

# Risks vs Return with Binary Option Trading

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Eemi Kiiskinen

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Binäärioptiot ovat johdannaisinstrumentteja, joilla on korkeat riskit ja korkeat tuotot. Binäärioptio on samankaltainen instrumentti normaaliin optioon verrattuna, jonka arvo perustuu jonkin ennalta määrätyn kohdeetuuden arvoon kuten osakkeisiin tai kultaan. Suurin ero binäärioptioilla ja perinteisillä optioilla on instrumentin tuotto. Koska binäärioptiot ovat vielä suhteellisen uusi tapa sijoittaa, ovat ne vielä melko tuntemattomia osalle sijoittajista.

Tämän opinnäytetyön tarkoitus on esitellä binäärioptiot ja niillä käytävän kaupan perusteet uusille sijoittajille. Opinnäytetyössä käydään läpi tarvittava informaatio ja työkalut, joita tarvitaan sijoittaessa binäärioptioihin. Työssä verrataan binäärioptioita normaaleihin optioihin, ja käsitellään kuinka binäärioptioiden kauppaa on säännelty.

Empiirinen osa opinnäytetyöstä toteutettiin kvalitatiivisena tutkimuksena. Tutkimus tehtiin haastattelemalla kahta alan ammattilaista, jotka työskentelevät eri tehtävissä johdannaisinstrumenttien parissa. Haastattelu toteutettiin puolistrukturoituna kyselynä.

Kirjallisuuden ja haastattelujen perusteella binäärioptioihin sijoittaminen voi olla kannattavaa, mutta erittäin riskialtista. Perinteisiin sijoitusmuotoihin verrattuna binäärioptiot nähdään usein enemmän uhkapelinä kuin järkevänä sijoittamisena. Menetelmänä se silti houkuttaa sijoittajia, sillä voitot ovat binäärikaupassa korkeat.

Asiasanat: binary options, derivatives, trading

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ABSTRACT

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Binary options are derivative instruments associated with high risks and high profits. A binary option is similar to a normal "vanilla" option where the value of the derivative is based on the value of the underlying asset. The main difference to a vanilla option is the payout of the trades. As binary trading is a relatively new way of investing, it is still uncommon for many private investors.

The purpose of the thesis is to introduce the binary option as an investment method for novice traders. The thesis introduces the key information and the tools that are required for binary options trading. Comparisons are made between binary and vanilla options trading and the existing regulations of binary options trading are studied.

The empirical part of the thesis was executed using qualitative research methods. The research was conducted by interviewing two professionals working with derivative instruments in finance. A semi-structured questionnaire was used in the interviews.

According to the interviewees, binary trading can be profitable, but it is an extremely risky way of investing. Compared to more traditional ways of investing, binary trading is often regarded more as gambling than as a reasonable means of investment. Despite the associated risks, the binary options remain an attractive method for traders as the payouts are often high.

Keywords: binary option, derivatives, trading

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# INTRODUCTION

## 1.1 Background

During recent years, derivatives have become increasingly important in finance. Different types of instruments, such as options, swaps and futures, are traded on many exchanges and financial institutions throughout the world. A derivative is a financial instrument whose value depends on the values of other underlying variables. (Hull 2009.) A current trend is to invest in a derivative of an underlying asset than the asset itself. Investing in derivative instruments has quickly become the most popular investing method, and the total value of the derivatives market is estimated at over 1.2 quadrillion dollars (Maverick 2015). The derivatives market has made investing more complex, and it also undermines the stability of the world economy.

In the following figure, an exponential increase in the derivatives market can be observed in the United States between 1990 and 2014.

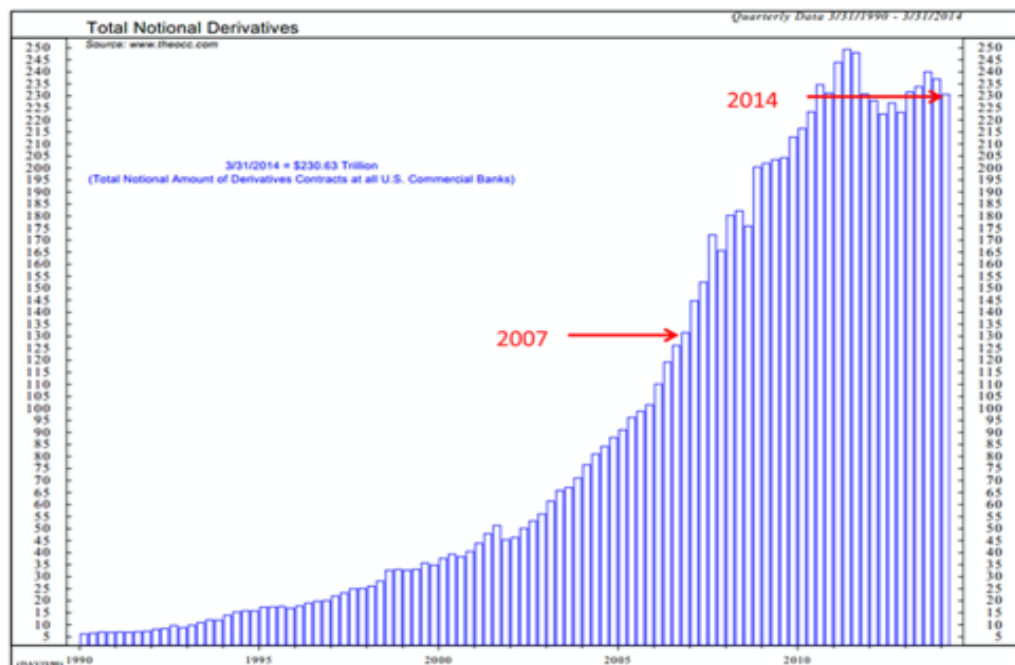


FIGURE 1. Development of total notional derivatives in U.S. (Forbes 2014.)

Binary Options are a relatively recent method to trade derivatives. In this type of trade, a trader purchases an option which can lead to two possible outcomes: a fixed profit or loss. If the option is profitable, the payout is approximately 80% of the trader's investment, depending on the trading platform and the underlying asset. If the trade is not profitable, the trader loses the total invested amount. (Maverick 2015.)

After the U.S. Securities and Exchange Commission (SEC) approved binary trading in 2008, it has quickly become one of the fastest ways to trade assets. The shortest trades made with binary options take less than 60 seconds to complete. During the last couple of years, the bulk of binary options trading is shifting from traditional exchanges to other financial institutions. Today, plenty of virtual trading platforms have made it easy for retail traders to enter into the market. (Maverick 2015.)

## 1.2 Research Objectives

The purpose of the thesis is to evaluate the risks and possibilities when investing in binary options. The thesis aims to answer questions, such as how binary options work in practice, and what kind of risks should a private investor consider when investing in binaries.

Since binary trading is a relatively new way of investing, many financial institutions have provided internet guides to help with methods and risk evaluation. Also, there are several earlier theses written about the derivatives market. The thesis aims to clear the behavior of the binary option and all the necessary tools when trading with binaries.

In the thesis, the author deliberately avoided going into too much detail about core functions of derivative instruments, but instead focused on giving advice for a casual or a novice trader, or anyone who is interested in learning the basics of binary options trading.

The two main questions regarding the subject of the thesis are:

What are binary options?

How do they work in practice?

These two sub-questions support the main questions:

How do binary options differ from other options?

What kind of binary options can a private investor trade?

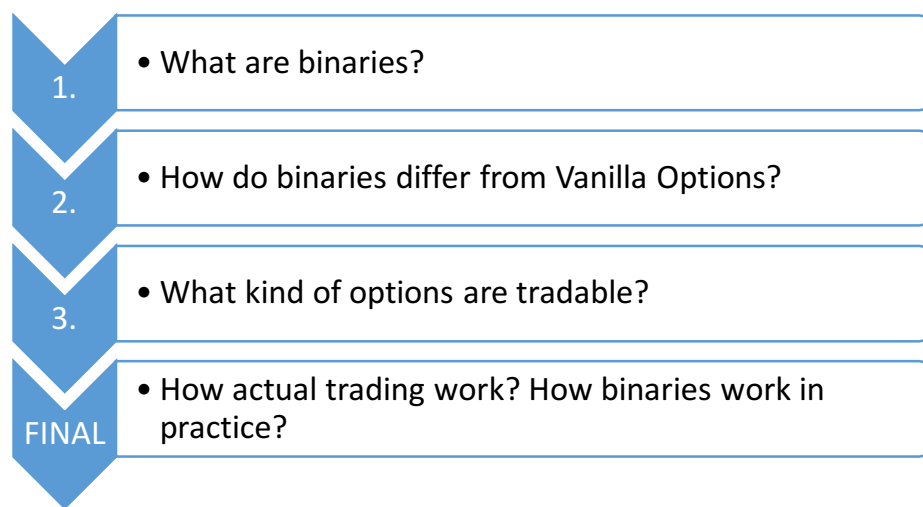


FIGURE 2. Research questions progression

The aim of the research is to create a comprehensive guide about binary trading. In the previous figure is described the progression how the binary trading is cleared in the thesis. The thesis examines the binary options, how they differ from vanilla options and what are the essential features of binary options. In addition, the research focuses to the binary trading in practice.

### 1.3 Research methods

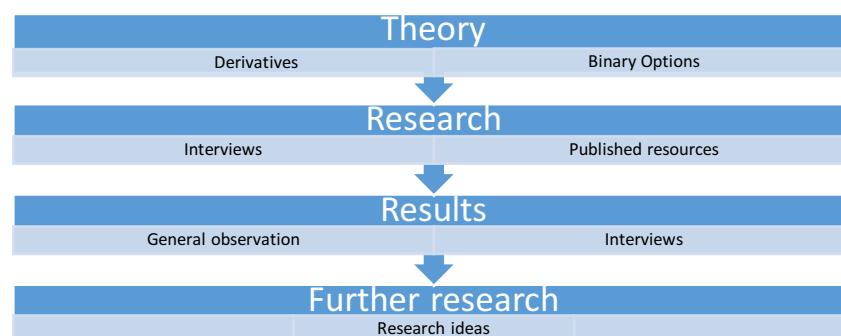
The research method used in the thesis is a qualitative one: a semi-structured interview or a theme interview. Qualitative research helps explain a studied subject in more detail than quantitative research

methods. (Heikkilä 2008, 16.) A theme interview is used to obtain information of the investigated persons own experiences. A semi structured theme interview proceeds on pre-established questions and the interviewees answer using their own words and experiences on the subject. For this thesis, a semi-structured theme interview was chosen since formatted questions fitted the best for the theme. The research, covered the function of binaries is covered and the typical investor is profiled.

The research was conducted by interviewing a binary options account manager and a bank employee who works in the derivatives market. For the interview, nine questions were prepared, for which the interviewees could give open answers using their own words. The questions were sent to the interviewees two days earlier so they could prepare for the interview. The interviews were individual and lasted from fifteen minutes to half an hour. The concept of the interview was already familiar for the interviewees and the interviewees participated voluntarily.

#### 1.4 Structure

The research is limited to investigate the derivative market and primarily binary options. The desk research clears the background and function of derivative market and binary options. The desk research is combined with interviews of financial specialists and gathering the most relevant information and facts. This will allow authentication to previous studies and conclusions.





### FIGURE 3. Structure of the thesis

The thesis includes a theoretical part and empirical research. The theoretical part starts with clarifying the basics of binary options and defining the key terminology. The second section examines the different types of trades. The next chapter goes through how binary options trading works in practice as well as the most commonly used indicators for binary trading. The last chapter of the theoretical part compares binary options to vanilla options.

## 2 FUNCTION OF BINARY OPTIONS

### 2.1 Derivatives

Derivatives are financial instruments whose value is based on fluctuations in the value of other investments. For example, a forex option is a derivative, the value of which is determined by the underlying currency exchange rate. Derivatives can be based on almost any conceivable variable. (Hull 2009, 1-2.)

There are several types of traditional derivatives. Basic derivatives are futures, options and warrants. The derivative trading is trading on assets future price change. In short, the derivative market is a deal between two parties where the participants either buy or sell an underlying based on some other variable. Some organizations are using derivatives to manage the business risks and protecting themselves from future price changes. (Leppiniemi 2002, 154.)

The derivative market is huge. In terms of turnover, the derivative market is much larger than the stock market. Deutsche Börse has estimated the global derivative market being in 2009 altogether 471 trillion euros in notional amount and some of the estimations go up to 1.2 quadrillion euros. (Deutsche Börse.)

### 2.2 Binary Options

Binary Option is a derivative which is based on the value of the underlying asset. Every binary option has a fixed deadline for expiration with a fixed payout. Basically, the binary option is a yes or no bet. More specifically, the bet is about whether the settled price of an underlying asset will be above or below a set target strike barrier until a certain time. As the name of the option states 'binary', it has two possible outcomes: all or nothing. (Simmons 2013.)

Binary options differ from other types of options by having different

payouts, fees, risks and investment processes. Also trading with binaries, the trader does not have any ownership of the asset but is only betting on the variations of the underlying asset. Unlike more traditional methods of investment where the instruments are traded in exchanges, binary options are mostly traded via individual brokers. (Mitchell 2015.)

There are several different types of binary contracts that can be traded. The tradeable assets can be indices, forex, stocks or commodities. After its introduction, forex trading has become one of the most popular tradeable assets. (Mitchell 2015.)

All binaries fall within the group of 'fixed-return options', for the payout is always fixed. A trader can buy either a 'call' or a 'put' option depending on his predictions of the tradeable asset. Buying a call option means that the trader predicts that the value of the underlying asset will increase and vice versa when buying the put option. Every option has an expiration time which may vary from minutes to months. (Green 2014.)

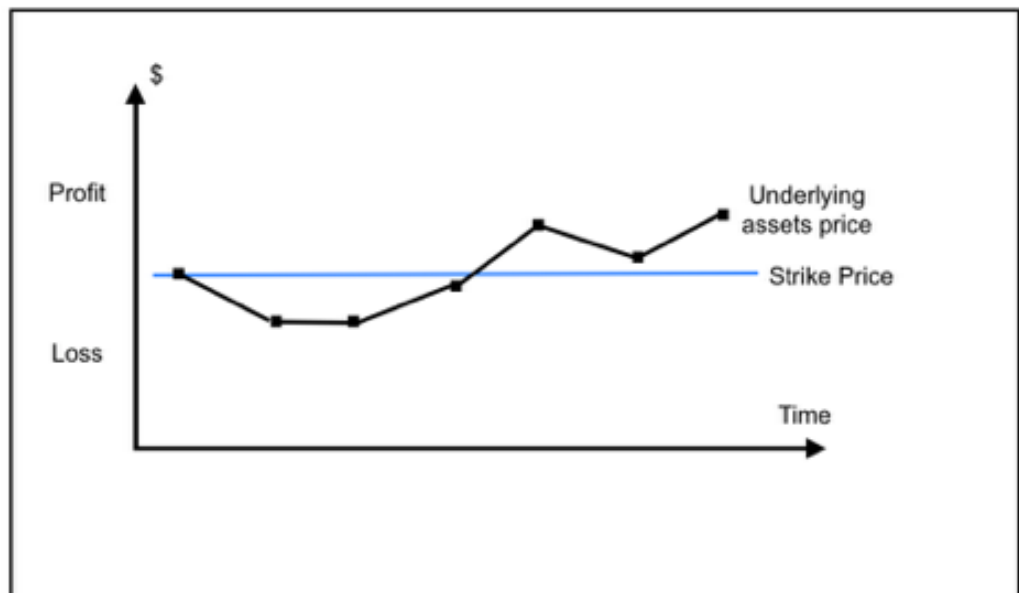


FIGURE 4. Visualization of a call binary option

Figure 4 demonstrates a possible movement of a binary trade. If the underlying asset price is below the strike price when expiring, it indicates a

loss. If the asset price is above the strike price at the expiry, the option is profitable. (Mitchell 2015.)

### 2.3 Key Terminology for trading

The mechanisms of binary options are rather simple to understand and use. Every starting investor should be familiar with the key terms before trading with binaries. The binary options key terms are explained below:

#### Strike Price

Each binary option has a strike price, which indicates the price the trader attempts to anticipate at the expiration time. The strike price is fixed at the beginning of every binary trade and stays unchanged until the option is expired. (Cofnas 2012, 11.)

#### Settlement Value

Settlement value states the value of the option on expiration. This states the amount of the trade's final payout. With binary options, the settlement value is always a fixed payout. (Cofnas 2012, 11.)

#### Underlying Market Price

This states the current real-time market price of the underlying contract. It varies during the binary option's life. (Cofnas 2012, 11.)

#### Volatility

Volatility is a statistical measure of the dispersion of returns for given security of market index. Basically, volatility shows the uncertainty or risk of the size of changes in an option's value. Usually, it is calculated based on the deviation of daily returns and expressed as a percentage per annum. (Investopedia 2013.)

## 2.4 Different types of trades

There are three main types of trade with binary options. First and the most popular kind of binary option is the call/put option. In this trade the strike price is settled and the trader is simply attempting to predict if the price of the asset will increase or decrease at the moment of expiration. If the prediction is right, the trade is 'in-the-money', and if wrong, it is 'out-of-the-money'. (Brezinski 2013.)

The next type of trade is called one touch trade. This trade type involves more risk, but the payout can be over 500% of the original investment. The trader is given a target price at the beginning of the trade. The asset price needs to reach the target price at least once during the timespan of the trade. In one touch trade, the price at the expiry can be below the strike price. (Brezinski 2013.)

The last of the main trade types is the boundary binary option. In this trade the broker sets certain boundaries within which the asset price needs to stay. It is irrelevant whether the asset price crosses the boundaries during the trade as long as it stays within the designated price range at expiration. (Brezinski 2013.)

## 2.5 Using binaries in practice

Next, a trade using a call / put binary option is illustrated:

Let us assume that the trader's analysis indicates that the DAX-Index is going to increase for the next ten minutes. The index is currently at 1,600, so the trader is bidding to a call option at the cost of 100€ with a payout of 60% and with an expiry time of five minutes. If the underlying asset closes 1,600 or higher by the expiration time, the options trade was successful and the trader gets the payout of 60€. If it expires anything under 1,600, the option expires without any payout.

TABLE 1. Profit/Loss of a binary trade

Underlying Asset Price at Expiry in €	Binary Call Option Profit in €	Binary Call Option Loss in €
1,598	0	-100
1,599	0	-100
1,600	60	0
1,601	60	0
1,602	60	0
1,603	60	0

In the previous table it can be observed that profit is fixed regardless of how much the asset price increases relative to the strike price upon expiry. On the other hand, if it remains under the strike price, the whole traded amount is out-of-money and lost.

## 2.6 Reliability of binary option trading

As with all investment, particularly with binary options, it is important to stay up-to-date and keep track of the movements of the economy in order to make the best possible investment. Observing the market, the trader may identify when the assets trends are increasing or decreasing in a short period of time. It is still good to keep in mind that no matter how professional the trader is, no one can predict the outcome with absolute certainty. Therefore, binary option trading is often rather regarded as gambling than more “traditional” investment methods.

Binary option trading attracts investors, who are especially willing to take higher risks for potentially high returns. There is a possibility to earn throughout the day, simultaneously trading with diversified binary options, choosing variable time expires to fit different strategies. Secondly, traders usually manage their own accounts and there are no brokers involved in the trades. (Harvey 2013.)

Many binary options platforms offer a free demo account with a possibility

to practice trading before using real money. Sometimes there are also features, such as the binary replicator, which allows traders to follow other traders' activity.

One of the biggest downsides of binary trading is that the reward is always less than the risk involved. A trader must have a high percentage of won trades to cover the expense for the lost trades. During longer periods of time, the payout percentage and risks fluctuates between binary brokers and instruments. (Mitchell 2015.)

With binary options, there are some benefits which include fixed risk, free trading accounts, and trading is relatively easy. Next, these factors are presented more detailed.

#### Fixed risk

There is a fixed reward and known risk. This means that there is no danger of leverage which could cost a client more than the amount they risked on their trade. In the case of a reward, one knows exactly how much one will profit from their trade. (Mitchell 2016.)

#### Some brokers have free trading accounts

Free accounts have made it easier for signing up for binary options in commerce. There is, however, a minimum fee in which many brokers require a fixed amount of money for a client to qualify to have a demo account. (Mitchell 2016.)

#### Trading is relatively easy

Unlike with forex trading, trading binary options is not complicated. Web sites providing the same are more user-friendly lately with more info update and answers to questions that trading features would require. (Mitchell 2016.)

#### Excitement

Trading binary options provide some degree of confusion. One can make so much money so fast due to its inherent unpredictability and rapid pace. This specifically attracts investors despite having a high-risk level. (Mitchell 2016.)

## 2.7 Binary trading risks

While dealing with binary options, there are several important aspects and risks involved. A client should be well conversant with these risks before engaging in any trading or investing activities in binary options so as to avoid the loss of their cash. Binary options pay a fixed amount and are pre-determined and are contingent on whether or not set events occur as per the expiration time of the binary options.

Unlike traditional options, binary options contain only double outcome of whether client losses the amount they have invested as resulted from each of the options or whether the customer has received his / her payment once the event has occurred. Nonetheless, binary options just like traditional options are fundamentally established on assets like indexes, commodities, stocks or currencies. It is one's responsibility to take into account your financial resources in addition to personal circumstances and take into consideration any orders one is to take individually.

Binary options trading involves risks of high degrees and is speculative hence this can cause loss of a client's investment wholly. This is, therefore, best advisable to clientele with enough knowledge in both the legal and economic risks involved in these transactions.

While engaging in binary options, there are some risks in which a client is warned off. This includes:

- 1) Trading binary options is suitable for customers who can be able to hold out or tolerate the losses of the funds they have invested entirely and comprehend and are enthusiastic about taking responsibility for legal, economic and additional risks that may arise from their involvement in



those transactions.

- 2) The future or current performance of any assets are not guaranteed by the previous ones. Historical data here does not constitute a safe forecast as per the resultant and impending future.
- 3) There is a high volatility or unpredictability rate among related markets and financial instruments which are derivative. Unforeseeable events may be reflected by the rapidly fluctuating prices by the clients or over the wide range of prices which may result in changes in conditions.
- 4) The customer has no implied or expressed warranty of whether the market prices are quoted in the assets available in the current market. The prices quoted of the respective underlying assets are related to the actual prices reasonably.
- 5) In binary options, trading is highly speculative hence one cannot predict a 100% outcome. With this kind of high degree risk, one can either gain or end up losing his / her entire investment on it.
- 6) The clients may not have any access to available info or data on their positions in the trading market hence their interests may be very different from the ones representing them in the market. The clients are not provided with any statistics that may help them in their trading or refrain from the same. (Levitov 2016.)

### 3 DIFFERENT INDICATORS FOR BINARY TRADING

#### 3.1 Black & Scholes Model

The essence of binary options trading is to identify the changes in the value of the tradable asset. The most widely known pricing model is the Black & Scholes Model. It was first published in 1973 by Fischer Black and Myron Scholes. The model was developed for the European vanilla call option but it can also be used with binary options with some amendments. To use the Black & Scholes Model, five assumptions need to be fulfilled: the value of the asset, the strike price, the risk-free interest rate, the exercise date and the volatility. (Hull 2009, 301-302.) In the thesis the Black & Scholes Model is not examined in detail, but several other guides describe it thoroughly.

In the next paragraph some of the most used indicators in binary trading to measure the movement of the underlying assets are explained.

#### 3.2 Candlesticks

In the options market, the value of the underlying asset is usually falling or rising. By predicting the asset's future development, a trader will make a decision if he will either buy a call or a put option. There are several different technical indicators that help to shape binary options trading. Every trader should be familiar with the so-called 'candlesticks'. Candlesticks are a common way to represent price activity within charts. The basic feature of a candlestick is the color. In an ordinary case, the white candle represents bullish activity and the black one bearish activity. Basically, the candles express the emotion in the market stating if the assets price is increasing or decreasing. (Cofnas 2012, 81.)



FIGURE 5. Candlesticks

In the previous figure there are presented a bearish and bullish candles. The thick part of the candlestick is called the 'body' and the thinner lines are so called 'shadows'. As the body represents whether the movement is bearish or bullish, the shadows represent the highest and lowest point of the movement. (Cofnas 2012, 81.) The indicators introduced next use all candlesticks to present the movement of the trend.

### 3.2 Moving Average

Also known as a running or rolling average, a moving average is analyzing data points through calculating by the creation of different subsets of a series of standards of the full data set. Its observations are spaced equally in time from consecutive periods severally. It then progresses by totaling the current value and dropping the initial value.

Moving average can be useful as it lessens the impacts caused by temporary changes in info. That is, increase data fit a line or mark so as to show the trend of data in a clearer way. The moving average is one of the most common indicators used. It reflects the asset's current price compared to the average price. The moving average can be divided into two different indicators: the simple moving average and the exponential moving average. The simple moving average indicates the average of a

security over a defined number of time periods. The exponential average gives bigger weight to more recent prices. (Investopedia 2005.)

Moving average is one of the most used technical indicators as it is easily customizable. The trader can freely choose a time frame for the assets movement. The shorter the frame is, the average is more responsive to the assets price development and vice versa. (Murphy 2014.)

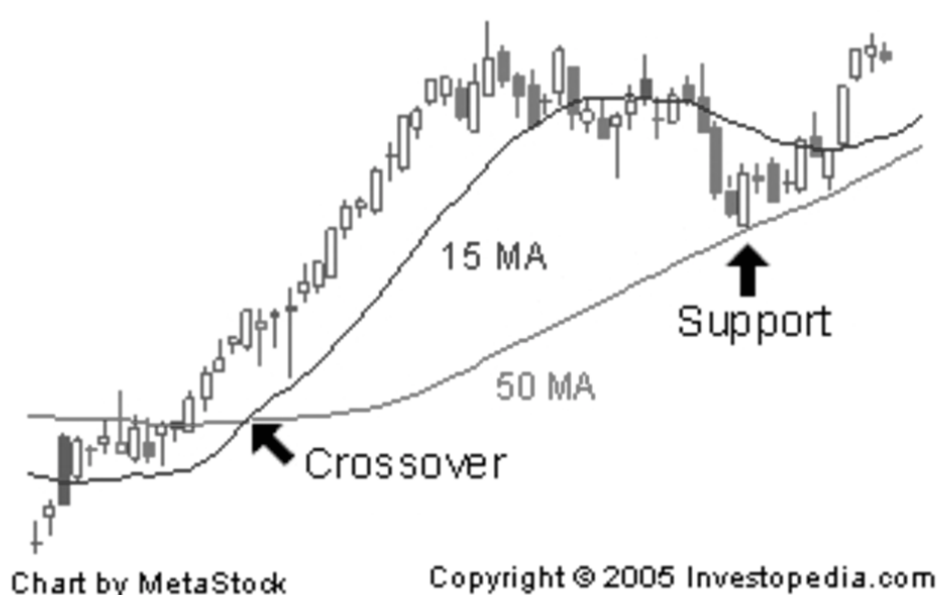


FIGURE 6. Moving average (Investopedia 2005)

This figure combines short-term average and long-term average. The crossover of moving average states when the short-term average passes the long-term average and it signals a positive movement is approaching. Moving average is a practical tool but it also has some limits. It is defined a 'lagging' indicator as it only measures past movements of the asset. Due to its nature, it does not include the possible future changes.

### 3.3 Bollinger Bands

A Bollinger Band was invented by John Bollinger in the 80s, and it is

plotted or strategized about two standard deviations besides a simple moving average. They just subtract and add a calculation for standard deviation.

Bollinger Bands indicate the market volatility of the asset. They have a centerline to indicate the exponential moving average. The lines above and below are the 'bands'. The bands tend either to expand or to contract depending on the volatility. (Seth 2012.)

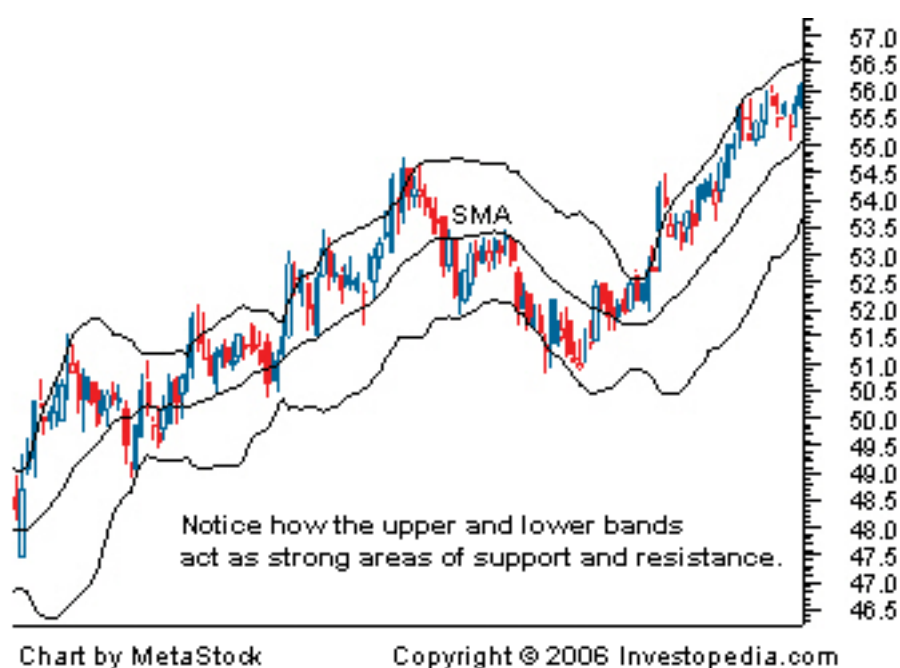


FIGURE 7. Bollinger Bands (Investopedia 2006.)

In essence, the Bollinger bands measure the asset's price relative to the previous trades. Contraction and expansion in the trend indicate signals that are helpful to find appropriate positions. (Seth 2012.) In short, when the bands become wider, the more volatile the market is and vice versa.

### 3.4 Stochastic Oscillator

The Stochastic Oscillator is an indicator of momentum which compares the range of a security's price to its closing price over a given period. The oscillator's sensitivity to movements in the market is often reduced by taking a moving average or adjusting the duration of the result.

A Stochastic Oscillator is used to indicate whether the market is either overbought or oversold. There are several different variations of the stochastic oscillator. One of the most commonly used ones is the slow oscillator which consists of two moving averages. The oscillator is used to find new trends that are coming, for example when the market is slowing down. (Wagner 2014.)

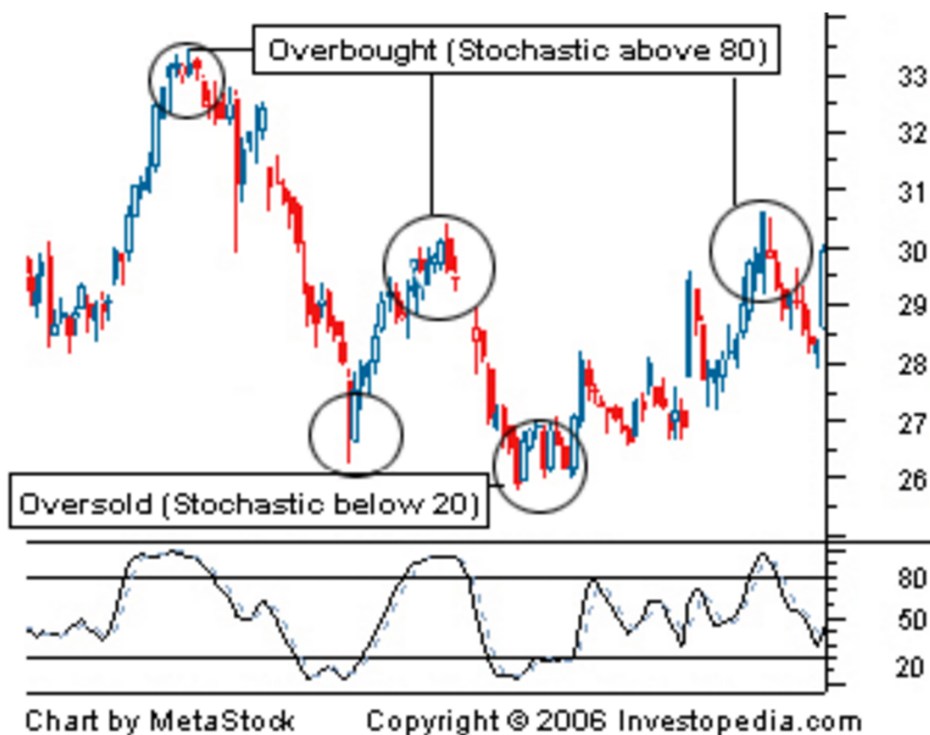


FIGURE 8. Stochastic Oscillator (Wagner 2014)

In this figure the Stochastic Oscillator is bound to a scale from 0 to 100. If it crosses the level of 80, the market is considered overbought. If it goes below 20, the market is oversold.

### 3.5 Pivot Point

Being a technical analysis indicator, a pivot point is used to determine the trend of the market inclusively over different frames of times. It is a price level for reaction and is considered a support level for prices if the pivot point is trading lower than a financial instruments basics. When a pivot

point is initially tested, prices have a tendency to deflect or pause. A pivot point becomes a stronger resistance level or price support level if it converges or else overlaps with a 200 period or 50 period moving average.

The pivot point is a trading tool, which calculates the price levels based on the prices from the previous day. The general formula of the pivot point is calculated by using the average of the previous high, low and closing prices. These factors determine the current pivot point. If the pivot point price is broken in an upward movement, the market is Call and vice versa.

(Saettele

2013.)

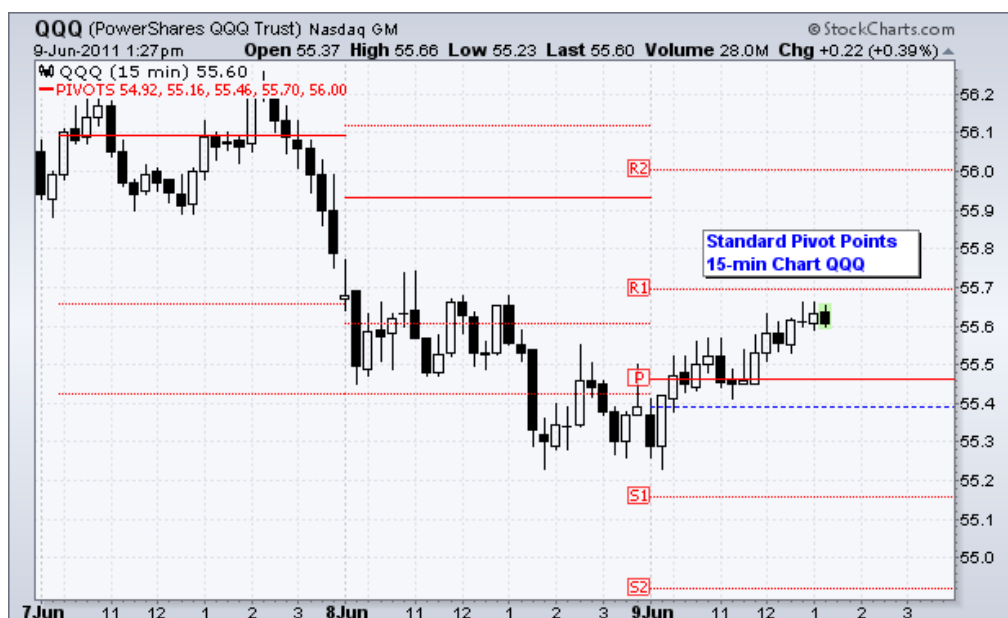


FIGURE 9. Pivot Points. (Stockcharts 2016)

In the figure above, the pivot point is the P line between resistance and support levels. The support and resistance levels indicate whether the market is overbought or oversold. The pivot point is used to predict the price movements as the largest movement is expected to happen at this price. (Kuepper 2015.)

## 4 DIFFERENCES BETWEEN VANILLA OPTIONS AND BINARY OPTIONS

### 4.1 Function

Both vanilla options and binaries are financial instruments that allow the trader to buy a contract of an asset at a predetermined price within a given time frame. The price of both option types derives from the assets value, but there are several functions that differ significantly.

One of the biggest difference between binaries and vanilla options is the payout. In the normal vanilla option, the payout depends on the size of the asset movement after it has passed the strike price. The trader either profits or loses the amount depending on the number of price interest points between the expiry level and the strike price. This means that the possibilities with vanilla options are either to win, lose partially or lose completely. Binary options are so-called all-or-nothing options with only the possibility to win or lose. Accordingly, the payout is always fixed and varies from 60%-90%. The amount of the asset's increasing value is not essential, since the profit is not dependent on the magnitude. (Binary Options Strategy 2015.)

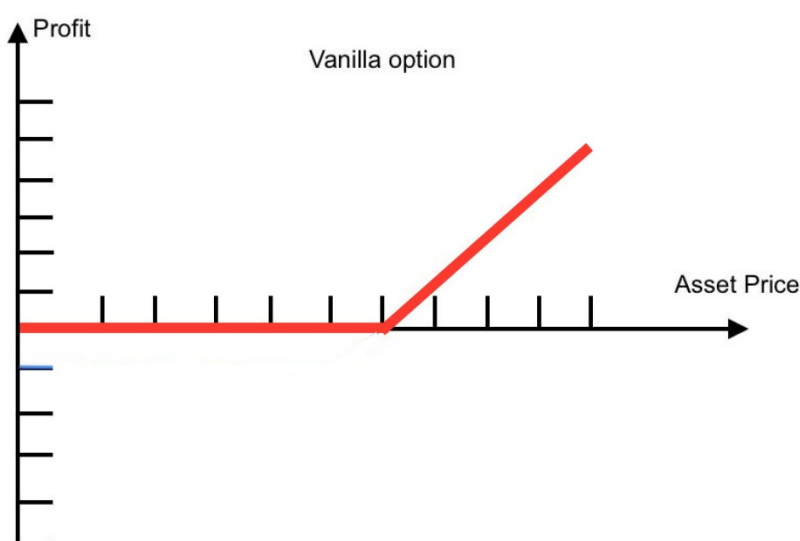


FIGURE 10. Visualization of vanilla option profit



The figure above illustrates a theoretical profit of a call vanilla option. When the asset price crosses the strike price at the expiry, the option is profitable. Vanilla options leverage which makes the payout dependent on the strike price and the price of the asset.

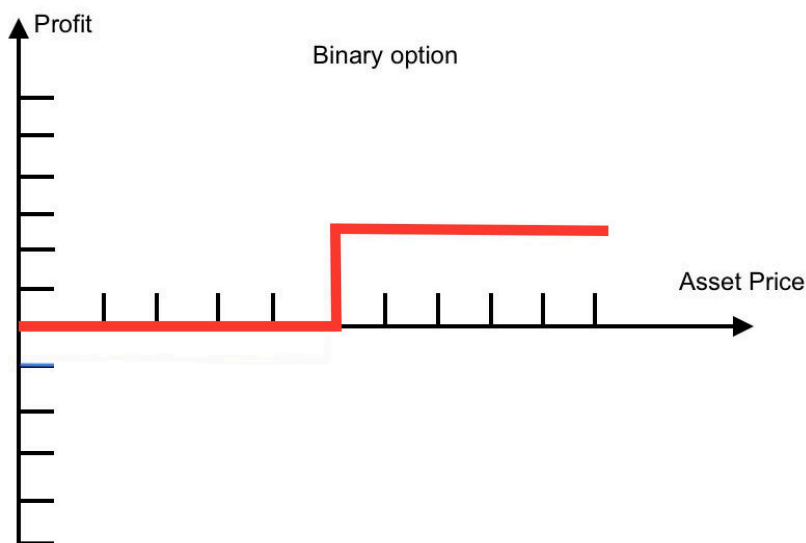


FIGURE 11. Visualization of binary option profit

With Binary Options the payout is always fixed. No matter how much the asset's price crosses the strike price, the payout does not change.

Another major aspect is the execution of the options. The vanilla option may be executed at any point before the expiry time, which gives the trader more flexibility. Binary options hold until the expiry time and cannot be sold before. There is also a significant difference in expiry times. Vanilla options usually have monthly or quarterly expiry times, whereas binaries have expiry time from minutes to days. (Binary Options Strategy 2015.)

TABLE 2. Differences between Binary Options and Vanilla Options

<b>BINARY OPTIONS</b>	<b>VANILLA OPTIONS</b>
Payout is fixed	The payout is based on the price of the underlying assets and is dynamic.
There is no relevance in price movement.	The underlying price and a strike price relation are required for execution.
Binary options have no rights to exercising stocks.	In the case of expiration of the money, the owner of the stocks is rightfully entitled to exercising their options.
Expiration terms are on hourly, daily basis.	Expirations occur once a month.
Their execution can only be exercised after expiry.	Their executions are exercised before to expiry or before.

The previous table combines the differences of binary options and vanilla options. The most differences occur in the expiration times and the payout. Binary trading happens in a much shorter period of time than normal option trading. Also, the binary option does not take in count the leverage factor, nor can be executed before the expiry. In short, binary trading is relatively easy compared to other trading methods and therefore effortless to a newcomer to start trading.

## 4.2 Regulation

The derivative market is supervised in Finland by the Financial Supervisory Authority in Finland. The Financial Supervisory Authority ensures that everyone in the market follows the active regulation (Tietoa Finanssisvalvonnasta 2009). The corresponding authority in the United States is the Exchange Commission 'SEC' which regulates the securities market to protect the investors (U.S. Commodity Futures Trading Commission 2013).

Options trading is usually conducted in exchanges or with so-called over-the-counter trading 'OTC'. In OTC trades, a mutual contract is created between the buyer and the seller, and the contracts do not have to be specified by an exchange. (Hull 2009, 2.) Both, the exchange trading and OTC trading are under the control of financial authorities.

Unlike vanilla options, binary options are mostly traded via the internet and mobile platforms. Lots of these platforms are unlicensed and work without regulatory supervision, which increases the risk of fraud. There have been several cases where binary options brokerages have been revealed as scams, either by manipulating data or refusing to pay withdrawals. One of the latest cases took place in Cyprus 2015 when the Cyprus Securities and Exchange Commission found out that a binary options brokerage had had multiple violations, including misleading marketing material. (Golovtchenko 2016.)

To avoid possible scams in binary options, the trader should always use a reliable platform which is authorized by a financial regulator, such as the SEC in the United States, or BaFin in Germany.

## 5 RESEARCH AND CONCLUSION

### 5.1 Research method

To support the research, the author used a semi-structured interview. In a semi-structured interview, the researcher prepares the questions but the interviewees answer using their own words. A semi-structured interview has more latitude as a structured interview and it is the most common interview method in business economics. (Koskinen & Alasuutari & Peltonen 2005, 254-255.)

In the research a semi-structured method worked well, as the interviewees could express their knowledge and ideas about the investigated subject. For the interview nine questions were prepared which covered the necessary information about binary trading.

The theme interview was chosen because it could be formatted to get exact and thorough answers from the interviewees. For this research the two interviewees were chosen to give a more precise description about the subject. The interviewees were two professionals working in different positions in finance.

### 5.2. Data collection

The interviews for the research were conducted during spring 2016. The interviewees were chosen and informed in February 2016 and the actual interviews took place in April 2016. The prepared questions were sent out by email a couple of days before the interview so that the interviewees had some time to familiarize with the questions.

The interview followed a prepared structure. The binary options account manager replied her answers by email and the bank employee's interview was recorded. Both interviewees could openly express their own experiences with their own words.

The topic and the terms were familiar to the interviewees. The interview followed the basic structure, and if necessary, there were complementary questions. The interviewees voluntarily participated in the research and all the necessary information was gathered from the knowledge of the interviewees. The interview was completed anonymously.

### 5.3 Results of the research

After the interviews were conducted and the necessary information gathered, the results were analyzed. First, the answers were transcribed to a separate file and the transcripts were used as a research data. The files were examined and the answers were compared with each other.

The interviewees' responses had similar basic features, although the personal point of view reflected strongly in the answers. One of the interviewees worked in a bank with derivative instruments and the other worked as a binary options account manager, which made for some contradiction in the answers. In the following chapter, the answers of the interviewees are examined:

*Question 1: How to start with binary options? Are there any requirements?*

The first question was how to start the binary options trading. According to both interviewees, starting is relatively easy. As most of the Binary Options trading is done via online platforms, basically anyone can start trading with a small invested amount at any time. Both, the trader and the account manager stated that the advantage is that the trading can be done during any time of the day anywhere as there is no middleman involved

*Question 2: What kind of investors usually trade with binaries?*

Binary Options trading involves risks of high degrees and is speculative hence this can cause loss of a client's investment wholly. This is therefore best advisable to clientele with enough knowledge in both the legal and economic risks involved in these transactions.

The account manager said that it was a good alternative for everyone wishing to make high profits rapidly. The account manager also stated that there is no 'typical' binary trader, as every trader has different needs. Some traders may make their whole living with binary trading and others may use it as extra income. The bank employee said, that binary traders are mostly gamblers. He said the binary trading is so unpredictable that he did not recommend binary options trading as the main way of investing, but rather as an extra method. These answers show that theoretically anyone can trade binary options, but the trader must have a high risk tolerance (Maverick 2015).

*Question 3: Is there something the trader should absolutely consider when trading binaries?*

The third question asked what should a trader consider when trading binary options. Both interviewees agreed that every aspiring trader should have a basic knowledge of the market trends and assets since the trader alone is responsible for his own investments. Investing using more traditional tools, stocks for example, there often is a financial advisor who may care for the investments. With binaries this is not an option.

The account manager stated that after understanding the basics, anyone can start trading because many binary platforms offer services to replicate trades made by others. With this type of trade, the trader can learn about binaries while already investing in them.

*Question 4: What amounts are usually traded?*

The fourth question inquired about typical amounts traded with binary options. The account manager could not give any specifics on amounts traded on their platform, but the amounts vary from 5 € to 10,000 €. She said that it is recommendable to start with smaller amounts and increase the invested amount after some experience. She pointed out, that often successful trades attract to trade larger amounts, but since many trades can be lost, it is better to initially stay within a low investment range.

Likewise, the bank employee preferred investors trading with less money per investment while making more trades to minimize losses. He also stated that when the volume of trades is high enough, the amounts traded in an individual trade need not be very high.

*Question 5: What are the most common tradeable assets?*

Both interviewees stated that the most common asset in binary options trading is forex. A trader normally follows trends of multiple currency pairs, such as EUR/USD or JPY/USD. Other assets such as indices stocks are also used. A search on some of the binary trading platforms indicated that forex trading indeed is the most widely used method.

*Question 6: Is short-term trading really profitable?*

This question provided different answers from the interviewees. Both of the interviewees agreed that binary option trading can be profitable. An interesting point was made by the account manager as she said that binary trading can be very profitable when following the market trends and knowing the assets' movements. The bank employee had a different point of view. He said that even though a minority of professional traders consistently profit from the binary trades, short term trading is still more akin to a form of gambling than actual calculated investment.

*Question 7: Is trading with binaries safe during an economic recession?*

Both of the interviewees agreed that Binary Options are very practical trading method during the recession. It was explained that it doesn't matter if the market is crashing or stagnating. Market volatility usually carries no considerable effects on binary options since the expiry times are usually very short. It was also stated that if the market is going down, traders can invest in decreasing trends by buying a put option on an asset.

*Question 8: Are there considerable differences between brokerages / platforms?*

Only the account manager could answer this question because the bank employee had no sufficient information about the platforms. It was found out, that there are several differences. One of the largest differences was the payout of the trades which varies from broker to broker from 60% to 90%. The account manager also said that every brokerage takes a cut from a successful trade, the amount of which varies.

Differences of opinion came up regarding regulation too. The account manager emphasized that there are several platforms that are not approved by any official regulator and therefore there is a risk of a scam. There have been several cases with traders having problems cashing out, or data that has been manipulated by the trading platform. She highlighted that every trader should properly vet a platform to prove it reliable before trading.

*Question 9: In your estimate, is the binary market growing or decreasing?*

The last question was about the development of the market. The interviewees said that for now the binary options market is relatively small and remains an uncommon investment method as it is still unknown to many private investors. The account manager believed that the market will grow as more and more investors get familiar with binaries.

#### 5.4 Validity and reliability

The degree or point at which an assessment produces a tool which has consistent results and is stable is known as reliability while validity denotes how well a test is measured by what it is supposed to measure it. It establishes the performance and incorporates the concept of experiment entirely. An analysis needs to be valid and reliable.

Validity and reliability are the evaluation criteria for the research to measure the quality of the research. Validity is used to measure whether the research is thoroughly done, whether the sources are good enough and are the interviewees competent to answer the questions of the



research. Reliability measures how dependable the research is, as in is the research repeatable, and if so are the results similar as earlier. (Hiltunen 2009.)

In this research all the questions were covered completely. For the interviewees, the questions were clear and structured so that all the necessary information was there. The results of the semi-structured research were easy to analyze and make conclusions regarding the topic. As the research was successful, the validity of this research is good.

To support the reliability of this research, the interviewees worked full time in finance and had common knowledge about the derivatives. The interviewees answered to the questions from their own points of view. Unless the fundamentals of the binary market change, similar interview answers could be expected in the foreseeable future.

## 5.5 Conclusions and further research

The theme interview gave a good and diverse picture about the binary options trading. The interviewees' responses had some similarities and differences. The differences in answers were most likely caused by the different positions of the employees and therefore having a different view of the market and trading.

Perhaps the most important conclusion found out was, that investing in binary options is convenient for people who can withstand high risk and the resulting uncertainty. Since binaries tend to have a short lifespan, forecasting the underlying asset's movement may be difficult. Still, it remains an attractive option for traders because profits are often much higher than with vanilla options.

Understanding and following the market was also found important. The traders are responsible for their own investments and should constantly monitor the underlying assets' movements. It was also highlighted, that a rookie does not have to be a professional in order to start trading as there

are several ways to learn by doing.

In conclusion, trading with binary options is quite simple. An investor only needs to create an account on a chosen platform to start trading. In addition of understanding the underlying assets and market, a prudent trader must set up realistic goals and know the risks when investing in binaries.

## 6 SUMMARY

The objective of this thesis was to produce a comprehensive summary about binary options trading. The thesis might be helpful for someone who wants to start binary trading, or someone who wants to get a general idea of how it works in practice.

The thesis consists of a theoretical part and an empirical research part. The theoretical part was divided into three main sections. The first chapter deals with derivative instruments and more precisely function of binary options. The second chapter covers the main different indicators a trader needs to use when trading with binaries and the third chapter, in turn, compares the differences between trading vanilla- and binary options.

This resulted in two main research questions which were:

What are binary options? How do they work in practice?

As the binary options are simply a way of introducing fluctuations among trade prices in numerous markets globally. A trader though ought to understand the rewards and risks of these instruments which are often misunderstood.

To clear more detailed the binary trading, there was created two sub-questions to support the research:

How do binary options differ from other options?

What kind of binary options can a private investor trade?

The theoretical part started by finding out the background of the derivative market. After that, the thesis focuses to Binary Trading clearing the the function of binary options, the key terminology used for the trading, different trading types and how binaries work in practice. The next chapter introduces the main indicators, the traders use for binary trading. Lastly, binary options are compared to vanilla options and the regulation of the market.

The empirical research was carried out as a qualitative research, for which two finance sector employees were interviewed. The interviews were conducted in April 2016. The interviewees were asked, among other things, to whom is the binary option trading suitable and what requirements there are to trade. The interviewees were able to bring their personal opinion to support the theoretical part of the research. The answers were recorded in the research part of the thesis.

The results of the research show that the binary trading is suitable for anyone who can tolerate high risk. Short-term trading with all or nothing options can be profitable but can be an insecure way to profit in longer run. Although the process of trading is simple, it is difficult to predict the assets' movements in a short period of time.

This research compiled a clear material, which clears the most essential information and tools for binary trading. The results show that a binary option or asset option is an option in which its payoff is meant to be either nothing in case of expiry of the money and investments or a fixed compensation amount in the event of expiries of one's investments. A binary option exercises in an automated way in a way that the holder of the option has no choice to sell or buy the underlying asset.

In addition, this research brought up new questions which would need more research. As the binary options trading is relatively new and risky method of derivative trading, the regulation and safety should be investigated further. Derivative trading in general is increasing rapidly, the effect on the world's economy should need more research.

The work itself managed to combine a clear material, which compiles the most essential features of binary trading. The results of the research were in line with the theory and therefore supports the reliability. The main downside of the thesis is the narrowness of the investigated subject and theory. However, the work consists of quality- and up to date information about binary trading.

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**Interviews**

Product Manager of Derivative Market. 2016. Company X. Interviewed 21 April 2016.

Binary Option Account Manager. 2016. Company X. Interviewed 21 April 2016.

## APPENDIX

### Questions of interview

- How to start with Binary Options? Are there any requirements?
  
- What kind of investors usually trade with Binaries?
  
- Is there something the trader should consider when trading Binaries?
  
- What amounts the are usually traded?
  
- What are the most common tradable assets?
  
- Is the short-term trading really profitable?
  
- Is trading with binaries safe during an economic recession?
  
- Are there considerable differences between brokerages/platforms?
  
- In your estimation is the binary market growing or decreasing?