economic stability of the majority of developed countries (opportunity)

- High growth of developing countries (opportunity)
- Growing middle class disposable income (opportunity)

(Ferguson, 2018)

4.10.3. Social Factors

This territory of the PESTEL/PESTLE Analysis display considers how the social circumstance influences Microsoft' remote or large-scale condition, particularly as far as clients' practices and desires. In the PC innovation showcase, the accompanying sociocultural outer variables impact Microsoft:

- Stable attitudes about leisure (opportunity)
- Increasing cultural diversity (opportunity & threat)
- Stable demand for high quality customer service (opportunity)

(Ferguson, 2018)

4.10.4. Technological Factors

The impacts of advancements on the remote or large-scale condition of the PC innovation industry are recognized around there of the PESTEL/PESTLE examination display. Microsoft needs to incorporate the accompanying innovative outside elements in its systems: Rapid adoption of mobile technology (opportunity & threat)

- Increasing volume of online transactions (opportunity & threat)

- Increasing automation in businesses (opportunity)

(Ferguson, 2018)

4.10.5. Environmental Factors

Around there of the PESTEL/PESTLE Analysis show, the effects of natural issues on the PC equipment and programming industry condition are considered. Microsoft faces the accompanying natural outside components in its remote or full-scale condition:

- Increasing preference for green products (opportunity)
- Increasing focus on business sustainability (opportunity)
- Increasing availability of recyclable materials (opportunity)

(Ferguson, 2018)

4.10.6. Legal Factors

The business centrality of laws and directions are resolved here of the PESTEL/PESTLE Analysis show. In Microsoft's remote or full-scale condition, the accompanying legitimate outside variables influence vital achievement:

- Increasing electronic waste disposal regulations (opportunity & threat)
- Improving patent laws (opportunity)
- Energy consumption regulations (opportunity)

(Ferguson, 2018)

4.11. SWOT analysis

SWOT analysis is strategic planning technique used to help to identify the Strength, Weaknesses, Opportunities, and Threats.

4.11.1. Strength

- The biggest strength of Microsoft is that it has top of the mind brand recall among all the PC (personal computer) users in the world.
- The most used Operation System in the world.
- Microsoft has worldwide network to distributors.
- Microsoft has consistently beat analyst expectations in terms of profitability and revenues though it is appearing to be vulnerable to shifting trends like mobile computing in recent years.

(Managementstudyguide.com, 2018)

4.11.2. Weaknesses

- The biggest weakness of Microsoft is that its fabled team did not anticipate the emergence of the internet as a phenomenon that would take over the world in addition to reading the market signals about mobile computing.
- As for mobile computing, Microsoft completely missed this wave and indeed, the success of the other computing revolutionary

(Managementstudyguide.com, 2018)

4.11.3. Opportunities

- The company has a huge cash hoard which means that if it cannot grow organically (through normal growth) it can still grow inorganically (through acquisitions) of smaller companies that have good business prospects.
- This is the manner in which Bill Gates made amends for misreading the internet and bought out Hotmail created by another Indian, Sameer Bhatia that did give Microsoft some edge for a few years before Google revolutionized personal email products.

(Managementstudyguide.com, 2018)

4.11.4. Threats

- The biggest threats are that it's very size which is an asset otherwise is preventing it from being quick and nimble and seize market opportunities by proactively reading market signals.
- On the commercial front, Microsoft has been exasperated with software piracy especially in Asia where the pirated copies are more than the original products in China and India.
- Finally, Microsoft has to be both weary and wary of potential lawsuits especially in Europe where the regulators are not taking kindly to its monopolistic business practices.

(Managementstudyguide.com, 2018)

5. Conclusion

The primary objective of this bachelor's thesis is to assess and evaluate Microsoft on an organizational level as well as from a financial perspective. After reviewing this thesis, the reader should be better informed about Microsoft as an organization, in addition to the having a clearer understanding of Microsoft's financial picture.

In the theoretical section of this thesis, there multiple parts are reviewed. Those include: Financial Analysis (Income Analysis, Revenue Statement, and a Net Income Analysis), SWOT Analysis, PESTLE Analysis, Correlation Analysis, Descriptive Statistical Analysis, and Technical Analysis (Simple Moving Average, Relative Strength Analysis, and a Bollinger Analysis).

In the practical section of the thesis these theories above are applied. They demonstrated that the general conclusion is that Microsoft has grown over the last 3 years in net income, even though gross revenue has decreased (Table 6). In addition, when examining both the 20 day moving average and 90 day moving average it shows an uptick in stock price. Finally, when scrutinizing both the Relative Strength Index and the Bollinger Band it is apparent that the stock price is expected to increase in the near future. It is also important to note, that after conducting a correlation analysis with Apple and Google-Microsoft has demonstrated higher levels of stability, and Google and Apple may be subject to increased stock price volatility.

When taking into account the recent increase in profitability, projected market share of PC Operating systems to stay the same, and online software and cloud services projected to increase; it is clear that Microsoft is on its way back to regaining its prestige of the 1990's and 2000's. With increased competition from Apple, as well as the difficult economic situation over the last 10 years, it is a wonder that Microsoft is still considered the best and most prolific operating system provider in the world.

6. References

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