

# **The Influence of Neo-Brokers on the Stock Market and Investment Behaviour**

**Revolutionising the stock markets with the help of young and  
inexperienced investors and neo-brokers**

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## BACHELOR'S THESIS

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### Abstract

The aim of this Bachelor's thesis was to find out a possible change in the investment thinking of the younger generation of investors. Many new online and neo-broker have a huge impact on this changing situation. A neo-broker is a new type of broker that makes it possible to invest money on the stock exchange easily and almost without any other costs. Furthermore, the aim was to find out whether the stock market could change in the future through incidents such as the short squeeze of GameStop and how neo-broker could influence this scenario.

For the theory part of this thesis secondary research was used. The first part of the thesis was elaborately based on existing data and investment models. The elaborated theory serves as the basic framework for the complete second and empirical part of the thesis. Primary research in form of a survey was used to collect various data and opinions from young investors with the main focus on students. The aim of the survey was to find out about the relationship between neo-brokers and possible changes in investment strategies and behaviour.

The paper's findings show that, neo-brokers are having a major impact on the stock market nowadays. Due to their ease of use and user-friendliness, these types of brokers are gaining more and more users. Investment behaviour is also being influenced by online brokers, especially among younger investors, and is therefore changing. Furthermore is the stability of the stock exchanges threatened by the mergers of many individual investors and the ease of trading through neo-brokers

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# 1 Introduction

More and more young people have a custody account with a neo-broker. The trend is clearly towards simpler design, cheaper trading, and the clarity and simplicity of the broker. The number of new openings at well-known neo-brokers such as Trade-Republic or others have increased significantly in recent years. (Riedl, 2021)

Incidents such as the short squeeze of GameStop, AMC Entertainment, and other heavily shorted stocks, have strongly fuelled this trend. An increasing number of young people dare to trade on the stock market. The influence of various social media platforms and forums also plays a significant role in this area. Through such events, the number of new investors can continue to rise steadily. It is also possible that investment behaviour will change significantly in the future due to the influence of neo-brokers. The focus will no longer be on long-term investment methods, such as value investing and the buy and hold strategy, but will shift towards the use of more risky methods. Investment methods such as trading with warrants and certificates are offered on most neo-broker platforms. Due to the simplification of trading on these platforms, trading becomes even more playful.

Thus, there is a high risk that the increasing popularity of neo-brokers will turn the stock exchange more and more into a gambler's platform and less into a marketplace where company shares are traded seriously.

The following questions will be answered in this paper.

What impact can incidents like the short squeeze of GameStop have on long-term market development and stability?

Is the investment behaviour of young investors changing due to the increasing number of neo-brokers?

Do neo-brokers have an influence on what happens in the stock markets? What are the advantages and disadvantages of this type of broker?

These questions form the basic framework for the following development of the complete Bachelor's thesis. With the theoretical help and the empirical work, an answer to these questions will be found and explained.

The thesis is structured in two main parts. The first section is intended to provide the reader with any theoretical knowledge necessary to understand the work. The second part deals exclusively with the empirical part and the evaluation of the survey.

The following scientific work is intended to show the advantages and disadvantages of neo-brokers. For a better understanding, the incident of the GameStop short squeeze is taken in consideration. This example is used to analyse and reveal changes that take place in the market. Furthermore, the change in investment behaviour due to the increasing number of neo-brokers is examined in more detail.

To establish a general understanding of neo-broker, the basic idea and strategy are presented at the beginning. Advantages and disadvantages are also explained in more detail using some current examples. This is an important part of understanding the whole thesis. A large part of the research method is based on this knowledge. To better understand how a short squeeze of such magnitude could occur, it is first of all important to know what is meant by the term short squeeze. In order to provide a better understanding of the term the most recent and important ones from the past are briefly analysed and considered.

Even when it comes to the change in investment behaviour, it is essential to know the most basic investment and trading methods. Since there are a large number of different possibilities to invest and trade on the stock market, this paper will only deal with the most important ones in the context of the short squeeze at the beginning of the year. Various derivatives are introduced and briefly explained for the sake of understanding. In order to illustrate a change, long-term and more conservative investment strategies are also briefly listed and explained. To conclude the theory part and to be able to draw conclusions later, the complete short squeeze around GameStop is also briefly shown.

The second and empirical part is a survey of young investors. The main focus of this survey is on students. A quantitative method is used as the research method. A survey was conducted on the use of neo-brokers and changes in investment behaviour. The target group of the survey was young investors.

The evaluation of the survey shows some changes in the investment behaviour and strategies of many people in the stock market. The survey was conducted in both Germany and Finland, which furthermore gave the opportunity to compare those two countries. In both Finland and Germany, the survey was mainly shared among higher education students.

## **2 Neo-Broker**

### **2.1 What is a neo-broker?**

Neo-brokers are a completely new generation of online brokers that have been trying to change the market for several years. They are pursuing a completely different strategy than the conventional bank brokers. As it can be seen in the following examples, the neo-brokers have already succeeded in changing the investment behaviour of investors. Most new online brokers aim to provide market access for almost everyone. No matter what value is available for their investments.

The strategy which the new brokers are using is mostly based on low costs. The goal is to reduce the costs by simplifying their application surface and offering consulting and assistance. Due to the enormous savings in staff and other driving costs that are eliminated with the new online platform, it is possible for them to offer trading services at a low or even zero cost level. Neo-brokers compared to a normal banking brokers are more focused on a small advisory service. They are concentrating on cost-reducing and cheap trading offers for their customers and try to offer a well-structured and easily understandable platform to invest in the stock market.

As a result of the cost-saving strategy, the service level is lower than the service of a normal bank broker. Also, the diversity of investment methods is highly limited. Thus, it is normally only possible to trade on a certain selection of exchanges. This means that some shares, funds, or bonds cannot be traded. Most of these are smaller companies that are not tradable on every stock exchange. Therefore, it is of great importance that the investor should be aware of his strategy before choosing his broker. It is of great importance whether the strategy is a buy and hold one or the intention is to trade a lot on foreign exchanges. (Warnecke, 2019, pp. 386 - 389)

However, the neo-brokers are mostly well designed and easily usable. Through an application or a simple browser version, the stock market is more easily accessible and comfortable for almost every part of society.



## **2.2 Advantages of a neo-broker**

As already suggested, a neo-broker bring a lot of positive advantages. The main and probably most important benefit for most of the users is the cheaper cost structure and the possibility to participate in the stock market with only a small amount of money. This is particularly appealing to younger people with no or only a low regular income. Therefore, it attracts mostly students with no salary and people after or during an apprenticeship with only a low salary.

Almost none of the new brokers charge a fee for account management. Placing orders is usually very inexpensive and sometimes completely free of charge, which can be seen in some examples listed later. Due to the low order costs, it can be worthwhile for investors to invest only a small amount.

Another point not to be neglected is how userfriendly these new brokers are. Many of the brokers described have a well and simply structured app. Many of them have well and simply structured apps, which make the trading experience more simple for the customer and thus easier to invest in stocks, derivates, and ETFs. The whole process has been simplified and it is often possible to place a buy or sell order with just a few clicks. The entire process has become much faster, and it is no longer necessary to go through many steps until the desired order is executed. Also, neo-broker offer mostly a high variety of cheap saving plans. This attracts again especially young people, who want to save and multiply their money over the next years. (Franke, w.y)

## **2.3 Disadvantages of a neo-broker**

Even though neo-brokers have a lot of advantages, they also have many disadvantages and even dangers. As already above briefly mentioned most of these brokers provide only a pre-selected number of marketplaces. Therefore, it is only possible to trade with a reduced portfolio of stocks and other assets and makes it impossible to trade with all different currencies and investment strategies. Thus, more experienced traders might reach their limit of investment freedom rather quickly.

In order to save money and reduce costs, the supply of various information materials is severely limited or even non-existent. The service and counseling options are terribly insufficient. Investors are often left to their own devices even when it comes to complicated

investments, they cannot expect any support from the respective brokers. The credit balance on the clearing account is also often charged with negative interest rates. Therefore, hidden cost traps can quickly occur. Furthermore, off-market trading is usually impossible. (Franke, w.y)

There are also some dangers and risks hidden in the large offer of neo-brokers. Due to the simple and playful presentation of the applications in the neo-brokers, more and more young inexperienced investors are trying their hand at the stock market. They often have no strategy and lack the knowledge to invest. However, it is possible for them to playfully buy highly risky derivatives with a high leverage effect. These are often investment assets that are used by professional traders.

Furthermore, the thought of making money quickly and easily can lead to a high addiction potential. The playfully simple-looking design and the easy operation of these brokers make it possible for many young traders to become addicted to the mindset of getting fast money. Many forget the basic idea of long-term investment in the stock market. Neo-brokers are increasingly tempting people to speculate on the stock market on a short-term and risky basis.

In addition, many of the new brokers do not have the same financial and technical resources as established bank brokers. This can lead to broker defaults in the event of high volatility in the stock markets. Share trading on such platforms might need to be stopped at short notice due to overload. Such an incident also occurred with the short squeeze around GameStop at some of these brokers. A short squeeze occurs when shareholders who have bet on falling prices have to buy back their shares because prices rise sharply against expectations. The share price rises even more dramatically as a result of the buybacks. This was also the case with GameStop this year. Later, the short squeeze in general and the example of GameStop will be explained in more detail. (Kehl, 2021)

## **2.4 Presentation of important neo-broker**

The following section describes in more detail a selection of neo-brokers and online brokers. This selection was chosen according to the degree of popularity and country of origin. Robinhood was one of the first neo-brokers which set a trend on the American markets. Nordnet AB is a comparative banking broker in the Scandinavian area. And in Germany, too, more and more new brokers are conquering the market. Here, the selection was made

on Trade Republic, probably the most well-known neo-broker in Germany recently due to the press. Furthermore, a more conservative neo-broker, Smartbroker, is briefly examined.

#### **2.4.1 Robinhood**

The pioneer of the neo-brokers is Robinhood, which first entered the market in America in 2013. Since then, this broker has managed to change the entire market. Many other new brokers have opened and trading for free has become very popular, especially within the younger generation.

The neo-broker advertises its user-friendliness and zero-fee trading to make it possible for everyone to participate in the stock markets. Robinhood charges neither custody fees nor fees for executing orders. Thus, there are no visible costs for the customer. In December 2020, Robinhood already had around 13 million users. Due to the GameStop share rally, the broker has once again been in the spotlight. By briefly interrupting the trading of the hyped shares, the broker has received a lot of criticism. Nevertheless, awareness has grown, and the app has now an average of 300,000 downloads per day in America. (Schiffer, 2021)

Thanks to the steady demand of the broker app, the neo-broker has already filed an initial listing with the US Securities and Exchange Commission (SEC). As soon as this review is completed, Robinhood will make its way to the stock exchange. An exact date has not yet been set. However, it is expected that the Initial Public Offering (IPO) can take place as early as the second quarter of 2021. If the IPO is successful, the company is estimated to be worth up to 20 billion dollars. (Manneiler, 2021)

Robinhood will also continue to further develop strongly in the coming days. As shown by the latest news of the online broker. Robinhood's goal is to make it possible for private investors to participate in an IPO in the very near future. Private investors will be the first to be able to acquire shares in Robinhood's IPO before it goes public. (Reuters, 2021)

Until now, it has been very difficult to participate in an IPO as a private investor. Only for large investors, funds, and banks, it is already possible to invest in an IPO. For smaller private investors, this is almost impossible. Therefore, Robinhood wants to remain true to its line and make almost every investment opportunity possible for small investors as well. However, the US regulatory authorities still have to approve this project. Furthermore, an agreement would have to be negotiated with the corresponding companies and the associated

investment banks. This is likely to be prove difficult, as they would be giving up some of their power to private investors by agreeing to this. (finanzen.net, 2021)

#### **2.4.2 Nordnet AB**

Nordnet AB is not a neo-broker as it is defined. However, their service and offer operate similarly to many neo-brokers. In comparison to the German and American brokers, a Scandinavian broker will be described in more detail.

Nordnet was founded in 1996 and was the first internet broker in Sweden. They have grown very fast and expanded to most of the Nordic Scandinavian countries. They are represented in Denmark, Sweden, Norway, and Finland with their headquarter in Stockholm. The company is divided into three different areas, savings and investment, loans, and pensions. With different bank stores in Oslo, Copenhagen, and Helsinki they are no longer an internet broker exclusively. The interest in online brokers in the Nordic countries can be clearly seen from the strong increase in numbber of users. In 2016, Nordnet had only about 500,000 customers using their services but this number has more than doubled in four years and in 2020, they already had more than one million users. (Tidestad, 2020)

Because of the large increase of users and the positive response to the business model Nordnet has gone public in November 2020 with a starting share price of 96 SEK per share. It is only traded at the Nasdaq Stockholm. At first, they started with a market capitalisation of 24,000 million SEK. On the 31st of March 2021, the share price already increased to 143 SEK which makes a market capitalisation of 35,750 million SEK. With these numbers, it is easy to see where the trend goes. (Tidestad, 2020)

How Nordnet differs from most of the neo-broker is the cost structure. New customers have to pay a minimum of three euros per trade. In the first two months, they get a special price with the best fee level with a fee of only 0.06%. If Finnish customers want to trade at the Helsinki stock exchange, they always have to pay a fee per order. Nordnet is also offering a different special price for groups that are for example trade a lot. They also offer to trade with different assets. Furthermore, Nordnet provides a desktop version as well as a mobile app. (Nordnet, w.y)

As Nordnet is mainly an online bank, it is not considered a neo-broker by definition. Nevertheless, there are many similarities in user-friendliness. Thus, just like most neo-brokers, Nordnet is also designed to be attractive for the younger generation.

### **2.4.3 Smartbroker**

As said before, the service and the model of Smartbroker should also be briefly introduced. The first thing to say is that Smartbroker is part of the major French bank BNP Paribas. Smartbroker is the smallest of the introduced Brokers. It has only approximately 80.000 customers (January 2021). But compared to other bigger neo-broker the individual depot volume is relatively high with an average of €25.000. (Franke, w.y)

Like most of the others, Smartbroker has no depot management and account management fees. The normal domestic order costs are four euros per order placed. It does not matter how high the invested amount is. If the customer chooses to trade at the marketplace gettex, it is free of charge. To trade free on this exchange it is necessary to invest at least €500. The main disadvantage Smartbroker has is the negative interest rate. Thus, negative interest accrues if the annual average cash ratio is higher than 15%. If this is the case, -0.5% p.a. interest on the cash in the account accrues. (Smartbroker, 2021)

A significant advantage that Smartbroker has is the possibility to trade and act on almost all domestic stock exchanges. This distinguishes this broker from almost every other German neo-broker. Furthermore, one of the largest European banks acts in the background which gives the broker a certain seriousness, credibility, and gives users security.

### **2.4.4 Trade Republic**

Due to the recent coverage around the suspension of trading during the GameStop short squeeze, Trade Republic is probably the best-known neo-broker in Germany. Like all the other new brokers presented here, Trade Republic does not charge any custody account management fees. Only one euro is charged for each trade. Trade Republic pursues a very simple pricing strategy. It can only be used via an app, where the usability is very easy. All transactions are processed via the LS Stock Exchange. It is not possible for the client to choose the marketplace on which he wants to trade.

In January 2021, the estimated number of users was 600,000. However, it can be assumed that many new accounts were opened during the increased trading of GameStop, AMC

shares, and other shares that participated in the short squeeze. Compared to Smartbroker, custody account volume is relatively low. It is only about € 6,500 per account. (Franke, w.y)

Trade Republic is associated with the easy usability and user-friendliness app. The very simplified idea of trading with shares and complicated values is presented in a playfully simple way and therefore appeals mainly to young people. Furthermore, the broker offers many free savings plans. Many ETFs and individual shares can also be traded without any problems.

## **2.5 How does a neo-broker earn their money: example Trade Republic?**

The main goal of neo-broker is to provide user-friendliness and to enable every person to participate in the stock markets. It should not matter how high the amount of invested money will be. With an aggressive pricing strategy, they stand out from the traditional bank brokers. However, the question is how such low-price strategies can be implemented in the market. This will be explained in more detail below by using the example of Trade Republic.

Most traditional brokers earn their money through portfolio or management costs and additionally add a fee for every order. All these opportunities to earn money are not possible for most neo-broker. Since there are normally no custody account fees and account management fees, it is more important to get money and save costs in other ways. The crucial point of how neo-brokers operate is the cost savings in contrast to the traditional bank brokers. At Trade Republic, the client cannot expect investment advice. Most of the time, investment advisors are well-trained personnel who also demand a high income. By eliminating this person, the new online brokers are able to avoid a major cost item. To a large extent, neo-brokers are used by young investors who are willing to take risks and do without the standard of advice. The main goal of many is to buy and sell shares cheaply and quickly. In doing so, no value is placed on professional competence.

Furthermore, neo-brokers are always only online brokers and therefore do not have branches. Enormous costs can be saved through the elimination of rents, branch employees, and the management of the branch network.

Another important point is the structure of the platforms offered. These are usually very simple and straightforward. Trade Republic has no costs for website support or similar. They

only have a very simple built application. Therefore, the maintenance of the IT offerings is very cheap. The simplicity in the whole layout is an important aspect in saving costs.

Furthermore, the legal guidelines for trading on the smartphone are less strict than on the computer. The whole order process is shorter and as result cheaper. Trade Republic is able to simplify the process of taking orders. The normal average of clicks on the computer to take an order is twelve. Through the easier authentication guidelines, Trade Republic managed it to place an order with only three clicks. The simplification of the process saves once again a lot of money. Also, the offering of only one marketplace simplifies the process for Trade Republic. All their trading activities go through the LS stock exchange or when it comes to the trade with derivatives HSBC Trinkaus. More stock exchanges would be a higher workload and there again result in higher costs. All the simplifications that are made, make the buying and selling process of the online broker more convenient.

Trade Republic advertises that each order costs only one euro. But this is not the only amount they earn per trade. One of the biggest incomes of all neo-brokers is the reimbursement from the stock exchanges. Trade Republic gets up to three euros per trade. By simplifying the whole buying process, incentives are given to make many trades per day. The more trades made per day; the more Trade Republic earns. The principle of tap, tap, trade makes it more attractive to set much more orders and therefore increases the active trading activity. (Kirchner, 2019)

All in all, it has to be said that neo-brokers only allow such an aggressive pricing strategy because of the enormous cost savings. Without these savings, trading at almost zero cost would not be possible.

### **3 Different investment methods**

Some investment opportunities are discussed in more detail below. The selected investment methods have played a major role in the short squeeze around GameStop. There are many more different methods to invest and trade in markets. However, all of them can and will not be discussed in detail in this paper.

### **3.1 Long and short position**

Two main terms describe which trend a market participant invests in the stock market. These are the terms long and short. While a distinction is made between rising and falling markets, it should be said that this principle can also be applied to the two terms. In this case, long and short trading is mainly related to single stocks.

#### **3.1.1 Long position**

A long position means mainly to buy a share or an asset. The basic idea of a long position is to enter a rising market or trend. By buying a long position, the investor becomes a shareholder in a particular stock or another equity opportunity. If the order is transferred it gives certain rights such as voting at the annual general meeting, etc. When the price of this investment rises, the value of the long position also rises. If the market moves in the other direction, a loss is made with a long position. The main difference to a short position is the direction the market should go and the possible risk of losing money. The worst-case for a long position investment is to lose 100% of the invested amount of money. This can happen when the share price drops dramatically, and the company has no value anymore. In this case, the participant will lose all the invested money. The risk can be minimized by setting a stop-loss. The profit can also be secured by a sell limit. (Mitchell, w.y.)

#### **3.1.2 Short position**

A short position stands mainly for investing in a downwards market or trend. The idea behind a short investment is to profit from a market that decreases. An investor borrows from another market participant's portfolio shares. The borrowed shares will be sold at the market. When the share price drops the seller can repurchase the shares at a lower price. The difference between the selling and buying price is the win or loss of the investor. After a certain time, the borrower must return the shares to the lender. The biggest difference to a long position is the trend an investor is investing in. Also, the risk is much higher. As already mentioned, the only amount that can be lost with a long position is the total of money invested. This is not the case with a short position.

The risk with a short investment is significantly higher than with a long investment. If the share price increases for a certain period of time, the investor in a short position is forced to buy back the share at a higher price in order to give it back to the borrower. The difference



is booked as a loss. However, just as with a long position, there is also the possibility of limiting the loss with a stop loss. Not only the loss can be limited but there are also possibilities to initiate a take-profit order add-on. (Brealey, Myers, & Allen, 2011, p. 327)

## **3.2 Derivate securities**

The most complex type of investment products often falls under the broad category of derivative securities. Many different investment opportunities can be categorised under the main term of derivatives. Trading in derivatives may involve stock derivatives, stock index derivatives, currency derivatives, interest rates derivatives, and commodity derivatives. As it can already be seen, it is almost possible to invest in every investment opportunity with derivatives. These include futures, options, swaps, certificates, forwards, and reverse convertibles. In the following, conditional and unconditional forward transactions are discussed in more detail. Furthermore, trading with certificates is also briefly discussed.

### **3.2.1 Unlimited forward transactions**

These classic unlimited forward transactions are called forwards or futures. A forward is an individually drawn-up bilateral contract between the contracting parties. In this contract, all contract components are individually adjusted for the underlying transaction. A future is standardised and can therefore be traded on the stock exchange. The components contained therein cannot be individually regulated. Therefore, a future can be transferred to another investor at any time. This is not possible with a forward due to its individuality. Futures or forwards are also called unconditional forward transactions because they must be fulfilled and exercised without fail. No further declaration of intent is required as to whether an execution takes place or not. There is no right of choice. (Bloss & Prof. Dr. Dr. Ernst, 2008, pp. 2-4)

So-called futures were already traded several hundred years ago. At that time with basic food and necessary living goods. In recent years, this has changed considerably, and it is also possible to trade index and interest rate futures. However, commodity futures are still a large part of the futures market. A future is a contract whose components are standardised and can therefore be traded on the exchanges. There are many different types of future notes. There are index futures, interest rate futures, foreign exchange futures, commodity futures, and the handle with futures on individual stocks. It is important to name such futures

possibilities, but they were not decisive for the GameStop short squeeze. For this reason, they will not be discussed in detail.

The counterpart to futures is forwards. These have an individual contractual solution that exists between two parties, usually between a bank and a client. This contract is normally adapted directly to the client and it is therefore not possible to pass the contract on to third parties. A common feature of both is the above-mentioned unconditional forward contract. This means that both parties undertake to honour the obligations entered into at the time of conclusion. It is important to note that there is no option with either a future or a forward. Therefore, the forward transaction must be fulfilled. Furthermore, a forward is not a means of short-term and risky trading and investing. Since during the short squeeze around GameStop, trading was not mainly in unconditional futures, the focus will not be on these investment methods. (Bloss & Prof. Dr. Dr. Ernst, 2008, p. 77)

### **3.2.2 Limited forward transaction**

In contrast to this is the option, which is often also presented as a forward transaction. In contrast to a future or forward, an option gives the buyer the right to choose whether he exercises the option or allows it to expire (does not exercise it).

The buyer of an option decides whether to exercise it or not. The seller, also called the writer, is called upon to fulfil the option after it has been exercised. He has no right of choice. He is merely the silent partner in the agreement. In return, he receives financial compensation from the buyer of the option, the option premium. Since the buyer does not have to exercise his right, but can also let it expire, options are referred to as conditional forward transactions, because in contrast to futures, their exercise is tied to a further declaration of intent (by the buyer). If options are not traded in a standardised manner on a futures exchange but are agreed upon individually between the contracting parties, they are referred to as OTC options. These are traded "over the counter". In the following, the focus is more on the standardised options than on the OTC. These have not played a significant role in the short squeeze around Gamestop. (Bloss & Prof. Dr. Dr. Ernst, 2008, pp. 2,3,4)

A warrant or option certificate is a bilateral contract for a limited period of time. The contract consists of a right of choice for the buyer of an option certificate. Because of the standardisation it is possible to trade these warrants at forwards exchanges. If the warrants are not traded at the forward exchange, they are called over-the-counter options. These are

concluded only between the contracting parties without the interposition of a futures exchange. A distinction is made between two different types of options, the call option and the put option. The following different possibilities of options will be reflected in more detail.

**The call option:**

A call option is a contract that gives the buyer the right, but not the obligation, to buy an asset at a specified strike price. However, this right expires after an agreed period of time. Therefore, the buyer needs to buy the assets within the agreed time. The buying price is fixed at the strike price. The number of shares that can be purchased is also determined when the option is bought. The seller is obliged to sell the asset at the agreed strike price if the buyer exercises his right to buy them. With this type of warrant, the buyer bets and only profits on increasing prices.

**The put option:**

With the put option, the whole game is simply turned around. The put option gives the buyer the right, but not the obligation, to sell an asset at an agreed strike price. This sale must be made again within the specified and agreed time period. Otherwise, the right of selling the asset expires. The selling price is again fixed at the strike price. The quantity is also already determined by the contract size when the option is purchased. The seller again has no right of choice and is obliged to buy the assets if the buyer makes use of his right of sale. With this type of warrant, the buyer bets and profits on falling prices.

All in all, the seller has no right of option but is bound to the buyer's volition. In return, he receives the premium payment from the buyer. He has thus entered into the obligation to sell (call) or buy (put) the specified quantity of the underlying asset at the agreed time and price in the event of exercise.

For options, there is another distinguishing criterion, the type of exercise. A distinction is made between options that can be exercised during the entire term and those that can only be exercised on the last trading day. Options that can be exercised during the entire term are also called American-style options. These options are usually used for trading single stocks. Options that can only be exercised at the end of the term are called European-style options. This type of option is mainly used for Index options.

If one were to delve further into the topic of options, there would be further differences and characteristics of different options. However, this will be neglected in the following and not examined in more detail.

If it comes to the point that the option expires but the investing party wants to extend this position, there is the possibility to perform a so-called roll-over. In this case, the existing position is closed on the last day and simultaneously reopened with a later expiry date. However, such a roll-over can change the strike price and/or the number of contracts. The rollover, therefore, extends the position beyond the original maturity horizon. By adjusting the number of contracts and/or the strike price, the investor can influence the option position and adapt it to the current market conditions. (Bloss & Prof. Dr. Dr. Ernst, 2008, pp. 27-35)

Basically, futures and forwards, as well as options, are mainly traded by large financial institutions such as banks or professional traders. Therefore, both are high-risk trading opportunities, and it is necessary to understand the market situation very well. The current trend must be anticipated in advance in order to trade and invest correctly with these types of derivatives.

### **3.2.3 Certificates**

Certificates also count as derivatives. They belong to the structured financial products and are nothing more than debt securities issued by banks. An investor who wants to invest in certificates gives his money to a bank and receives a certificate in return. As is usual with derivatives, certificates also have a so-called underlying asset. Such an underlying asset, to which the development of the certificate then refers, can be, for example a share, a bond, an entire index, or also the development of a yield curve. It is also possible to buy certificates on the development of commodity prices. (Kehl, Zertifikate einfach erklärt, 2017)

The many different certificates are divided into some main characteristics. The most important distinguishing features are:

- Whether there is capital protection against rapid price losses
- Whether certificates can be purchased at a discount when they are issued
- How high the profit and loss participation is
- Whether an early maturity date is possible

Also, these certificates have different levels of risk

**Guarantee certificate**

The safest certificate is the guarantee certificate. It is guaranteed that at least 90% of the invested amount of money will be returned to the investor after the certificate expires. Because of the repayment guarantee the risk level is very low. Therefore, the earnings potential is also very limited due to the conservative investment strategy. It must be excluded that the guarantee expires. Furthermore, it is not allowed to link it to any conditions. (Doll, 2009, p. 16)

**Bonus and partial protection certificates**

They have two main characteristics

- If the share prices drop, the certificate can decrease only as far as the price will touch the strike price
- There is a range around the issue price in which the bonus certificates are protected against minor price declines.

If the losses of the market price will be stronger then the investor will lose this kind of protection and the value of the certificate can drop until the underlying asset. The risk is not that high when trading with this certificate. The positive aspect of a bonus and partial protection certificate is that it is possible to get a good sideways yield. (Doll, 2009, p. 16)

**Discount certificates**

This type of certificate tracks the price of a share 1:1. The buyer acquires the certificate at a lower price than the strike price. He thus receives a small price discount. Repayment of the value is due when the price reaches the strike price. The buyer receives the discount because he accepts a profit limitation and also waives all dividend payments. A discount certificate aims to maximise the sideways yield. In addition, they have a limited maturity. (Doll, 2009, p. 17)

**Participation certificate**

These are again certificates that track the price of a share or index 1:1. They behave in the same way as the underlying price. These include, for example, index, basket, themes, strategy, turbo, and the knockout certificate. With this method of investment, it is possible for the trader to make high profits quickly. The risk increases considerably the higher the leverage of the respective certificate is selected. Particularly with knockout and turbo certificates, which are also increasingly used by private investors, there is a high risk. This

can also lead to a total loss of the investment. These certificates do not need to have a limited maturity. Therefore, it is possible to buy for example open-end knockout certificates, which have no time limit. (Berkholz, 2021)

### **Outperformance certificates**

These are sprint and outperformance certificates. The leverage must be greater than one. If the underlying rises, the certificates rise disproportionately. If prices fall, on the other hand, the participation in price declines is exactly 1:1. The certificate may never perform worse than the underlying.

In the case of outperformance certificates, the participation in price gains is unlimited. Sprint certificates, on the other hand, only participate in price increases of the underlying asset up to a maximum value (cap).

It can also lead to increased risk. It is possible to participate in disproportionate price gains. However, there is no possibility of sideways returns. (Doll, 2009, p. 18)

### **Mini- Future certificates**

A mini future works with leverage. In this case, the value can rise disproportionately to the bearish price when prices rise. However, the leverage does not only count for rising prices, but also for falling prices. This means that the loss in the event of falling prices can also be disproportionate, up to a total loss. With the trading of mini-future certificates, it is possible to achieve high price gains with high leverage. The risk increases considerably due to the leverage used. (Doll, 2009, p. 18)

Certificates can have two different purposes when it comes to investing. On the one hand, some certificates are suitable for long-term and permanent asset accumulation. Particularly suitable for this are those where the risk is kept as low as possible. These include guarantee certificates, bonus certificates, discount certificates, and 1:1 participation certificates.

On the other hand, certificates are also popular for a speculative and short-term investment style. Since the chances of profit increase significantly due to the usually high leverage, the possibility of earning high profits in a short period of time is given. However, this entails higher risk. Speculative certificates include above all mini futures and outperformance

certificates. Due to the leverage effect, these are not suitable for a safe and long-term investment.

### 3.3 Investment strategies

It is not possible to list and explain all investment strategies in this paper. However, a closer look will be taken on a few selected strategies that are of a rather conservative nature. It should be said at the outset that it is not possible to determine the optimal investment strategy. Each investment strategy should be adapted to each individual investor. It is possible to take into account strategies that have been successfully tested in the past. With the so-called magic triangle of wealth accumulation which is visualized in Figure 3-1, the three main competing goals are considered. Each corner is used to describe a different goal of wealth accumulation.



**Figure 3-1: The magic triangle of investments** *Source: ShareWood*

The three positions Profitability, Security, and Liquidity are constantly under confrontation. It is not possible to make an investment in which all three points are fully covered. Profitability is the first objective in the triangle. It means the money is invested at the highest possible interest rate. The second objective is security. The higher the security on the investment, the lower is the return on the investment. Third and last part is liquidity. It describes at which time investment can be converted easily into money. It is to say that the shorter the investment time period, the higher the liquidity of the investment.

For example, higher-risk investments can have higher profitability. However, the security of this type of investment decreases considerably. With most safe investments, the probability of high profitability is very low. Also, the availability of the investment is usually tied to a certain time of the investment. Thus, it is usually not possible to quickly convert the invested capital into liquid funds. As already mentioned, it is not possible to cover all three objectives with one investment. Therefore, it is advisable not to stick to just one investment, but to make several investments through diversification and thus fulfil all three of the objectives described above. (Wiesflecker, 2020)

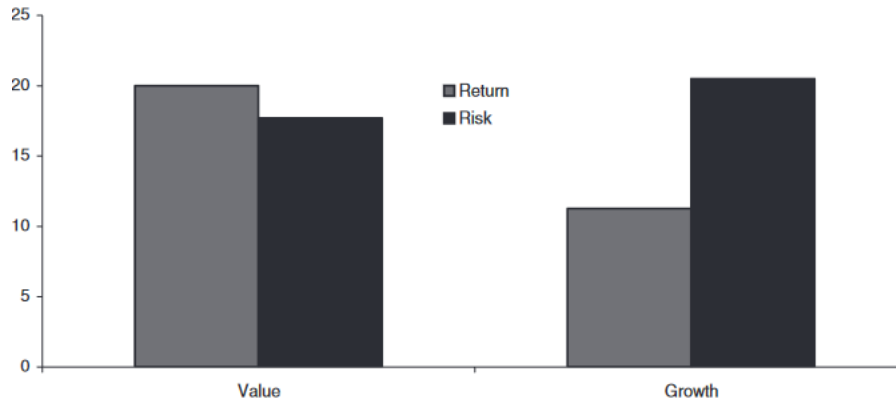
### **3.3.1 Value investing**

Benjamin Graham and Warren Buffet are unarguably the original figures of value investing. Probably the most conservative investment strategy on the stock market, value investing has made Warren Buffet with his holding company Berkshire Hathaway the sixth richest person with a fortune of \$99.8 billion. (Forbes, 2021)

Value investing is investing in companies that are trading below their enterprise value. This strategy aims to identify undervalued companies and invest in them over a long term. These companies should have a positive outlook and growth potential. This investment strategy is always about keeping the price of the company's share as low as possible. This discipline enables value investors to succeed where many other investors in the stock market hardly do not want to go. Often, the price exceeds the claims of quality in this investment strategy. However, investors like Warren Buffet have also been looking more at the relationship between quality and price for some years now. In value investing, company shares are increasingly bought from companies where the stock market value is lower than the current assets minus the liabilities. The connection between the price development of a share and the price-to-book ratio is also an important point in the analysis of the market in value investing. (Mihaljevic, 2019, pp. 45-47)

The value investing strategy and the growth investing strategy are also often compared with each other. Both are concentrating on the shares which are undervalued. The principle of value investing, however, is more focused on shares of companies that have already been established on the market for a long time, whereas the growth strategy mostly invests in new companies that have not been active for a long time period yet.





**Figure 3-2: US value and growth returns and risk (%p.a. 1950 – 2007) Source: SG Equity research**

If you take the most expensive stocks of the last few years (Growth) and the cheapest stocks (Value) from the American market and compare them, you can see a clear difference in risk and return. Figure 3-2 shows the long-term difference between the risk and return of growth and value stocks. It is noticeable that the risk was lower and the return higher for value shares than for growth shares. By investing in already established stocks in the market at a very low price, the risk is reduced relative to growth stocks. (Montier, 2009, pp. 57-64)

### 3.3.2 Growth Investing

The difference between value and growth investors clearly lies in the selection and valuation of the companies in which to invest. As already described in value investing, undervalued companies with a strong business model are looked at more closely. Normally, the focus in value investing is on the so-called blue chips. This is different from growth investing. Here, the greatest focus is on companies that still have strong growth ahead of them. Often these are still smaller and not yet on the market established companies. The growth investment method is also assessed as a rather riskier and more offensive investment method. The aim is to increase the investment through high-growth shares and not just to hold it as in the passive method. Thus, mainly industries and sectors are observed which are likely to grow strongly in the near future.

Nevertheless, there are also some similarities between value and growth investment. Growth investors also look for companies that are undervalued. However, it is usually the case that they are still very new to the market and have not yet received the necessary attention from investors and the media. The goal is to buy a share of a company that already has a good position in the market and can expect a high growth rate. (Kalogeropoulos, 2021)

### 3.3.3 Buy and Hold

The buy and hold strategy is an investment method in which an investor buys different stocks and holds them for several years or decades. This strategy's aim is to ride out any volatile market movements and tries to ignore them. As it is a long-term investment method, it is important not to lose patience and to bear with the fact that, in the event of a sharp decline in the markets, profits may also decline significantly. With this strategy, it is necessary to believe that the long-term return exceeds the short-term return. Furthermore, buy and hold is more of a passive investment strategy. Buy and hold investors believe that the market will go up in the long run and is more efficient than trying to find the right timing in the market. It is very difficult even almost impossible to find the right time to enter or exit the market. However, it is easy to buy a suitable stock and hold it for a long period of time.

The investment strategy of buy and holds is simply explained. The investor chooses a suitable investment that he thinks will perform well over the next few years. There are many parallels to value investing. Mostly undervalued company shares are bought, which, can present a good business model and have good future prospects. (Thune, 2020)

One of the biggest advantages of buy-and-hold investments is cost savings. Because the trading frequency is lower than with other strategies, the trading and brokerage costs can be minimized. Furthermore, holding the shares eliminates capital gains tax, which would be due on every sale at a profit in the case of high trading. Furthermore, the risk is minimised by the passive investment strategy. By holding the investment securities, all influences can be faded out and thus human errors are almost eliminated. The last major advantage of this strategy is simplicity. Holding for the long term eliminates the need to constantly research and trade securities.

However, there are not only advantages to the buy and hold strategy. One of the risks is that a share is chosen incorrectly and does not rise steadily as expected. Of course, this can also happen with other investment strategies. Another disadvantage is the long capital commitment and the resulting lack of flexibility during the investment. However, the risk is minimised, but the liquidity rate decreases due to the long-term and passive investment strategy. It is therefore often not possible to sell units quickly and thus increase the liquid funds. (Commerzbank, w.y.)

## **4 What is a short squeeze**

### **4.1 Explanation of a short squeeze**

A short squeeze is the supply shortage of a security (usually a share) that has previously been sold short in large numbers. After the short sales, the resulting open positions must be closed out again by buying back the shares. If - contrary to the expectations of the short-sellers - the stock market price of the assets rises, many short-sellers have to buy back the security at the same time to limit losses, which can lead to excess demand that drives the price up even further and thus increases the losses of the short-sellers. It becomes problematic when there are not enough shares in circulation to close out their positions again. The share price rises unchecked until the company issues new shares or shareholders agree to sell shares. This is the only way short-sellers can close their positions, which is why they theoretically have an unlimited risk of loss.

Often short-sellers are large hedge funds that have large amounts to invest. This gives them great influence on what happens in the stock markets. Most of the time short-sellers see no future in the shorted stocks or see problems in the shorted companies. The collusion of the big hedge funds is forbidden, but again and again, companies are shorted by many big hedge funds.

### **4.2 Example Volkswagen 2008**

This was clearly shown by the example of Volkswagen in 2008.

The trigger for the whole VW short squeeze in 2008 was that many larger hedge funds shorted VW's common stock. Porsche had already started buying VW shares in 2005. These were further increased over the coming years. Porsche announced in October that it had already increased its stake to over 40 percent and that, with the help of options, it would be able to obtain 74.1 percent of Volkswagen's ordinary shares. Since the federal state of Lower Saxony always holds 20.2% of VW ordinary shares, only 5.7% of VW ordinary shares would still be available.

As a result, many investors wanted to buy the VW share, which had been doing very well until then.

As some large hedge funds have shorted VW shares, they have had to start share buybacks to minimise their losses. The demand for the shares was therefore much greater than the supply. This effect caused the share price to jump up by a considerable amount. At peak times, the ordinary share had a value of €1,005.



**Figure 4-1: Volkswagen ordinary shares 2008 (€) Source: Bloomberg**

Thus, Volkswagen became the world's most valuable company which has been listed on the stock market in the year 2008. However, this only lasted from 27 - 28 October 2008. After that, the share fell significantly again. As clearly shown in Figure 4-1, the rapid price increase was only of very short duration. After the peak was reached, the share lost its upward momentum very quickly. In the following days, the share lost significant value again. One of the main reasons was the sale of 5% of Porsche's shares. This meant that there were significantly more shares on the market again. This action was intended to prevent further price turbulence.

About 40 hedge funds claimed in court that Wiedeking and Porsche as a whole had manipulated the market by forcing them to buy VW shares at an inflated price. The hedge funds - led by the fund companies Elliott Associates and Black Diamond Offshore - claimed damages of around two billion dollars. However, the funds have not seen any money to date. (Reimer, 2021)

This short squeeze has gone down as the mother of all short squeezes.

### **4.3 Example Tesla 2020**

Another and one of the best-known short squeezes in recent years was Tesla in 2020. Hedge fund manager David Einhorn of Greenlight Capital, probably one of the best-known short-sellers, has bet on sensible prices for Tesla in recent years. During the financial crisis, Einhorn already lost several billion through short positions. After Tesla's shares were long considered to be overvalued, several large hedge funds also took a stand against the rise in share prices. Einhorn's first short sales of Tesla took place back in 2017. At that time, the price was still around 50 USD. Alone in 2020 Tesla's share price has risen by around 750%. Approximately 20% of Tesla shares were shorted at the beginning of the year. By the end of the year, most short-sellers had closed their short positions, so that by the end of the year the number was only 6%. This was also one of the reasons why the Tesla share price rose exponentially in 2020. With these short sales, the large hedge funds and other short sellers lost almost USD 40 billion. These were by far the highest losses from short positions in 2020. (Reimer, 2021)

## **5 The “GameStop Short Squeeze”**

### **5.1 What is GameStop**

GameStop is a gaming retail chain that comes originally from the United States. They have more than 7,500 stores over the world with most of them located in the United States and Europe. They are also represented in Australia, New Zealand, and Canada. The business idea is to sell computer games and accessories. It is also possible to bring already used games back to the stores and get a small amount of money back. In the years around 2010, GameStop's business flourished. More and more people took up the games retailer's offer. Due to the steady growth, some investors invested in GameStop and thought of a continued successful future. However, the trend went away from analog games to downloads and online gaming. However, GameStop missed this change in the gaming world.

### **5.2 Why did the hype start?**

Ryan Cohen an entrepreneur who already made a pet food seller to a very successful company invested a big amount into GameStop last year. He bought a 13% stake in the company. He spent about \$75 million on it which has a value of \$1,8 billion nowadays. He

intends to change the business model of the company and make it a successful and leading company in the gaming sector again. This investment by Ryan Cohan would probably not have become so well-known without the media hype. (Herbst-Bayliss, 2021)

However, this has not been the only influencing factor of the GameStop rally. The investor Keith Gill, who became known through the Reddit forum wallstreetbets and his YouTube channel, has caused a stir with his videos and posts. He started investing in GameStop as early as 2019, with various positions. Initially, he shared his positions on GameStop quarterly, then monthly, and from December 2020, almost daily on the Reddit forum wallstreetbets. Here you can see exactly how scepticism is high at the beginning, but the more the positions increase, the more positive resonance he gets. As early as May 2020, he announced a major short squeeze of GameStop shares in a post on wallstreetbets. More and more investors have jumped on it and also invested in the share. By actively sharing his posts, more and more investors have become aware of it and have also invested in the share. (Reddit, wallstreetbets, 2021)

Not to be forgotten was also the enormously high short ratio of the GameStop share. The short ratio at the end of January 2021 was 151.8%. In particular, large hedge funds have been shorting the stock in a big way. With the publication of the high short rate in various companies, the good news in the restructuring of the business model of GameStop, and the regular post of the successful investments of Keith Gill, there has been a large merger of many young investors. These have joined together, especially on the wallstreetbets forum, and have bought GameStop shares in cohesion to create a short squeeze. The aim was to force the large Hedge funds to close their short positions through the rapidly rising prices. (Völkl, 2021)

### **5.3 Which parties were involved in the short squeeze?**

In the case of the complete GameStop rally, it has to be said that the enthusiasm and the rapid rise of this share have quickly found followers. Basically, the Reddit forum wallstreetbets has had a strong influence on the market movement. In this forum, a large number of young and risk-averse investors have joined forces and bought shares of companies. The business basis of many of the selected companies had a poor outlook for the future. The reason was often the ongoing corona crisis and outdated business models, such as GameStop's. For this reason, the business model of these companies was considered and

analysed by many large hedge funds as not promising. Thus, the shares were sold short on a large scale.

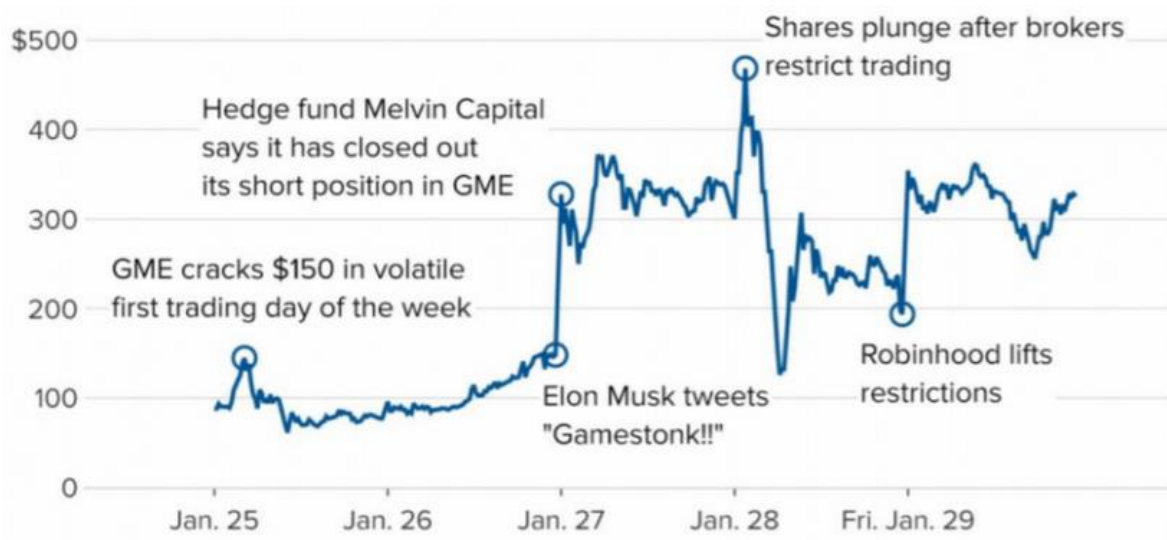
It was a combination of small investors and big hedge funds. The goal of the wallstreetbets community was to stand up against the big hedge funds and try to break them. A significant influence on the whole hype was, as already mentioned, the Youtuber "Roaring Kitty", who fuelled the whole hype with daily posts of his depot. Through the heavily shorted shares of GameStop, Blackberry, AMC Entertainment, Bed Bath & Beyond, and Nokia, just to name a few examples, more and more young investors got in on the hype.

As already mentioned, one of the main platforms on which many investors have gathered and coordinated is the Reddit Forum wallstreetbets. On 25 January, the wallstreetbets forum had already been subscribed to 4.5 million times. (Adams, 2021) However, the number of subscribers is constantly increasing. The number of followers has already more than doubled again. Today, the forum already has 9.8 million followers. (Reddit, 2021)

On the one hand, many individual investors have made a lot of money from the short squeeze, on the other hand, hedge funds have lost huge amounts of money. The biggest loser is the American hedge fund Melvin Capital. After the explosive rise in the share price, it had to be saved from insolvency by rescue packages from other funds. The total losses of the hedge funds are estimated at 12.5 billion dollars. (DiePresse, 2021)

Another important role in the whole situation is played by the online and neo-broker Robinhood. This was already looked at in more detail in the previous part. In the meantime, it had to collect further funds in order to fulfil its obligations. On Thursday 28 January 2021, the broker limited its services on some highly volatile stocks. This meant that investors were only able to sell shares and no longer to buy more. This had a serious impact on the performance of the highly traded shares. This action put Robinhood even more in the limelight and it had to endure a lot of criticism. The neo-broker advertises that it enables small investors to participate in the stock market. Many users have announced a change due to the restriction of trading. Other brokers have also restricted trading for a short time. This is also the case with the neo-broker Trade Republic from Germany. (Li, GameStop, Reddit and Robinhood: A full recap of the historic retail trading mania on Wall Street, 2021)

As can also be seen in Figure 5-1, big names like Elon Musk also have an influence on the situation. With his frequent tweets, he has already caused a great stir in recent years. The very influential businessman has also caused GameStop's share price to soar with a tweet. (Gambrell, 2021)



**Figure 5-1: GameStop share price volatility** *Source: FactSet. Data as of market close on Jan. 29* CNBC

The whole situation came to such a head at the end of January that the CEO of Reddit Inc, the CEO of Robinhood Markets Inc, Keith Gill (known on YouTube as "Roaring Kitty"), and several others who were involved in the rally had to testify before the House Committee on Financial Services. The possible market manipulation was discussed. As a result of this incident, it is being discussed whether there should be general restrictions on short trading in the future. The price fluctuations of the GameStop share are still immense. (Frier, 2021)



## 6 Market Research

### 6.1 Research method

It is possible to gather quantitative data with several different options. None of these methods are superior in all situations. There, it is of great importance to weigh the advantages of each method to find the best which fits the thesis work. In this case, an online survey was selected as the most suitable method. An online questionnaire brings a lot of advantages. It is easy to develop a survey especially with the wide offer of different tools for creating them. Most tools offering students the possibility to create surveys without a fee.

The possibility to share the surveys via social media channels and e-mail also speaks for this research method. Especially in this day and age, when it is difficult for the researcher to make personal contact, the online survey has become indispensable. This makes it possible to comply with any Corona measures such as contact restrictions and distance without any problems.

Another advantage is the possibility to get a huge range of answers from different participants. By the simple distribution of the questionnaire on various social media platforms and sending it via email, a large number of people can be reached. The increased participation in the survey strengthens the validity of the entire survey. Anonymity is also guaranteed at all times in the online survey. This is also a crucial aspect nowadays.

Furthermore, most survey tools are very easy to use. This makes it easy for both the questioner and the respondent to process the survey. Most tools have ready-made question methods that can be easily adapted to the individual question. The possibility of simple and uncomplicated questioning can again increase the participation rate. Most respondents want a survey that is easy to understand and to work with. (DeFranzo, 2020)

Despite the many advantages, there are also a few disadvantages that need to be considered. The flexibility during the survey is severely limited. Once the survey is completed and shared with the target group, it is usually no longer possible to make changes to the question. This means that the question can no longer be adapted to the respondents.

Furthermore, depth can be a problem in surveys. Since the questions have to be asked in such a way that they can be answered by many different groups of people, the questions are

often asked superficially and not in-depth. This can weaken the validity of the questions and the evaluation. (DeCarlo, w.y.)

## **6.2 Survey structure and design**

The survey for this thesis was designed with the survey tool Forms from Microsoft. Due to the easy accessibility through MS office 365 and the extensive analysis tools, this became the chosen tool. The simple design and clear presentation of the survey should make it as easy as possible for respondents to answer the survey. The short explanation at the beginning pointed out the purpose of the survey. However, this was kept very brief in order to make the survey as entertaining as possible for the respondents. Open questions were also avoided in the survey. These are often answered only minimally or not at all. To make the survey as easy to answer as possible, only single and multiple-choice questions were asked.

The scope of the survey was also simplified to the bare minimum. The aim was to take up as little of the respondent's time as possible and thus get many high-quality answers. The problem with surveys that are too long is that they are often sent incompletely or not at all. The survey aimed to observe the investment behaviour of young investors more closely. For this purpose, the target group was clearly defined as younger investors.

The first part was focusing on general information about the respondents. They were subdivided into age groups from 18-21, 21-25, 25-30,30-35, and older than 35. The age division is of great importance as they have different opportunities to invest in the market. This is not only a question of financial means, which usually increase with older age but also of employment and the social situation of the individuals. The next question dealt with whether the participants are employees, students, self-employed or unemployed.

However, the reasons of the respondents who do not invest in the stock market should also be briefly explained. This divided the survey into two subcategories, which the respondents did not notice. If someone already invests in the market and answered yes to the question "Do you invest in the stock market", they were forwarded directly to the stock market-specific questions. For respondents who do not invest in the stock market, there was only one question left to answer. This question was intended to find out what possible reasons they have for not investing in the stock market. By dividing the respondents, it was possible to divide and identify the target group.

The second part can also be divided into two super-groups. In the first rough subdivision, the aim is to find out how the participants became aware of the stock exchange and through which brokers they trade on the stock exchange. Here, some of the neo-brokers are deliberately listed in the answer options. The brokers available for selection in the questions have already been examined in more detail in the theory section. The second subdivision is more about the investment strategy and the information procurement of the investments. The willingness to take risks will also be looked at in more detail in this part.

As already mentioned, the focus is on younger investors. All the neo-brokers already listed are increasingly targeting young and inexperienced investors. The short squeeze around GameStop and the other heavily shorted companies also involved more inexperienced and young investors. Thus, the investment behaviour of these investors is to be analysed and examined more closely.

### 6.3 Survey Results

In the following, the results of the surveys from Germany and Finland are presented, compared, and analysed. To begin with, the results of both countries are examined in more detail. Chapter 6.3.3 mainly deals with the analysis and comparison of the two countries.

The survey was first released and shared on the 16 March, 2021. Respondents had the possibility until the 09 April, 2021 to participate in the survey. This should be a sufficient period of time, as it was assumed that most of the respondents had already submitted their answers at the beginning of the deadline.

#### 6.3.1 Survey Results Finland

##### General information about the participants

● ... 18 - 21 years old.	41
● ... 21 - 25 years old.	86
● ... 25 - 30 years old.	24
● ... 30 - 35 years old.	18
● ... older than 35 years old.	22



Figure 6-1: Different age groups

In Finland in total 191 people participated in the survey. The largest age group is those between 21 and 25 years old. This corresponds to a percentage rate of 45%. The second



**Figure 6-2 Profession of the participants**

largest group is 18–21-year-olds. From this group, 41 (21%) people participated. 24 (13%) people between the ages of 25 and 30 took part in the survey. The average time taken to complete the questions was 1:49. This figure gives an indication of whether or not respondents took enough time to complete the survey. Thus, one can conclude and say whether the answers are meaningful and representative or not.

The survey was distributed via the student network at Novia of Applied Sciences in Turku. For this reason, 156 (82%) of the participants are students. However, since the survey is also aimed at the target group of young investors, this is an acceptable result. Only 26 (14%) of the participants are in employment at the time of the survey. Of these 26 employees, only ten are under 30 years old. The evaluation of such a small number of participants in a more precise way would give an inconclusive result. Therefore, the focus of further evaluation and analysis is on the 82% of the survey who count as students. Unfortunately, it was not possible to get more answers from other groups of young people.

### Question 3 – Invested people in the stock market

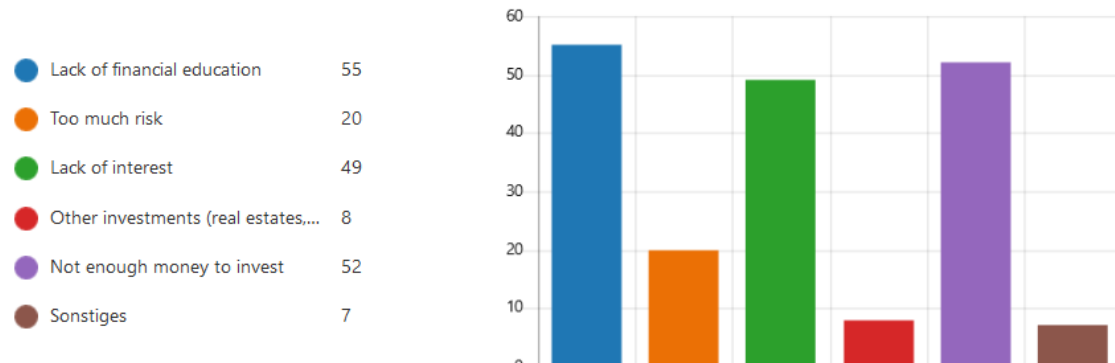


**Figure 6-2: Subdivision into investors and non-investors**

As can be seen in Figure 6-2, the larger part of the respondents is not invested in the stock market. 85 of the total Finnish participants are currently actively investing in the stock

market. Therefore, the main focus of further analysis and evaluation is on the 44% of participants who invest in the stock market.

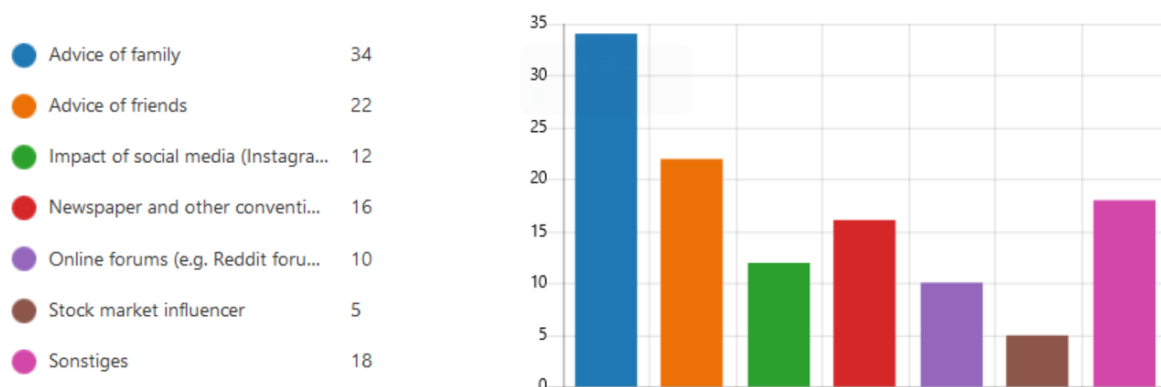
#### Question 4 for non-investors – reasons for not investing in the stock market



**Figure 6-3: possible reasons why participants do not invest in the stock market**

The fourth and last question asked for those who do not invest was what reasons they have for not investing in the stock market. 55 of them answered that they did not have sufficient education in the field of finance and investment. The second most selected reason was not having enough money to invest. This was closely followed by a lack of interest in the stock market with 49 participants. As can be seen in charts 6-2, risk and other investments are not as important.

#### Question 4 for investors – reasons for the start to invest in the stock market

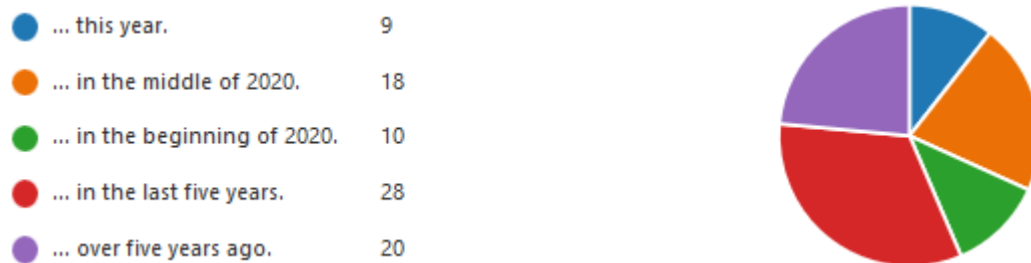


**Figure 6-4: List of different reasons for starting to invest in the stock market**

In this question, the respondents were asked to indicate which influencing factors played a role in their decision to invest in the stock market. For a large part of the respondents, the advice of family was the most decisive factor. 22 became aware of the stock market through the advice of friends. Newspapers and other conventional media played an important role for 16 respondents. Social media, stock forums, and stock market influencers played only a minor role. The many respondents who opted for other reasons are striking. In this part, the

factor of personal interest and the passive increase of money was particularly noticeable. The desire for financial independence was also mentioned as a reason.

### Question 5- starting time on investing



**Figure 6-5: Possibilities of the starting time of investing**

20 of respondents have already started investing in the last five years. The second-largest share is still invested in the market for the longer term. Thus, 48 of the respondents have been active in the stock market for more than a year. 27 started actively investing in the stock market last year. And only 9 have started investing in the stock market this year.

### Question 6 – Broker selection



**Figure 6-6: differentiation between the usage of online broker**

When asked this question, it was noticeable that Finnish investors use almost no German or American neo-brokers. Surprisingly, 41% of young investors still use traditional bank brokers. When evaluating the other data, it was noticeable that 49% of the respondents have a custody account with Nordnet. For this reason, Nordnet was already briefly discussed in the theoretical part. Furthermore, the evaluation also revealed that 24% of respondents use at least two different brokers for their investments.

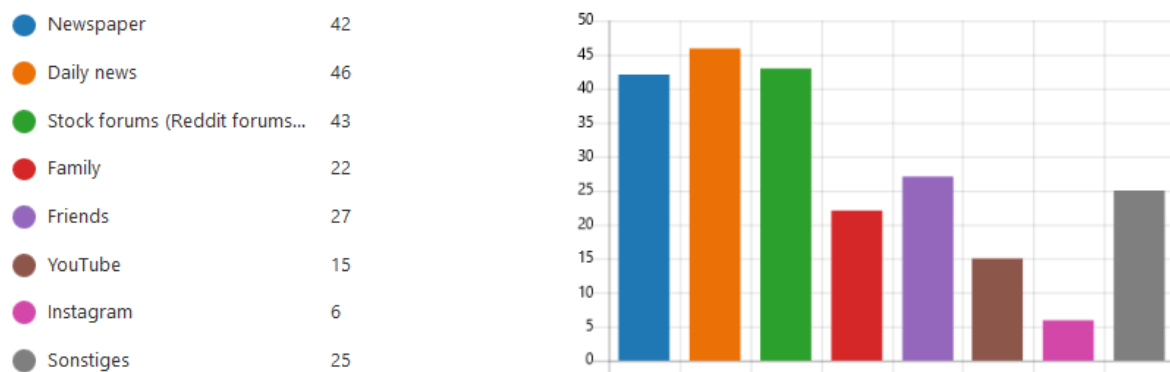
### Question 7 – Change to a neo-broker in the last twelve months



**Figure 6-7: Presentation of the possible switch to a neo-broker in the last year**

When asked about switching to a neo-broker in the last twelve months, exactly 50% answered with a no. 17% have not switched because they are satisfied with their traditional bank broker. However, a quarter of all investors have made a switch. And another 8% are planning to switch in the near future.

### Question 8 - Obtaining information for the investments



**Figure 6-8: Subdivision of different sources of information for investing**

Traditional information gathering such as newspapers and daily news are at the top of the list with 46 and 42 votes respectively. New sources such as websites as Reddit, for example, were surprisingly often selected as the answer 43 times. The advice of family and friends is used equally often as a source of information. Online and social media channels such as Instagram and YouTube are not as popular for news gathering for one's own investments. Many apps of the various brokers also already offer certain sources of information. These were increasingly listed under the item "Other".

### Question 9 - Criteria for a good investment

● A high dividend rate	24
● The advice of friends and fa...	6
● A high growth possibility	75
● A high risk diversification	22
● Sonstiges	7



**Figure 6-9: Selection criteria for a well-considered investment**

When it comes to the importance of the different criteria for a good investment, a high growth opportunity was an important aspect for 56% of the Finnish participants in the survey. With 18%, the dividend rate is in second place, closely followed by risk diversification with 16%. Advice from friends and family is not an important investment criterion for most.

### Question 10 – Investing in different industry sectors

● ... only one.	6
● ... more than one and up to f...	45
● ... more than five and up to t...	23
● ... more than ten.	11



**Figure 6-10: Listing of the possible number of sectors in which the participants are invested**

The aim of this question was to find out the diversification of the respondents. 53% of respondents invest in only one to five different sectors. 27% are invested in more than five but a maximum of ten sectors. Only 13% of respondents diversify their portfolio with more than ten industry sectors.

### Question 11 – Holding period of the investments

● Up to one month	2
● Longer than one month but ...	27
● Minimum one year but maxi...	22
● Longer than five years	34

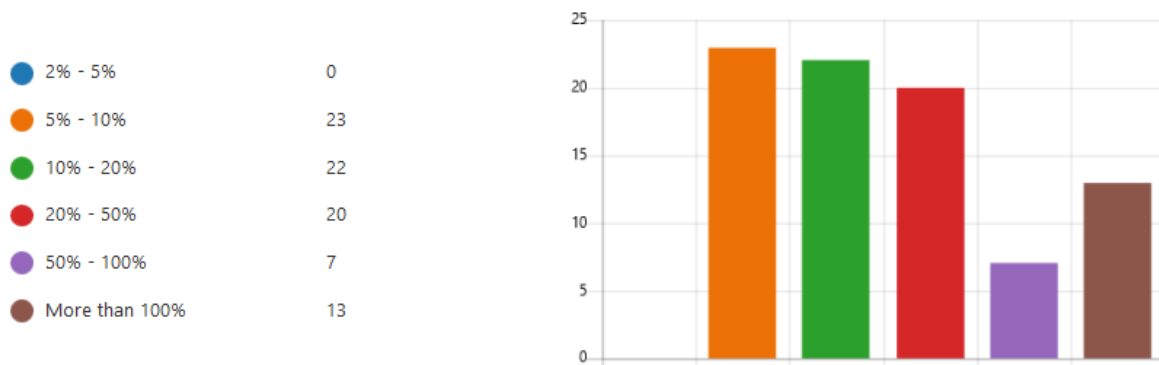


**Figure 6-11: List of possible time periods for how long an investment is held on average**



The question of how long the participants in the survey hold their investments on average was aimed at finding out whether they tend to pursue a long-term or short-term investment strategy. 34 of all participants hold their investments for more than five years. For 49, the average holding period is between one month and five years. However, it should be emphasised that a little more than half hold their investments for only up to one year. Two of the investors in the survey change their investments within one month.

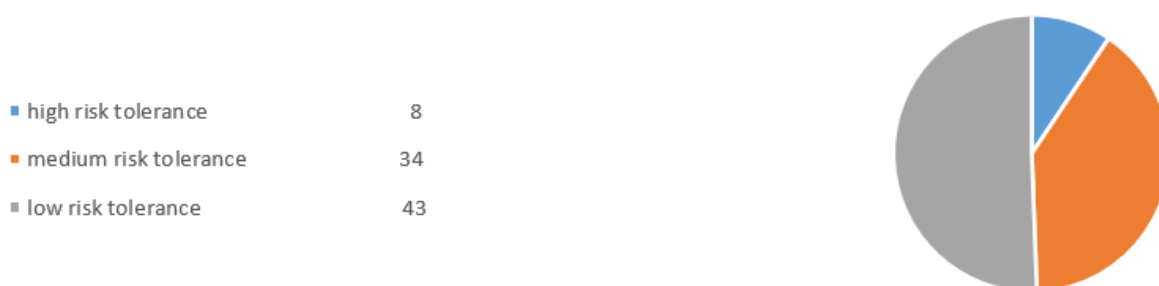
### Question 12 – target return on investment



**Figure 6-12: Breakdown of the percentage return into different categories**

In question number 11, which was asked of all investors in the survey, 53% were satisfied with a return of 5% - 20%. The target return of almost a quarter of the respondents is 20%-50%. Although the majority are satisfied with a return of up to 20%, 15% are aiming for a return of over 100%. In contrast to this enormously high figure, none of the respondents would be satisfied with a return lower than 5%.

### Question 13 – Self-assessment of risk tolerance



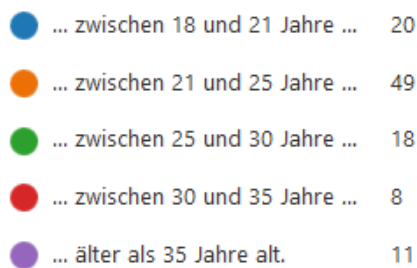
**Figure 6-13: Self-assessment in relation to the willingness to take risks on the stock exchange**

In the last question of the survey, respondents were asked for their self-assessment of their risk tolerance when investing in the stock market. It is clear that 51% of the participants describe themselves as less willing to take risks. What stood out, however, was that 9%

would describe themselves as very risky investors. 40% of the respondents consider their risk tolerance to be normal and balanced.

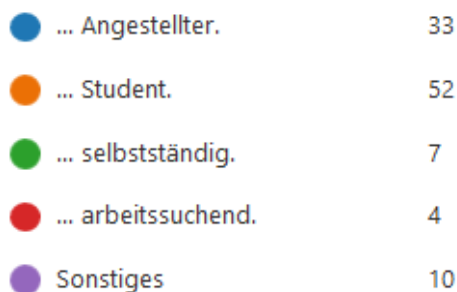
### 6.3.2 Survey Results Germany

#### General information about the participants



**Figure 6-14: different age groups of the participants**

In Germany in total 106 people participated in the survey. The largest age group is those between 21 and 25 years old. This corresponds to a percentage rate of 49%. The second-largest group with 20 participants is 18-21-years-olds. 18 (17%) people between the ages of 25-30 took part in the survey. The average time taken to complete the questions was 2:08. This figure indicates whether or not respondents took enough time to complete the survey. Thus, it is possible to draw a conclusion and to say whether the answers are meaningful and representative or not.



**Figure 6-15: possible profession of the participants**

The second survey was divided between students and employees in Germany. The selected people were also encouraged to share the survey with friends and acquaintances. Furthermore, the survey was shared in various Reddit forums. Unfortunately, the number of participants was not high. Due to the fact that the survey was mainly distributed among students, the majority of participants are students. 52 of all participants are currently enrolled at a university or college. 33, or 31% of the respondents, are on a salary contract. 7% of respondents are self-employed. Four unemployed people also took part in the survey. One civil servant, a few school pupils, and a few trainees also took part in the survey. As already mentioned, however, the largest number of participants are students and employees.

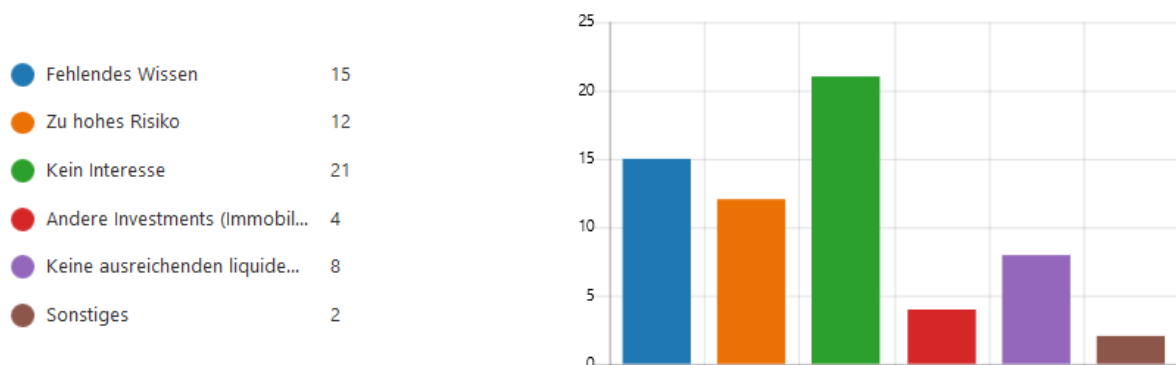
### Question 3 – Invested people in the stock market



**Figure 6-16: Subdivision into investors and non-investors**

In Germany, significantly more people indicated in the survey that they invest in the stock market, at 65%. It can be concluded from this that the remaining 35% are not active on the stock market.

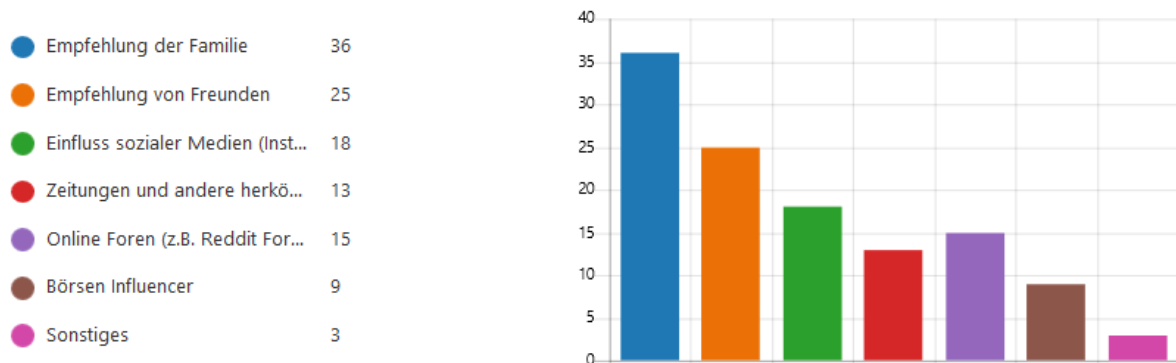
### Question 4 for non-investors – reasons for not investing in the stock market



**Figure 6-17: possible reasons why participants do not invest in the stock market**

When asked about the possible reasons why respondents do not invest in the stock market, 21 stated a lack of interest. The lack of expertise in the area of investing in the stock market and the high risk are thus only the second and third decisive points. The lack of liquid funds was only given eight times as a reason. Investing in other goods such as luxury items or real estate is negligible with four responses.

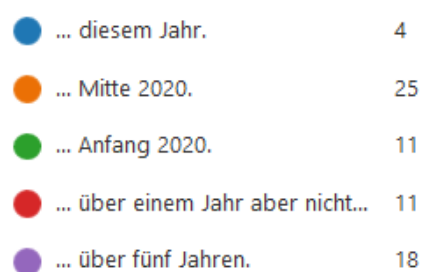
### Question 4 for investors – reasons for the start to invest in the stock market



**Figure 6-18: List of different reasons for starting to invest in the stock market**

When asked what led the respondents to invest in the stock market, the recommendation of the family was chosen by far. This was selected a total of 36 times. Another important point in the decision to invest in the stock market was the recommendation of friends for 25. The influence of social media such as Instagram and YouTube has been selected a total of 18 times. Only 19% had their attention drawn to the stock exchange by newspapers. However, 22% became aware of the stock exchange through online forums.

### Question 5- starting time on investing



**Figure 6-19: Possibilities of the starting time of investing**

36%, and thus the majority of respondents, have been actively investing in the stock market since mid-2020. 26% have already been investing for more than five years. 16% either invested at the beginning of 2020 or have been investing for more than a year. Only 6% have ventured into the stock market this year.

### Question 6 – Broker selection

Trade Republic	39
Robinhood	1
Smart Broker	21
Herkömmliche Banken Broke...	25
Sonstiges	6



**Figure 6-20: differentiation between the usage of online broker**

When selecting brokers, it is evident that almost half of all respondents, 42%, use the neo-broker Trade Republic. Another 23% use the neo-broker Smartbroker, which has already been presented. Only 27% of the participants take the offer of the traditional bank brokers. Another interesting value revealed by the evaluation is that 49% of all respondents trade with at least two different brokers. Of the 25 people who use the traditional brokers to access the stock exchange, 76% have at least one other neo-broker listed. Other online brokers are also used according to the survey like Flatex, Scalable Capital, and comdirect who were also mentioned.

### Question 7 – Change to a neo-broker in the last twelve months

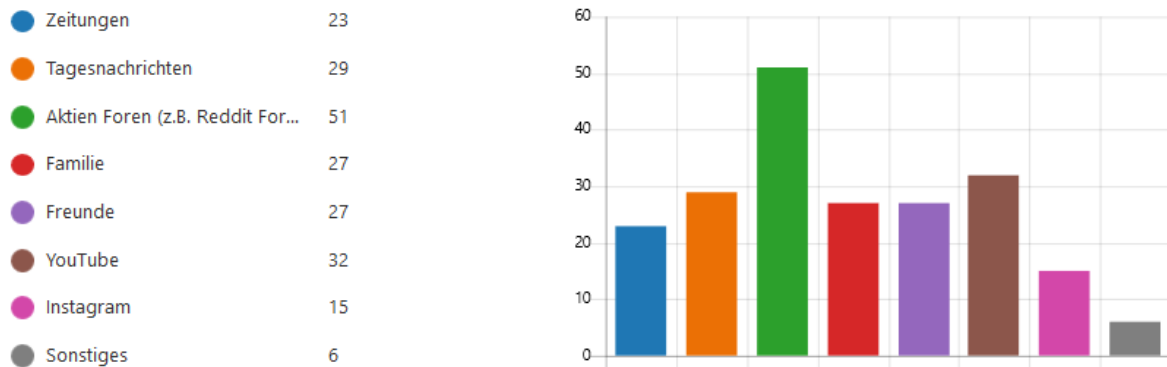
Ja, habe ich.	32
Nein, habe ich nicht.	21
Nein, habe ich nicht, da ich ...	13
Nein, habe ich nicht aber ich ...	3



**Figure 6-21: Presentation of the possible switch to a neo-broker in the last year**

The high number of new openings of neo-brokers in the last twelve months is also striking. Thus, 46% of the respondents have switched or opened a new neo-broker during this time period. 4% of respondents have not yet switched but are planning to do so in the near future. Accordingly, just under half have not opened a new online broker and are satisfied with their current service offering.

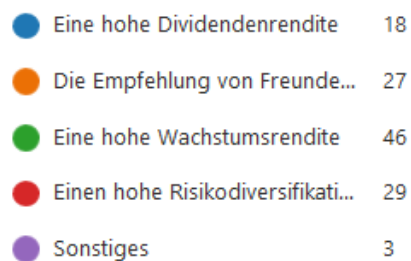
### Question 8 - Obtaining information for the investments



**Figure 6-22: Subdivision of different sources of information for investing**

When it comes to obtaining information for investments, the stock forums are by the most used source. Thus, 51 respondents obtain their information for their investments from stock forums. There are no particularly large fluctuations in all other sources of information. They are all used almost equally often except for the social media channel Instagram, which is not as popular for obtaining investment information. Furthermore, it should be said that 99% use at least two sources to gather data. Facebook and company websites were also listed as other sources of information.

### Question 9 – Criteria for a good investment



**Figure 6-23: Selection criteria for a well-considered investment**

Among German participants, the possibility of strong growth opportunities is an important criterion for 37% when selecting a suitable investment. At 24%, risk diversification is in second place. The recommendation also comes in at 22% among German participants. A high dividend yield is an important criterion for only 15%. Another point mentioned is the personal identification with the company and the business model.

### Question 10 –Investing in different industry sectors

● ... eine Branche	2
● ... mehr als eine aber maxim...	33
● ... mehr als fünf aber maxima...	15
● ... mehr als zehn.	19



**Figure 6-24: Listing of the possible number of sectors in which the participants are invested**

When asked about the amount of different invested sectors, 48% of all investors surveyed selected more than one but no more than five. Only 28% diversify their portfolio with more than ten different sectors. 22% invest in more than five but a maximum of ten sectors. However, it should be noted that only 3% of all participants invest in only one sector.

### Question 11- Holding period of the investments

● Bis zu einem Monat	10
● Mindestens einen Monat a...	22
● Mindestens ein Jahr aber m...	18
● Länger als fünf Jahre	19

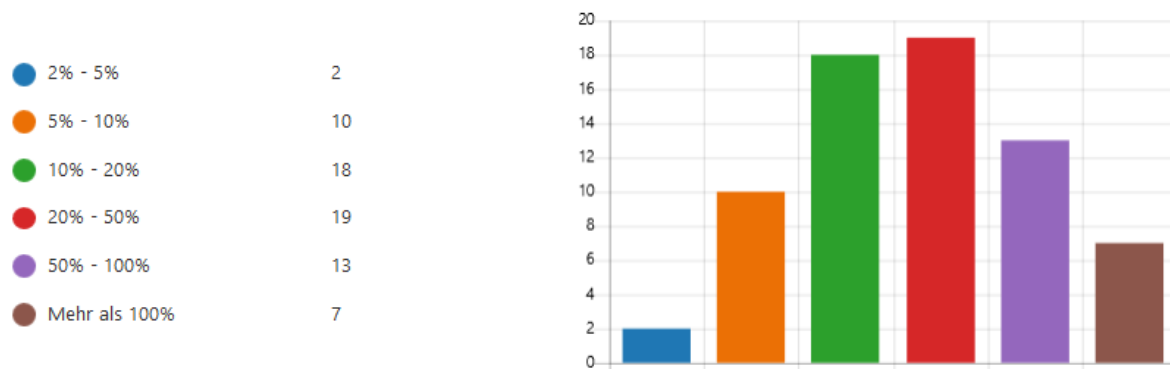


**Figure 6-25: List of possible time periods for how long an investment is held on average**

The average holding period of an investment is at least one month for 32%, but no longer than one year. In contrast, 28% invest with a long-term intention and thus hold their investments for at least five years and even longer. Almost as many (26%) hold their investments for at least one year, but dissolve them after an average of five years at the latest. Only 14% of the respondents invest for a very short term. It should be noted that this group only holds their investment for up to one month on average.



### Question 12 – target return on investment



**Figure 6-26: Breakdown of the percentage return into different categories**

The target return is between 20% and 50% for 28% of the German respondents. A return of 10% to 20% is the target of 26% of respondents. Only 14% would be satisfied with a return of 5% to 10%. Only 3% are aiming for a maximum return of 5% on their investment. In contrast, 19% envisage a return of up to 100% on their investment. And even 10% expect a return of over 100% from their investments.

### Question 13 – Self-assessment of risk tolerance

high risk tolerance	19
medium risk tolerance	27
low risk tolerance	23



**Figure 6-27: Self-assessment in relation to the willingness to take risks on the stock exchange**

In the self-assessment of risk-taking, the results of the survey were very evenly balanced. 33% of the respondents would describe themselves as not being risky investors. 39% describe themselves as balanced investors, who take risks that are not too high. As many as 28% of the total respondents consider themselves to be very risk-averse investors.

### 6.3.3 Analysis and Comparison

In the following part, the survey results from both countries are used for a comparison and a short analysis of the investment behaviour and the possible changes due to influencing factors such as the GameStop short squeeze and the introduction of the new neo-brokers. As

already mentioned, the survey from Germany, as well as the survey from Finland, can be divided into three subcategories.

### **Part 1**

The age groups in Germany and Finland show a similar picture. The majority of respondents in both countries are between 21 and 25 years old. Also, in both countries, the survey was filled out predominantly by students and employees. A significant difference that is immediately noticeable, is the willingness to invest money in the stock market. The percentage of investors in Germany is much higher than in Finland. In Finland, less than half of the respondents are active on the stock market. In Germany, almost a quarter more of the respondents invest in the stock market. A connection can be made here at a later date to the increased market entries during the last year.

Among the reasons for not investing in the stock market, the lack of interest is high in the ranking for both countries. In Finland, the lack of expertise and insufficient liquid funds are also decisive reasons for most of the participants. Especially in today's times, when interest rates are at a record low, it is almost indispensable to invest alternatively. Therefore, the offer of knowledge enrichment in the field of investing in the stock markets should be increased. The lack of knowledge should not be a reason for most of the young people of such highly developed countries like Germany and Finland.

### **Part 2**

In the second part of the survey, the intention was to find out the influencing factors that brought the respondents to the stock market and how they trade on the stock market. Here it becomes clear that the influence of the family plays an important point in the decision for the stock exchange. This is still the number one influencing factor in both countries.

As already mentioned, one can clearly see that the majority of the 18 to 25-year-olds started investing in the last year at the earliest. This is especially evident in Germany. Thus, 67% of 18 to 25 year-olds started investing in 2020 or 2021. In contrast, only 44% of those over 25 started investing at the same time. From these figures, one can conclude that the Corona low in the middle of 2021 has had a major impact on the entry of young investors into the stock market. Also, the number of new accounts opened with neo-brokers such as trade Republic increased rapidly last year and especially in January and February of this year. (Reintjes, 2021)

This can also be seen in the survey in Germany. Alone 46% of the investing respondents have switched to a neo-broker in the last twelve months. Furthermore, Trade Republic is the neo-broker most used by the respondents. 42% have at least one custody account with this online broker. This again confirms the rapid increase in neo-brokers in the last year's distribution.

The trend towards neo-brokers among the younger generation also becomes apparent when taking a closer look at the figures of how many of the 18 to 25 year-olds still trade with a conventional bank broker. Just 21% of the surveyed group trades with a traditional bank broker. In addition, more than half still have at least a second custody account with a neo-broker. If this is compared with the number of over 25s, the figure is astonishingly low. In this age group, 62% of respondents still have a custody account with a conventional bank broker. Due to the targeted marketing, the cost advantage, and the ease of use, more and more young people are using a neo-broker.

Information procurement also points to a change in investment behaviour. In Germany, the shift away from traditional media such as newspapers and daily news to alternative media is more proceeded than in Finland. The examination and analysis of the survey show the enormous change. 84% of all participants use Reddit forums and other online media sources such as YouTube, Instagram, and financial influencers as a source of information. In comparison, only 65% still use conventional media such as newspapers and daily news as sources of information. An increasing number of neo-brokers enter into cooperations with alternative media, they are also gaining more and more popularity. For example, Trade Republic supports a podcast that reports daily on stock market news. Through such cooperations, the neo-brokers are moving more and more into the foreground and thus represent a good alternative to all conventional bank brokers.

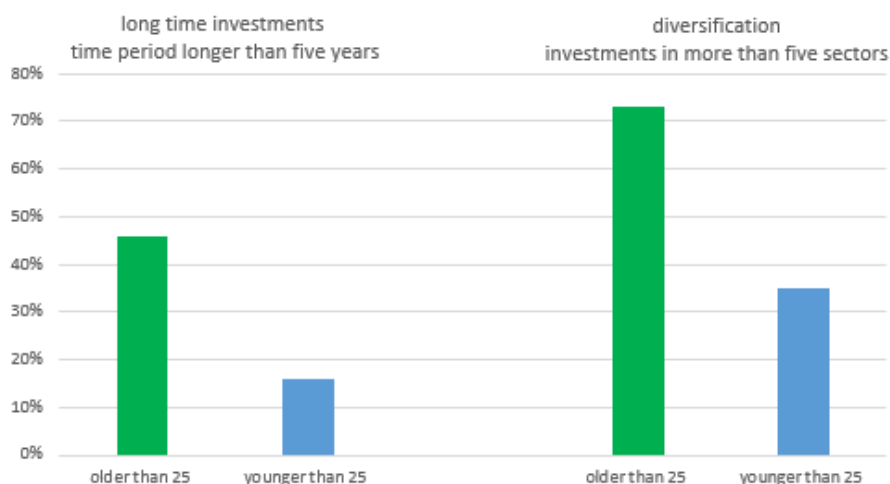
If these figures are compared with the Finnish survey results, it can be quickly realised that the majority consider traditional media such as newspapers and daily news to be the best source of information on their investments. Thus, 71% use the above-mentioned media as a reliable source. In comparison to Germany, only 65% also use online media such as forums and social media platforms. However, it should be said that almost all of the respondents in Germany and Finland use more than one source of information for their investment decision.

### Part 3

The third part will show whether there has been or will be a change in the diversification of the portfolio. The risk appetite should therefore also be shown in more detail. These are two aspects that play a major role in an investment strategy.

Depending on the definition, long-term investment has a minimum holding period of five years. Because of this reason, the question about the time period is divided into several groups. Anything with a holding period of more than five years is referred to as a long-term investment. Between one and five years is referred to as a medium-term investment. Anything less than one year is referred to as a short-term investment. (AlleAktien, w.y.)

As already described in more detail in the theory section, there are investment methods that are intended for the long term. Also, there are many possibilities to invest the money with short-term options. Thus, during the short squeeze at GameStop, short-term methods such as the highly speculative purchase of certificates and warrants were used. If a closer look is taken at the outcomes of the German survey, it is easy to notice that younger investors, in particular, pay less attention to a thoughtful diversification in their portfolio. Added to this

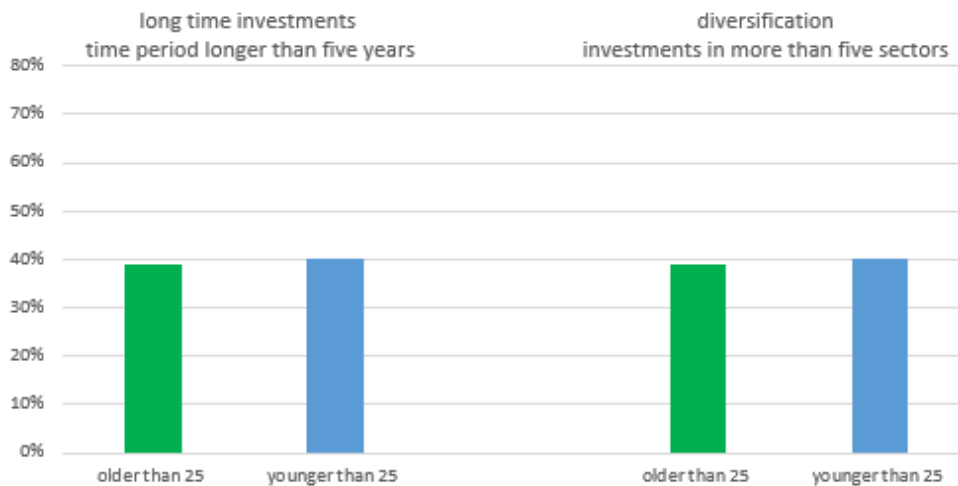


**Figure 6-28: Comparison of investments time period and diversification, Germany**

is the rather short-term investment strategy. Thus, only 16% of the respondents under 25 years invest with a long-term intention. Furthermore, only 35% invest in more than five sectors. This drastically reduces the diversification of the portfolio and thus represents a significantly higher risk.

However, if these values are compared with the figures for the over-25s, it becomes clear that the willingness to take risks increases significantly at a younger age. This finding supports the statement that neo-brokers tempt younger investors to take on

more risk and no longer want to use the safer and long-term investment methods. As it is easily visible in figure 6-28 that the time period of an investment and the diversification of the assets differ significantly between both age groups.



**Figure 6-29: Comparison of investments time period and diversification, Finland**

However, if one compares the values with the Finnish survey results, one notices that the investment strategies in the two age groups do not differ greatly from each other. This is also shown in figure 6-29.

In terms of returns, too, it can be concluded that many investors are no longer satisfied with an average return. The long-term average return of Dow Jones is 9%. This is calculated from the dividend yield and the growth yield from the data of over 100 years of Dow Jones history. Thus, this value can be taken as a realistically relatively safe and long-term average return. (boerse.de, w.y.)

However, the evaluation of the German survey showed that 83% of the investors surveyed have a target return of over 83%. Of these, as many as 35% assume a return of over 50%. Such high returns can normally only be realised with very risky investment strategies. However, due to the usually high leverage used for this, the risk of losing the investment with a complete loss also increases proportionately. A country comparison also shows that 73% of Finns also expect a return of over 10%. The respondents from both countries also agree on a return of over 50%. 32% of Finnish respondents have a target return of over 50%.

By assessing the survey results, it can be said that younger investors tend to invest more riskily and thus also with higher returns. The GameStop short squeeze has shown that large sums of money can be earned with risky warrants and certificates. Traditional investment

strategies such as value investing and buy and hold are becoming less important and less popular among younger investors. The quick and easy information gathering on social media platforms and forums makes it easier for investors to get important stock market news quickly. However, this also makes stock market prices move faster and thus more volatile. The surveys have also shown that the trend is increasing towards low-cost neo-brokers. This has enabled many new investors to participate in the market quickly and cheaply.

## **7 Summary, critical review, and conclusion**

### **7.1 Summary**

The latest events surrounding GameStop and other companies involved in the big short squeeze have shown that the investment behaviour on the stock markets has changed dramatically. Through the use of simple trading platforms such as Trade Republic and Robinhood, a broad spectrum of investors can invest and speculate on the stock markets.

As already described in more detail, neo-brokers have many advantages. The vision of neo-brokers to enable everyone to invest in the stock market is probably the main reason for the great acceptance of investors. All the advantages are well received by most of the users. The aggressive pricing structure of the neo-brokers is forcing the traditional banks to rethink their business models more. Due to the high costs, they have to bear, they cannot follow the low price trend. This can lead to an increased loss of customers. As can already be seen, there is a lively switch to the neo-brokers.

The possibility for everyone to invest in the market is giving a real boost to the number of investors, at least in Germany. The almost playful way of investing in the stock market and the idea of earning big money quickly have many people almost addicted to speculating on the stock market. However, it must be said that this is often not the case. In times of increasing markets always new investors start to invest in the markets. Nevertheless, markets do not increase for any time. If the markets decrease and losses will be made, many young and inexperienced investors will stop the investments in the stock market. In this case mostly the conventional investment strategies with buy-and-hold and value investing stay in the market.

The two surveys in Germany and Finland provided a lot of data on the change in investment behaviour under the influence of neo-brokers. Due to the fact that the surveys were mainly

answered by students and thus only by one social group, it is not possible to standardise the results. However, through the evaluation and analysis of the data, a trend in the rethinking of investing can be identified.

It was analysed that young people are increasingly turning to online media sources to get their information about potential investments. There is a strong shift in investor thinking in this area. By easily and conveniently obtaining a wide range of information on all possible investment opportunities, news can be identified and shared more quickly. Newspapers, daily news, and other conventional media sources are taking a back seat. Platforms such as the wallstreetbets forum on Reddit enable investors to exchange and discuss possible price movements on the markets very quickly.

As already described in more detail, this was also the case with the short squeeze at the end of January this year. Since almost everyone can trade through the very cheap or free neo-brokers and the trend is increasingly towards obtaining information through forums and the like, the question arises as to whether such events could recur in the future. If it takes a closer look at the evaluation and analysis of the surveys, it can clearly be seen that things have changed in this perspective as well. The fact that the investment strategy of young investors differs greatly from that of traditional investors means that a kind of trend is developing here as well. The risk appetite of young investors is significantly higher than that of middle-aged investors. Due to the lower diversification in the portfolio and the high-risk tolerance, the possibility of speculating on a single industry or company is not excluded.

The targeted collusion on various social media platforms and forums in the GameStop short squeeze has shown that many small investors can massively influence prices on the stock market and cause them to rise sharply. This creates a certain uncertainty in the market. Even more values could be influenced by possible further collusion. This leads to certain volatility in the stock markets and furthermore adds a certain degree of uncertainty, which is triggered by such incidents. The risk could arise that many new and young investors no longer see the stock market as an investment in a company and their vision, but as a gamble and an opportunity to make fast a lot of money. Thus, it is quite possible that the stock exchange is losing, or has already lost, its true meaning to a certain extent.

## **7.2 Critical review**

During the critical analysis of the work, I noticed a few things that could have been done in a different way.

In the research method, a comparison of a professional opinion in the form of an interview and the survey data should take place at the beginning of the thesis process. Thus, both a quantitative and a qualitative research method could have been used in the thesis. In the course of developing the topic, the difficulty of such an interview became apparent. Several banks, trade journals, and individual investors were contacted and considered. Despite numerous calls and conversations, no interview with a professional from the finance and investment sector was conducted. The qualitative research method was thus underestimated.

When looking critically at the survey, I also noticed that it was impossible to get more answers. This is mainly due to the short time I had available for the survey. With a longer preparation time, it would have been possible to get more answers. Thus the survey is only partially representative and reliable, as only a certain number of people answered the survey.

The scope of the topic was also partly underestimated when working on the theory part. For this reason, the thesis also exceeds the specified number of pages. However, all the points listed above are of great importance for the bachelor thesis.

## **7.3 Conclusion**

In conclusion, it can be said, that the development of the stock market already started. The entry of many new investors has made the stock markets even more unpredictable and unstable. Strong price fluctuations can be artificially induced by mergers of investors. The merger of many young investors can also bring about artificial short squeezes in the future. Thus, it is possible that the market will continue to be influenced and manipulated in some way by such events.

The influence of neo-brokers also plays a major role in this respect. It should not be forgotten, that neo-brokers offer great advantages and also give smaller investors the opportunity to participate in the stock market. The ease of trading on the exchanges, the simplified user-friendliness, and the cost advantage means that the demand for such brokers continues to rise. Nevertheless, it must also be said that the sometimes dangerous economic risks are not considered more closely or are forgotten.



However, it is important to realise that on the stock exchanges shares of companies are traded and that the stock market should not be a substitute for casinos.

*“It’s most egregious in the momentum trading by novice investors lured in by new types of brokerage operation like Robinhood and I think all of this activity is regrettable,” (Charlie Munger, (2021))*

With this quote, one of the largest and most successful value investors clearly criticised the neo-brokers' business model. In conclusion, it can be said that even behind the many advantages, there are many risks for investors, companies, and the entire markets. Investors should also not be influenced by hyped shares and forum contributions. Especially when investing in the stock market, it is of great importance to inform oneself sufficiently about investments in order to minimise the risk and thus to be successful in the long term.

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## 9 Appendices

### Appendix I: Printed Questionary Finland

🌐 English (United States) ▼

# Survey: change of the investment behaviour caused by new brokers

In my opinion, the investment behaviour in the stock markets has changed considerably in recent times. As part of my bachelor thesis and to underline this opinion, I have created a short survey. I would be pleased if you could take two minutes of your time and participate.

\* Required

1. How old are you? \*

*I am ...*

- ... 18 - 21 years old.
- ... 21 - 25 years old.
- ... 25 - 30 years old.
- ... 30 - 35 years old.
- ... older than 35 years old.

2. I am... \*

- ... employed.
- ... a student.
- ... self employed.
- ... unemployed.

Other

3. Are you investing in the stock market? \*

Yes

No

4. Why are you not investing in the stock market? \*

Lack of financial education

Too much risk

Lack of interest

Other investments (real estates, luxury goods, etc.)

Not enough money to invest

Other

5. Why have you started to invest in the stock market?

Advice of family

Advice of friends

Impact of social media (Instagram, YouTube, etc.)

Newspaper and other conventional information sources

Online forums (e.g. Reddit forums, etc.)

Stock market influencer

Other

6. When have you started investing in the stock market?

*I have started ...*

- ... this year.
- ... in the middle of 2020.
- ... in the beginning of 2020.
- ... in the last five years.
- ... over five years ago.

7. Which broker are you using for your investments? \*

- Trade Republic
  - Robinhood
  - Smart Broker
  - Traditional bank service
  -
- Other

8. Have you changed your broker or have opened a new account with an online/Neo Broker in the last twelve years?

- Yes, I have changed to an online broker.
- No, I have not changed.
- No, I have not because I like my traditional banking service
- No, I have not but I am planning to change.



9. Where do you get your information about your investments? \*

- Newspaper
- Daily news
- Stock forums (Reddit forums, etc.)
- Family
- Friends
- YouTube
- Instagram
- 
- Other

10. Which criteria are important for your investments? \*

- A high dividend rate
- The advice of friends and family
- A high growth possibility
- A high risk diversification
- 
- Other

11. In how many different industry sectors are you investing?

*I am investing in ...*

- ... only one.
- ... more than one and up to five.
- ... more than five and up to ten.
- ... more than ten.

12. How long do you keep your investments on average?

- Up to one month
- Longer than one month but maximum for one year
- Minimum one year but maximum five years
- Longer than five years

13. What is your target return on investment? \*

- 2% - 5%
- 5% - 10%
- 10% - 20%
- 20% - 50%
- 50% - 100%
- More than 100%

14. How would you rate your risk tolerance on the stock market? \*

0	1	2	3	4	5	6	7	8	9	10
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low risk high risk

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## Appendix II: Printed Questionary Germany

# Umfrage: Einfluss der Neo Broker auf das Investitionsverhalten

Meiner Meinung nach hat sich das Investitionsverhalten an den Aktienmärkten in der letzten Zeit stark verändert. Um diese Meinung zu unterstreichen, habe ich hierfür eine kurze Umfrage erstellt. Ich würde mich freuen, wenn Sie sich zwei Minuten Zeit nehmen könnten und diese ausfüllen würden.

\* Erforderlich

1. Wie alt sind Sie? \*

*Ich bin ...*

- ... zwischen 18 und 21 Jahre alt.
- ... zwischen 21 und 25 Jahre alt.
- ... zwischen 25 und 30 Jahre alt.
- ... zwischen 30 und 35 Jahre alt.
- ... älter als 35 Jahre alt.

2. Ich bin ... \*

- ... Angestellter.
- ... Student.
- ... selbstständig.
- ... arbeitssuchend.

Sonstiges

3. Investieren Sie an der Börse? \*

- Ja
- Nein

4. Warum investieren Sie nicht an der Börse? \*

- Fehlendes Wissen
- Zu hohes Risiko
- Kein Interesse
- Andere Investments (Immobilien, Luxusgüter, etc.)
- Keine ausreichenden liquiden Mittel
- 
- Sonstiges

5. Was hat Sie dazu gebracht an der Börse zu investieren?

- Empfehlung der Familie
- Empfehlung von Freunden
- Einfluss sozialer Medien (Instagram, YouTube, etc.)
- Zeitungen und andere herkömmliche Nachrichtenquellen
- Online Foren (z.B. Reddit Foren, etc.)
- Börsen Influencer
- 
- Sonstiges

6. Wann haben Sie begonnen an der Börse zu investieren? \*

*Ich investiere seit...*

- ... diesem Jahr.
- ... Mitte 2020.
- ... Anfang 2020.
- ... über einem Jahr aber nicht länger als fünf Jahre.
- ... über fünf Jahren.

7. Welche Broker nutzen Sie für Ihre Investments?

- Trade Republic
- Robinhood
- Smart Broker
- Herkömmliche Banken Broker (Sparkasse, Consorbank, etc.)
- 
- Sonstiges

8. Haben Sie in den letzten zwölf Monaten Ihren Broker gewechselt oder ein Depot bei einem online/Neo Broker eröffnet?

- Ja, habe ich.
- Nein, habe ich nicht.
- Nein, habe ich nicht, da ich mit meinem herkömmlichen Broker zufrieden bin.
- Nein, habe ich nicht aber ich plane einen Wechsel.

9. Woher bekommen Sie Ihre Informationen für Ihre Investments? \*

- Zeitungen
- Tagesnachrichten
- Aktien Foren (z.B. Reddit Foren, etc. )
- Familie
- Freunde
- YouTube
- Instagram
- 
- Sonstiges

10. Welche Kriterien sind Ihnen bei Ihrer Anlage wichtig? \*

- Eine hohe Dividendenrendite
- Die Empfehlung von Freunden und Familie
- Eine hohe Wachstumsrendite
- Einen hohe Risikodiversifikation
- 
- Sonstiges

11. In wie viele verschiedene Branchen investieren Sie?

*Ich investiere in ...*

- ... eine Branche
- ... mehr als eine aber maximal fünf.
- ... mehr als fünf aber maximal zehn.
- ... mehr als zehn.

12. Wie lange halten Sie Ihr Investment durchschnittlich? \*

- Bis zu einem Monat
- Mindestens einen Monat aber maximal ein Jahr
- Mindestens ein Jahr aber maximal fünf Jahre
- Länger als fünf Jahre

13. Wie hoch ist Ihre angestrebte Rendite? \*

- 2% - 5%
- 5% - 10%
- 10% - 20%
- 20% - 50%
- 50% - 100%
- Mehr als 100%

14. Wie hoch würden Sie Ihre Risikobereitschaft einstufen? \*

0	1	2	3	4	5	6	7	8	9	10
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sehr gering sehr hoch

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