



Examining the Reasoning Behind the Adaption of Neo Brokers in Germany

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Abstract

Traditional online brokerages have been dominating the industry since the 90s but came with high entry barriers in form of significant costs and were not accessible for the broad mass. Neo brokers offer low costs and are accessible from every digital device that offers access to the internet. They aim to make investing and trading more accessible.

This dissertation aims to assess the reasoning behind the adaption of neo brokers in Germany. Therefore, a literature review and exploratory interviews were conducted to get a general understanding of the current situation of the reasoning behind the adaption of neo brokers in Germany. In the second place, the previously identified reasons led to postulating the hypotheses and testing those with a quantitative approach.

Results indicate that neo brokers tend to be mainly adapted by males from Generation Y and Generation Z, who have a university degree and a monthly income between 1000€ and 2000€. Further, the fees, user experience, access to cryptocurrencies regulations, and data security represent the main drivers for the adaption of neo brokers. However, the fees solely do not have a direct impact on the adaption of neo brokers.

This dissertation provides a deeper understanding of the adaptors profile and the reasoning behind the adaption.

Keywords: Neo Broker; Online Broker; Germany; Investing; Generation Y; Generation Z; Fin Tech; Wealth Tech; Adaption Reasoning

Título: Estudo do raciocínio por detrás da adaptação dos Neo Brokers na Alemanha

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Sumário

As corretoras tradicionais on-line têm dominado o setor desde os anos 90, mas vieram com altas barreiras de entrada, na forma de custos consideráveis, e não eram acessíveis para a grande massa. As corretoras Neo oferecem baixos custos e são acessíveis em todos os dispositivos digitais com acesso à Internet. O seu objetivo é tornar o investimento e o comércio mais acessíveis.

Esta dissertação tem o objetivo de avaliar os motivos por detrás da adaptação das corretoras Neo na Alemanha. Neste seguimento, uma retrospectiva da literatura e entrevistas foram conduzidas para obter um entendimento geral da situação atual dos motivos por detrás da adaptação das corretoras Neo na Alemanha. Em segundo lugar, as razões previamente identificadas levaram a sugerir e a testar as hipóteses com uma abordagem quantitativa.

Os resultados indicam que as corretoras Neo tendem a ser geralmente utilizadas por homens da Geração Y e Geração Z, os que têm um diploma universitário e um rendimento mensal entre 1000 e 2000 euros. Além disso, as taxas, a experiência do usuário, o acesso aos regulamentos de criptomoedas e a segurança dos dados representam os motivos principais para a adaptação dos corretores Neo. No entanto, as taxas não têm impacto direto na adaptação dos corretores Neo.

Esta dissertação faculta uma compreensão mais profunda do perfil dos adaptadores e dos motivos por detrás da adaptação.

Palavras-chave: Neo broker; Online Broker; Alemanha; Investimento; Geração Y; Geração Z; Fin Tech; Wealth Tech; Motivos de Adaptação

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List of Abbreviations

A.I.:	Artificial Intelligence
B.C.:	Before Christus
FinTech:	Financial Technology
PDF:	Portable Document Format
R.Q. 1.:	Research Question 1.
R.Q. 2.:	Research Question 2.
R.Q. 3.:	Research Question 3.

Chapter 1. Introduction

1.1. Background Information

1.1.1. From the Amsterdam Stock Exchange to the Neo Broker

The human's interest in investments can be traced back to 1700 B.C., when the Code of Hammurabi provided the first legal framework for investments, which codified the rights of debtor and creditor as collateral for both parties (Mohan & Ramji, 2013). Ever since then, trading goods and investing has been part of the society. Every day, investors buy and sell stocks worth billions of Dollars globally. They actively help companies raising capital through issuing shares, allows companies to gain fresh resources to conduct activities such as creating new business operations. The stock market made investors rich, and some went bankrupt, as there are a lot of hidden risks, especially for inexperienced investors. An exchange should not be seen as financial playground, it should rather be seen as a tool to help companies reach their goals and consequently help to grow the economy as well (Conway, 2012). When the first modern stock exchange in Amsterdam, the Netherlands, opened, it marked one of the first significant milestones of the financial industry and shaped the future. The stock exchange was required by law to have limited opening hours, which only set out on Sunday from 11 a.m. to noon. This led to a regulated exchange on the market (Petram, 2011).

Throughout history, exchanges were opened around the world. These traditional stock exchanges were centralized until the internet was introduced, with the introduction of the internet a new era for the stock market has begun (Maxemchuk & Shur, 2000). Investors were able to buy stocks from foreign exchanges. Due to the existence of exchanges, located in different time zones, investors were theoretically able to buy and sell 24 hours a day. The technology has developed in the past two decades and stock trading and investment applications have been released for the public. In the early phase, there have been fees for the order of stocks and calls, which meant to make a guaranteed loss due to the high fees in the beginning (Conway, 2012).

When Robin Hood was founded in 2013, the became more accessible for retail investors. They made it to their mission “to provide everyone with access to the financial market, not just the wealthy”. They stated that executing a trade does not cost more than “fractions of a penny” and other brokerages still charge its customers fees up to ten dollars and require them to have account minimums of hundreds of dollars (Our Story, 2021).

Neo brokers have several elements in common, which are among other things a platform that has recently been created or was designed as supplementary service of an already established undertaking. They offer as well as mainly advertise with their non-existent to low fees and offer comparably less functions and trading venues when comparing to established online brokers. Neo broker mainly focus on trading and investing via web-based trading applications and smartphone trading applications (Frölich & Lembach, 2021).

1.1.2. Problem Statement and Research Questions

This thesis investigates the reasoning for the adaption of neo brokers in Germany through their innovative investment and trading platforms. The innovative concepts of the neo brokers have the potential, to make the financial markets more accessible, offers a faster sign-up procedure, lowering the transaction costs for the customers, extending the trading hours of the exchange venues and provide an overall simpler and better customer experience. It is hypothesized that the acceptance of the neo brokers in Germany is dependent on the adaption of their services, which is determined by the drivers people may face.

Therefore, this dissertation aims to assess *the reasoning behind the adaption of neo brokers in Germany*.

In order to attain this, the following three research questions were created which allow the assessment of the reasoning behind the adaption of neo brokers in Germany:

- **Research Question 1:** *How does the profile of a person adapting to a neo broker look like?*
- **Research Question 2:** *What are the main drivers that make people use a neo broker in Germany?*
- **Research Question 3:** *To what extent do fees influence the adaptation of neo brokers?*

Based on the literature review and considering the promises neo brokers do make in Germany, the following hypothesis are proposed in order to answer the three research questions and therefore, assess the reasoning behind the adaption of neo brokers in Germany.

- **Hypothesis 1:** *The fees are positively influencing the adaption of neo brokers in Germany.*

- **Hypothesis 2:** *The user experience is positively influencing the adaption of neo brokers in Germany.*
- **Hypothesis 3:** *Available exchange venues are positively influencing the adaption of neo brokers in Germany.*
- **Hypothesis 4:** *The access to cryptocurrencies is positively influencing the adaption of neo brokers in Germany.*

1.1.3. Academic and Managerial Relevance

Since the mid-1990's companies such as Charles Schwab, Vanguard, Fidelity and eTrade have dominated the online brokerage platforms due to their low commission costs and their accessibility. But more innovative companies are disrupting the industry by offering advantages compared to the traditional online brokerage. Neo Brokers are on the rise and are increasing their customer bases. They offer even lower commissions and no-fee stock trading while providing more functionality and interactivity with a community (Fink, 2021).

Amidst a potential economic crisis, market volatilities and a global pandemic, a significant number of investors has entered the market. Speaking for the U.S. market, 15 percent of all investors first started to invest in the 2020 and they are bullish on the financial future. Amongst several options did the majority state that their top reasons to invest are to increase their savings in case of emergency and provide additional income (Charles Schwab, 2020).

This dissertation aims to provide insights why people adapt to neo brokers to the academic community and knowledge by researching an area that has gained interest in the past years. The public interest in this area has increased, companies such as Robin Hood were able to gain more than six million new customers within six years (Fink, 2021). Moreover, have recent events, such as the short squeeze of the Game Stop stock shown, to what extend private investors can sabotage the short positions of large players of the Wall Street, and therefore influence the stock market (Chohan, 2021).

Managerial wise, this dissertation aims to provide relevant information out of an emerging industry that has a lot of potential to be innovated. The gamification of the applications, the fast and simple accessibility and the chance of a high returns make the Neo Broker tempting for

investors of all generations. It can be expected that neo brokers play a crucial role in the future of the financial industry as more investors will enter the stock market or want to invest in crypto currencies as they are on the rise and slowly adapted by the public.

This dissertation provides relevant information on the reasoning behind the adaption of neo brokers.

1.1.4. Dissertation Outline

The structure of this dissertations divided into eight chapters: chapter one of the dissertation provides background information of the researched area and gives insights into current events, previous research, the research aim, the problem statement, and the research questions, the academic and the managerial relevance and an overview of the dissertations outline.

Chapter two, the literature review provides background information about the FinTech industry, wealthtech, the concept of neo brokers, disruptive events, and an overview of the German market environment. Chapter three explains the methodology for the conducted semi-structured interviews with customers of neo broker and online brokerages and the online survey. In chapter four, the gathered data will be presented, analyzed, and statistically evaluated. This is followed by chapter five, the conclusions, which summarizes the main conclusions of the dissertation. Chapter six of this dissertation provides information on the limits and recommendations for future research in this topic area.

Chapter 2. Literature Review

2.1. FinTech

The term “FinTech” is the short form for the cross-disciplinary subject financial technology, which describes the consolidation of financial services with innovative technologies. In general, it can be said that a recent established company in the market offers a in form of an internet- and/or application-based solution that provides an innovative service that has the potential to replace an old service in a more transparent, efficient, user-friendly, and automated way at lower costs (The digital transformation of banks and the Digital Single Market, 2015) (Mackenzie, 2015). As there is a broad range of products and services that fintech’s offer within the financial industry, the term ”FinTech“ rather focusses on the technological innovation that is offered to the providers of financial services. Thus, fintech’s focus on different types of legal activities and differ due to their products and services as well as their business models. For this reason, there is no overarching definition that can be applied to all companies in the fintech industry. Most of them are in their start-up phase and seek or do have a large number of investors but these are no features which can be seen as base for a definition (Dorfleitner, Hornuf, Schmitt, & Weber, 2018).

2.1.1. FinTech’s in Germany

According to a study by Haddad and Hornhuf (2016) Germany represents the fifth largest fintech market globally. Within Europe, Germany represents the second largest market after the United Kingdom (Dorfleitner, Hornuf, Schmitt, & Weber, 2018). Ten percent of all new founded start-ups in Germany are operating in the fintech industry. When looking at all industries, fintech’s are the second strongest industry after the information technology sector (German FinTech Report 2021, 2021). Until early 2020, there were 694 registered fintech’s in Germany. Compared to 2015, there has been an increase of 60%. The cities Berlin, Munich, Frankfurt am Main, and Hamburg are the dominating cities in Germany (Dorfleitner, Hornuf, & Wannemacher, Der deutsche FinTech-Markt im Jahr 2020, 2020). When looking at the subsegment of investment and banking, in which the neo broker can be found, does Berlin dominate the location wise. Berlin is internationally known as start-up incubator. Six out of seven FinTech unicorns are founded in Berlin (German FinTech Report 2021, 2021).

Of the 694 FinTech’s, belong 36 to the subsegment investment and banking. The managed assets of fintech's in the subsegment investment and banking correspond to 35.4 billion Euro in 2019. This relates to a market share of 67.7% (Dorfleitner, Hornuf, & Wannemacher, Der

deutsche FinTech-Markt im Jahr 2020, 2020). The major providers in the subsegment investment and banking, of the neo brokers, are Trade Republic, Flatex, Scalable Capital justTrade and freebroker (Dr. Fischer, Huebner, & Bulis, 2020).

2.1.2. FinTech Segments

According to Hofleitner and Hornuf (2016) can the FinTech industry itself be divided into four major segments, which are the financing, asset management, payments, and other services. The asset-management, to which the neo broker belongs, is further divided into four subsegments, which are the social trading, robo-advice, personal financial management and the investment and banking (Dorfleitner, Hornuf, Schmitt, & Weber, 2018).

A big-four consultancy stated there are six overarching FinTech segments. These are the payments, insurtech, regtech, wealthtech, blockchain/cryptocurrency and cybersecurity (Pollari & Ruddenklau, 2021). According to these two segmentation approaches does the neo broker find his home in the investment and banking (Dorfleitner, Hornuf, Schmitt, & Weber, 2018) and in the wealthtech, as they offer a service to their customers, which aims to help them to invest in different areas and reaching their financial goals (van Papendrecht, 2018).

2.1.3. WealthTech

Wealthtech describes the rapprochement of wealth management and digitalization the financial industry. It can be defined as the technological approach which aims to help investors to make better investment decisions in the financial industry. The adaption of the technology can be advantageous for institutions on an in- and external level as it can improve the product innovation as well as the operational efficiency (Chishti & Puschmann, 2018) (Gupta & Tham, 2018). There are several major business models in the wealthtech industry. On a business-to-consumer model side, business models such as robo-advisory, crowd-funding, and alternative lending are common. On a business-to-business model side, business models such as artificial intelligence, blockchain and big data common. These models can help to lower the costs for the customers while achieving higher returns (Chishti & Puschmann, 2018).

The customer- and wealth manager profile is changing, as both are looking for more digitalized solutions instead of traditional face-to-face and contact center solutions (van Papendrecht, 2018). The traditional delivery of wealth management services includes eight main elements: acquisition, onboarding, profiling, client engagement, advice, management, reporting and other

services. Wealthtech aims to innovate and make them more efficient by using technology (Gupta & Tham, 2018).

When putting the traditional wealth management into relation to the technological improvements by the wealthtech, there are major changes in the industry.

While the traditional customer acquisition was rather offline, do technological solutions allow an online customer acquisition with help of social media tools and search engine platforms. The onboarding now is more accessible as it is possible to instantly open an account, sign with a digital signature and verify the identity with help of a video verification program. The customer profiling is more precise as blockchain technology, data of tracked users and psychometric risk profiling guarantee precise data. Personal meetings can be covered through digital content. The traditional advice of employees was done via emails, phone calls and research reports. Advice now can be given by chatbots and is based artificial intelligence analyses which are tailored for each portfolio. The management of portfolios was run by advisors and excel-based, and the reporting was done with help of web portals, paper, and pdf statements. This can be replaced by artificial intelligence based and automated portfolio management engines. Moreover, can reports be shown consolidated in the applications. Remaining are the personalized offers and customer entertainment. Here are various solutions. Common solutions are mobile payment platforms, electronic wallets, digital lifestyle partnerships, instant payment and credit approval and social media platform integration (Gupta & Tham, 2018).

2.2. The Neo Broker

The term broker defines the intermediary between two parties, which buy and sells on behalf of them. This intermediary can either be a person or a company. As the broker provides a service, does at least one party have to pay a commission as soon as a deal is done. Further responsibilities of a broker are mainly the consulting of customers, analyses of markets and of administrative nature (Heldt, 2018). Considering neo brokers are a new and emerging concept, there is no official as well as legal definition for the term “neo broker” in Germany (Drucksache 19/32243, 2021). According to Frölich and Lembach (2021) are neo broker trading applications or online platforms where customers can buy and sell securities. They have several characteristics in common which let them differ from traditional online brokerages. Main characteristics are that they are a platform that has recently been created or was designed as supplementary service of an already established undertaking. They offer as well as mainly

advertise with their non-existent to low fees, offer comparably less functions and trading venues when comparing to established online brokers. Neo broker mainly focus on trading and investing via web-based or/and smartphone trading applications with a simplified user interface (Frölich & Lembach, 2021).

Neo brokers provides its customers access to the stock market and crypto currencies. As it is possible to buy and sell securities, there is a variety of products. These products might be, depending on the neo broker, reduced, compared to an online broker. The access to crypto currencies offers a new dimension of possibilities such as instant payments and the possibility to store value digitally (Corbet, Lucey, Urquhart, & Yarovaya, 2018). As of 31st October 2021, there are 7380 cryptocurrencies listed on the leading platforms. This figure tends to increase daily (All Cryptocurrencies, 2021). It must be mentioned that not all crypto currencies are available on neo brokers and some only provide them as asset which means, there is no integrated crypto currency wallet within the neo broker app and therefore, no payment with these crypto currencies is possible (Chu, 2019). In addition is only the minority of the crypto currencies is used for payments. There have been recent events, which show the adaption of some cryptocurrencies, such as the introduction of Bitcoin as the official currency in El Salvador, but these are rather early adaptors (Gorjon, 2021). In terms of how neo brokers monetize their services and to what extend customers bear these costs, depends on the business model as some of them charge either a small fee, are free of charge or do have a subscription model. Common monetization approaches behind the advertised pricing are the payment for order flow, spread, portfolio commissions, cross-selling, and the exclusivity of trading/exchange venues (Schmidt-Ott, 2021).

2.2.1. Gamification of Neo Brokers

Neo brokers provide an application for their customers which is a simplified version of a full online brokerage as they focus on the most important aspects and reduce the user interface in its complexity (Frölich & Lembach, 2021). The term gamification defines the implementation of elements into a service that aims to increase the feeling of a gameful experience in a non-game context and has the target to support the users value creation. However, these elements can be from various kinds and are dependent on the purpose of the product or service (Huotari & Hamari, 2017). A successful gamification has the intention to establish emotional stickiness and lasts throughout the time in which businesses and market transforms, even though if people

change within their behavior. Thus, the product or service should offer an intrinsic motivator that keeps customers using it (Sironi, 2016)

The gamification of financial applications, such as neo brokers, comes with challenges. The accessibility in terms of the download, sign-up procedure, and the simple user interface of the applications make it easy to access the financial markets and execute order (ESMA Report on Trends, Risks and Vulnerabilities, 2021). Unexperienced users can lose their money fast as there is almost no protection or consultation when it comes to an investment decision. Moreover, can the interface create the impression of a video game like experiences (Bayuk & Altobello, 2019).

2.2.2 Adapting to FinTechs

The adaption of fintech's is depending on the attitudes and values of the generations. In terms of technology adaptation and financial independency do Generation Z and Generation Y / Millennials represent the majority of the most active population in the twenty-first century (Dospinescu, Dospinescu, & Anastasiei, 2019). People from the Generation Z were born between 1995 and 2010, while people from Generation Y / Millennials were born between 1980 and 1994 (Francis & Hoefel, 2018).

Generation Z can be described as sustainable-oriented, technology-dependent, flexible, and connected to companies, which connect with them and facilitate their experiences (Dabija, Bejan, & Puscas, 2020) (Fernández-Cruz & Fernández-Díaz, 2016). Generation Y / Millennials can be described as digital natives and does represent one of the largest generations (Dabija, Postelnicu, & Dinu, 2018). They consider using products of fintech's if they offer a stable performance and they do have trust in the traditional banking system (Abu Daqar, Arqawi, & Abu Karsh, 2020).

Generation Z as well as Generation Y / Millennials, do contemplate that bank are more expensive than fintech's (Abu Daqar, Arqawi, & Abu Karsh, 2020). Moreover, it is expected that younger generations will open their first account rather at a fintech application than with a traditional bank (Sangwan, Harshita, Prakash, & Singh, 2019). Another reason is the retirement age and the preventing of poverty, as both generations acknowledged a discrepancy between working and not-working generations in the future and therefore, there is a need to save and invest money to be financially independent (Yao & Cheng, 2017).

Low fees for a service as well as commissions are the major reasons for Generation Y / Millennials to adapt fintech's (Carlin, Olafsson, & Pagel, 2017). When looking at the pricing strategy of the major fin tech's, they do offer a competitive pricing model which points towards low or non-existing fees (Parlour, Rajan, & Zhu, 2019). These pricing models of in tech's do not always provide the highest degree of transparency (Frölich & Lembach, 2021). The customer's adaption depends on the perception of fees which is based on a comparison of different available services (Xu, Kim, & Gupta, 2012). According to Rangkuti (2002), do customer adapt to fees which they must spend in order receive a service. A competitive pricing in form of low fees can help to attract customers (Nakamura & Steinsson, 2011). To retain customer, a fair pricing as well a high degree of user experience must be guaranteed (Wieseke, Alavi, & Habel, 2014).

There are further factors which illustrate the drivers for adaption of fintech's. For already established financial institutions, there are two options, buying or founding a fintech. As buying a fintech is rather on the expensive side, there has been the trend in the industry to found institutionally owned fintech which makes them part of an already established institution and customers can access it easier. Every fourth institution founded an own fintech and every second institution disclosed to currently work on a fintech (Branchen Kompass, 2017).

Another driver to adapt a fintech is the reputation of an institution. According to a survey (Nemeh & Harris, 2019), by an internet security company from the United Kingdom, do consumers trust financial institutions but are concerned about the hidden costs of digital payments and the protection of their personal data. The last major event which affected the reputation of fintech's in Germany was the Wirecard scandal. After the German fintech startup Wirecard forged their balance sheet and one of the employees vanished with millions of euros, the reputation of the fintech industry faced setbacks (Franklin, 2020).

The customer experience in the fintech industry is technology driven as there is a shift towards the behavior of the customer. Customers tend to share and search information as well as buy and sell services and goods online. This technology takes a part in the life of the customers. Key components of the customer experience in fintech are the support of the customer, speed, data security and the perceived value and innovativeness of the company (Barbu, Florea, Dabija, & Barbu, 2021).

The execution processes of fintech applications are faster and aim to provide its customers a more efficient management of their daily finances (Varga, 2017).

Customers value reporting tools in fintech applications, which can be powered by robo-advisors. These robo-advisors aim to help the customers in terms of reporting, assessing, and investing in order to reach their financial goals. Robo-advisors are automated investment solutions that are based on a self-assessment and aim to guide customer through the investment process (Sironi, 2016).

According to literature Dorfleitner et al. (2018), do customers want to save time by using technological solutions. Fintech's take this into account and offer entirely digitalized solutions which also covers the sign-up procedure and the entire usage of the application. Moreover, they mostly forego on physical branches for customers (Dorfleitner, Hornuf, Schmitt, & Weber, 2018).

Considering the customers individual needs, there are various reasons why they want to make use of a fintech. Customers bear in mind that fintech's, especially neo brokers, can offer comparably less functions, products and exchange venues than offers from long established brokerages (Frölich & Lembach, 2021).

Quality and performance of an application are key factors which make an application a success. According to literature are customers more likely to stop using an application if it does not work properly (Inukollu, Keshamoni, Kang, & Inukollu, 2014).

A German major neo broker, Trade Republic, stopped the trading of Game Stop share as too many risks were related to the trading of this share. This stop was illegal and had legal consequences for the company as the prohibited its customers the unlimited access to the stock market and they missed on opportunities (Schier, 2021).

The customers in Germany are protected by the law and the FinTech Council of the German Federal Ministry of Finance (Two years on: the Fintech Council as a successful mediator between the political and the practical, 2019). As not all fintechs have their jurisdiction area in Germany, as they were founded abroad but still operate in Germany, different regulations can apply (Dorfleitner, Hornuf, Schmitt, & Weber, 2018).

There are various reasons why fintech company fails but when looking at the fintech history, the major reasons are underfunding, compliance and not taking advantage of an experienced venture capital partner (Shevlin, 2019).

The technological development in the past years was comparably fast paced and even for fast operating fintechs, does it take time to implement new technology in their business operations. The data security plays a role for the adaptors. As most of the digital platforms provide an intrinsic value to their customers, the customers are concerned about their assets as well as data (Dabija, Postelnicu, & Dinu, 2018).

The adaption of cryptocurrencies is two-fold, as it differs for companies and individuals. The minority of listed companies are offering cryptocurrencies as payment method but do see potential in the underlying blockchain technology (Andraschko & Britzelmaier, 2020). The majority of individuals that invested in cryptocurrencies is using the acquired tokens to store value in a digital form and seek a potential profit (Nica, Piotrowska, & Schenk-Hoppe, 2017).

2.2.3. Major Neo Brokers in Germany

When looking at the market share of neo brokers in Germany, there are five major providers which established themselves over the past years. These providers are as following:

- Trade Republic Bank GmbH;
- Scalable Capital Vermögensverwaltungs GmbH;
- wallstreet:online capital AG (Smartbroker);
- JT Technologies GmbH (justTRADE);
- finanzen.net zero GmbH (Drucksache 19/32243, 2021).

When looking at their customer base, it sticks out that Trade Republic and Scalable Capital do have the majority of the market share. It is estimated that Trade Republic has one million customers in April 2021 (Dohms, 2021). As Scalable Capital was recently founded in 2020, they do have less customer. It is estimated that their customer base amounts to 200.000 in October 2021 (Kahl, 2021). As they are still in their early phase, there is no specific strategic classification possible. It can be assumed that they aggressively aim to increase their market share by offering the most price friendly solution available (Dr. Fischer, Huebner, & Bulis, 2020).

2.4. The Online Brokerage Market in Germany

A brokerage, also known as securities, account can be defined as an account which holds financial assets of an investor with a broker, bank, or custodian. These accounts are typically with the bank or the broker with the purpose of buying and selling these (Cargan, 2016).

Compared internationally, the brokerage market in German is still in an early phase, as it is estimated that only 15 percent of the German population are holder of a brokerage accounts. Since the year 2010, there is an average decline in the number of accounts by 1.5 percent each year. When looking at the security owner type according to their activity, it can be said that 76 percent of them represent the traditional buy and hold style, which means they make up to ten transactions per year. Even though the lack of digitalization in Germany, there is a shift in the

market. It is forecasted that the online trades increase by five to seven percent until 2024 which is caused by the introduction of new digital solutions, lower barriers to enter the market as an investor and the increased price transparency (Dr. Fischer, Huebner, & Bulis, 2020).

2.4.1. The German Execution Only Market

This part analyzes the four major providers in Germany and their strategic classification within the execution only market. The execution only market can be defined as it indicates. A customer makes a financial decision, and the provider only carries out this decision (Jutzi & Wess, 2019).

2.4.2. Major Online Broker in the German Execution Only Market

When looking at the market share in the execution only market in Germany, there are four major providers. They were able to establish themselves on the past 20 years and based on their figures, they are responsible for three quarters of all execution only trades in Germany. The four major providers are as following:

- Consorbank;
- Comdirect;
- ING DiBa;
- flatex

Their offered solutions might be similar, but their strategic classification differs as the customers of Consorbank, Comdirect and ING DiBa tend to focus on the buy and hold strategy, while the customers of flatex tend use their brokerage account for active trading purposes (Dr. Fischer, Huebner, & Bulis, 2020).

2.5. Disruptive Events in the Industry

Considering the German online brokerage market is still in its early steps as it was established around thirty years ago, there have been several disruptive events in the industry since the year 2019.

In October 2019 did one of the leading brokerages in the United States of America, Charles Schwab, made an impactful business decision. They lowered their commission fees for securities orders to zero. Caused by this decision, other leading securities brokers followed them and ended an ongoing price war in the brokerage market. The lowering of the commission fees forced neo- and online brokerages to rethink their monetarization approaches (Dr. Fischer, Huebner, & Bulis, 2020). Alongside the announcement of commission fees that amount to zero, neo brokers such as Trade Republic and justTRADE were launched in Germany and marked a milestone, as they were the first low cost/zero-fee broker in the country. They make use of

different monetarization approaches as Trade Republic does charge one Euro per executed order. Just TRADE on the contrary does not charge per executed transaction, they do offer their customers free trading. As mentioned in the section “The Neo Broker”, are neo brokers not free of charge and do have various monetarization approaches (Schmidt-Ott, 2021).

During the Covid-19 crisis, the life has shifted online and a dependency on a stable information technology has been mandatory for neo- and online brokers. Some well-known online brokerages in Germany had disruptions which led to a several days lasting malfunction. This malfunction meant for customers that there was no trading activity possible. While brokers miss out on transaction and could face compensation claims, do customers miss out on opportunities on the market (Dr. Fischer, Huebner, & Bulis, 2020).

Since the beginning of the pandemic, many new investors entered the financial markets. Especially the number of young people set a record high. Due to a group on the social media platform reddit, a significant number of people started to buy the share of the company Game Stop, as a hedge fund manager initially started to short selling shares of this company. Their target was to proof the strength of the individual investors. The global media attention led to participate a tremendous number of people and they were able to drive up the price to an all-time high of 347 dollars on the 27th of January 2021 (Tinn, 2021). At the same time in Germany, did one of the major neo brokers, Trade Republic, stop the trading of this share. According to them did the trading tends to bring too many risks with it. In the meantime, it was still possible to trade this share at other German exchanges. Thus, a neo broker stopped to provide the advertised free access to the stock market. This action also had legal consequences (Schier, 2021).

2.6. Regulations in Germany

In the past years, policies and regulations in the financial market have been established as the digitalization impacts and changes the financial industry fundamentally (Dorfleitner, Hornuf, Schmitt, & Weber, 2018). The German Federal Ministry of Finance decided to institute the FinTech Council as a mediator with the aim to improve the communication between politics, companies, and academia (Two years on: the Fintech Council as a successful mediator between the political and the practical, 2019).

The FinTech Council, the consumer protection, German Federal Ministry of Justice and German Federal Ministry of Finance are concerned about the regulations for digital- and crypto currencies and other securities based on the blockchain (Eckpunkte für die regulatorische Behandlung von elektronischen Wertpapieren und Krypto-Token - Digitale Innovationen ermöglichen - Anlegerschutz gewährleisten, 2019). Therefore, a legislation was proposed that aims to simplify and regulate the usage of crypto currencies and securities based on the blockchain (Company start-ups and fintech companies, n.d.). The BaFin, the federal financial supervisory authority, and the legislator decided to make use of the technology-neutral principal (BaFin's Digitalisation Strategy, 2018). This means that the same legislation applies for companies in a specific industry, no matter to what extent they make use of technologies (Maxwell, Lovells, & Bourrear, 2014).

When looking at the customer protection in Germany, there are two major legislations which were introduced by the European Commission. The deposit guarantee scheme which is part of the European legislation aims to protect bank deposits. It was introduced in 1994 and updated in 2010. The legislations protect savings of depositors up to 100.000€ and does prevent mass withdrawals in case a financial institution fails their business operations (Deposit guarantee schemes, n.d.). This means, if a neo broker does have a banking license, the deposits are protected up to 100.000€. When having a look at the major neo brokers in Germany, only Trade Republic does have a banking license (Trade Republic Pressemappe, 2021).

Chapter 3. Methodology and Data Collection

The objective of this dissertation is to assess *the reasoning behind the adaption of neo brokers in German*. In order to attain this, three research questions were created which allow the evaluation of the reasoning behind the adaption of the neo brokers in Germany.

The following methodology elaborates how the required data this dissertation is gathered to provide answers for the problem statement as well as the research questions.

3.1. Secondary Data Collection

The secondary data was gathered through the literature review and aims to provide the current state of research in terms of general information, data, and critical insights. The sources of the literature are academic papers, research journals, official organization websites and consultancy analyses. The collected data builds the foundation for the semi-structured interviews and the online distributed survey.

3.2. Primary Data Collection

In order to align the primary data with the research questions, semi-structured interviews and an online distributed survey were conducted. As the interviews aim to gather users' perspectives on the services of the neo brokers, the interview partners are customers of them or an online brokerage. The interview questions are based on the gathered data from literature as well as the promises neo brokers do make. Semi-structured interviews were chosen as this method allows to gain deeper knowledge about why people behave in a certain way, gain insights into their perceptions, attitudes and experiences related to the provided questions (Long & Harvey-Jordan, 2001).

A total of ten potential interviewees were contacted of which five agreed on having an interview. The five interviewees are customers at Trade Republic, a German major neo broker, and the ING-Diba, a German major online brokerage. The language of the interview was German, as most of the customers on the German market are originally from Germany. The interviews were translated into English and the transcripts can be found in the appendix.

The online distributed survey aims to gather data, which is connected to the customer profile and assesses the drivers that could make people adapt to a neo broker. The survey was created based on the literature review. The analyzed data of this survey was composed of 302 participants of which 23 responds were not valid, as the participants stated they are not from

Germany and therefore, they are not representative for this study. Thus, this study is composed of 279 valid responses.

Chapter 4. Results and Analysis

4.1. Qualitative Data

4.1.1. The Competitive Environment

When the interviewees were asked what they motivated to look for a solution such as a neo broker or online brokerage, the users for neo broker, did state they signed up because of the easy accessibility of the platform in terms of download and sign-up procedure, the low fees, and the reputation of the company. The users of online brokerages both stated they signed up because the broker is already part of their house bank. All interviewees agreed that an online solution was a key criterion.

Considering the users of the neo broker and how they found this solution, two interviewees stated they were first customer at the ING-Diba and were not satisfied with the provided online brokerage and were looking for alternatives. Another interviewee stated that he was analyzing multiple German brokers and chose the neo broker Trade Republic for digitalization and simplicity reasons.

When it comes to the reasons why the users of an online brokerage did not choose a neo broker, two interviewees stated, they do not have enough trust in neo brokers. Other obstacles are questionable products as factual shares and untransparent monetarization approaches due to high spread costs. One of the interviewees added that a German neo broker could not execute all orders for the Wirecard share due to a too high demand and therefore, losses for customers occurred. When it comes to the reasons, why the users of a neo broker did not choose an online brokerage, they all agreed on the low fees. Two added, the offered products do meet the demand of the basic private investor while one added that the design and technology of the application specifically meet the needs of Generation Y and Generation Z.

One user of a neo broker and two user of an online brokerage mentioned situations, in which the brokers did not meet their expectations. For the users of the online brokerage, these were the non-availability of cryptocurrencies, the time-consuming password reset, which is still done via post, and the at no time available customer support hotline. One user of a neo broker mentioned the broker did stop the trading of the Game Stop share during the official trading hours which led to a decreased trust, while two neo broker users stated they have never experienced any issues and their expectations were met. One interviewee, which is customer at a neo broker raised a comment to the competitive environment between neo broker and online

brokerages in Germany: “Considering the traditional bank as benchmark in Germany, you don't have too high expectations. I would rather consider Trade Republic as a benchmark for them”. When the interviewees were asked what they value about the innovativeness of a brokers, the users of a neo broker value the all-round solution for shares and cryptocurrencies, the simple user interface, and the fast sign-up procedure.

4.1.2. The Technological Demands

All interviewees agreed on having access to their broker via an iOS and Android smartphone application as well as a web-based or desktop version. One interviewee, which is customer at a traditional online brokerage, added he could execute orders via a phone call, in which he has to enter the share number and the demanded number of shares on the dial pad.

Function wise, the users of the traditional online brokerage use their application solely for execution purposes and have access to standard information such as the price, price-earning-ratio, and price chart, while neo broker users have access to watchlists, adjustable price chart position, metrics as the day range, 52-week range, bid, ask, market cap, an analyst view, upcoming company events, similar stocks, derivatives and fundamental company data. One interviewee, a user of a neo broker, added that the offered functions are an advantage in comparison to other brokers, but do not replace a technical analysis and are rather indicators for investments decisions.

All interviewees stated that security measure such as a two-factor authentication are provided by the neo broker as well as online brokerage. One interviewee, which is customer at a traditional online broker raised a comment concerning the broker industry in Germany: They're under strict regulations of the government because they have an official banking license. Moreover, there's the banking secrecy and the German and European law which protect the customers and their data.

When asking the interviewees, how much time they spend in the broker application per day, the users of the neo broker stated, their use averaged between 30 and 60 minutes per day. The users of online brokerages averaged between two and 15 minutes. One of them mentioned the danger of spending too much time in the broker application, as bank account and broker account are combined in one application.

When it comes to technology saving aspects and the interviewees opinion towards this aspect, a user of an online broker stated that there is no need for additional time-saving features such as analyst recommendations as there are more professional analysis solutions of other providers

which solely focus on the analysis of stocks. Moreover, it was stated an advice of an unknown person is unreliable. The other user of the online broker expressed his opinion towards the automatic saving plan function. According to him does this function replace a monthly manual order which saves him time.

4.1.3. The Customer Profile

According to the interviewees, there are various factors which describe the average user of a neo broker. Four interviewees agreed on that the average user is a young professional between 25 and 30 years old. Further, three interviewees stated that the average user tends to have a short-term investment horizon, takes advantage of the low fees in terms of order fees and volume, and is not risk-averse. Two other interviewees stated that the average user of a neo broker seeks additional access to crypto currencies. Moreover, three interviewees stated the average user has an increased affinity towards technology due to the entirely digital solution. One other interview stated that this technological aspect could be a reason for older generations to dissociate themselves from neo brokers. Another agreed and added that the older generation prefers the traditional banks and their brokerage solutions.

At one point, the interviewees were asked to describe their investment strategy. Three interviewees comply with the traditional buy and hold strategy and describe their investment strategy as passive due to a long-term horizon and their investments in ETFs and shares. Two other interviewees stated, they are not likely to be risk-averse and invest in cryptocurrencies as well as penny stocks and participated in known short-squeezes. Considering their broker allocation, users of neo brokers and online brokerages, tend to obtain different investments strategies.

All interviewees agreed on not having any aspect of a social interaction with other users within their broker application. One interviewee added he would like to see a social media function in which he could see the investments of other users, as his knowledge is limited due to his experience under two years. Another interview stated that such a function would come with risks for other users, as they would blindly follow investment decision and do not conduct their own research.

When the interviewees were asked towards their knowledge about the regulations of neo brokers and online brokerages, four of them were aware of the European deposit guarantee of 100.000 Euro. Two of them added, neo brokers need either an own banking license or a traditional bank in the background to provide their services in Germany. One interviewee

further elaborated and added that some brokers operate from abroad, e.g., Malta, to use loopholes and observe less regulations. One interviewee added his concerns towards the European deposit guarantee as he doubts that the deposits are easily accessible in case of a crash and rather assesses the deposit guarantee as an incentive for people to deposit their monetary assets to neo and online brokers and. Another interviewee added, there are strict European as well as German laws which neo brokers and online brokerages must observe. In combination with the BaFin, customers should be well protected.

4.1.4. The User Experience

When the interviewees were asked to run the interviewer through a basic execution process, they differ in specific areas. As the online brokerage, this case the ING-Diba, is connected to the bank account of the users, there is no need to charge the brokerage account, while the users of neo brokers do have to charge their account to be eligible for the execution of orders. The users of neo brokers stated, there are the traditional bank transfer, credit card, PayPal, Apple Pay, Google Pay as payment methods. Only the bank transfer can take up to two days until the funds have arrived, all other methods are instantly available. The search function differs, as users of an online brokerage must look up the share code in a separate application, while users of a neo broker can search for the listed company's name. When comparing the steps, it took them from opening the application to finalizing an order, the online brokerage users averaged eleven clicks while the neo broker users averaged seven to eight clicks.

The interviewees opinion towards the execution process differs between the users of neo brokers and online brokerages. Whilst the former to be considered as satisfied towards the execution speed, interface, and price, the second stated the execution itself takes too long. It can take between three and five hours until the order shows up in their portfolio.

According to the interviewees does the online brokerage does not give any buying recommendations while the neo broker applications do provide analyst recommendations. One interviewee added this would also been interesting for online brokerages, but he had concerns about the fundamentals the advice was built on.

Considering the question if there were any technical issues or the stop of the trading of specific shares, four interviewees stated, there never occurred such a situation. One interviewee, customer of a neo broker, mentioned the Game Stop short squeeze. During this event, the provider Trade Republic started a trading ban of this share. He added, he comprehends that a

lot of customers left the broker after this event as it is objectionable to not providing free access to the stock market.

4.1.5. The Costing Breakdown

When the interviewees were asked about the fees that arise when executing an order and their opinion towards these fees, the users of online brokerages and neo brokers can either choose an exchange venue or a direct order. Executing via an exchange venue comes with costs for both users. The costs are depending on the exchange venue partner. Considering a direct order, the users of an ING-Diba, mentioned a fixed order cost of 4.90€ and a variable commission of 0.25% the price of the share up to a maximum amount of 69.90€, while the users of the neo broker stated they solely pay one euro per order. Both users added that the saving plan function is free of charge and not connected to the normal order costs. The users of an online brokers are aware of the comparably higher execution fees. One of them added he is knowingly paying more as the transactions are safer with a traditional bank. Another two interviewees stated, the high execution fees make it difficult to invest for retail investors. Depending on the order value, the shares must increase significantly before they can compensate the execution fees. All users of neo brokers stated they are satisfied with the pricing model of their broker. One of them added, if a person wants to actively trade shares, there are other solutions with offer a trading flat rate for a fixed fee. Neither user of online brokerage nor neo broker, experienced unexpected fees when executing an order. One interviewee, a user of a neo broker added, the fees are transparent for the customers but in some cases, there was a spread which means, the customer does not get the best price available.

All interviewees stated they consider their deposits at their broker as save. Four interviewees addressed the deposit protection of the European and German law. Two interviewees, users of an online brokerage and neo broker, stated that they are customers at company which has a highly regarded reputation in the banking and fintech industry.

As the interviewees stated earlier, there are various payment methods for users of neo brokers and the payment methods for users of an online brokerage are limited. As the bank account of the interviewees of the online brokerage is connected to their brokerage account, payments are instantly. Payouts can take up to two days according to them. The users of the neo brokers stated it can take up to two days to deposit and payout funds when using the bank transfer. Other payment methods allow an instant deposit but are connected to commissions. Interviewees out of both user groups stated, they would like to see faster deposits and payouts.

4.1.6. The Exchange Venues and Products

When the interviewees were asked about the available exchange venues, the users of online brokerage stated that they have access to several exchange venues and direct orders, while the users of neo brokers stated that they cannot place direct orders and must use exchange venues such as the one of Lang & Schwarz in Germany. Two users of a neo broker stated that it would be more convenient to have more than one exchange venue, as the selection of shares can be limited. One specified this and mentioned the unavailability of fintech company Robin Hood from the United States. A user of an online brokerage added that he faced a situation in which he wanted to invest in the electric vehicle company Rivian on the day of the initial public offering, but he could not as the share was not listed at this point.

Another user of a neo broker stated that due to his neo brokers cooperation with the institutional digital asset platform Bitgo, the availability of crypto tokens is limited compared to other providers. He added that a cooperation with a larger industry leader such as Coinbase would grant access to more diverse crypto tokens.

When asking the interviewees if there were any products missing at their broker, both user groups stated that they were satisfied with the offered products overall. Two users of both user groups criticized the range of ETFs. One specified that mainly iShares ETFs of the American multinational investment management corporation BlackRock are available. One user of an online brokerage stated that it would be good to have the opportunity to invest in crypto currencies, but it is not a requirement as his focus lies on shares and ETFs.

4.1.7. Access to Cryptocurrencies

All interviewees recognize potential in cryptocurrencies and blockchain-based technology. One of the interviewees stated that Bitcoin could be seen as sort of digital gold to store value. Furthermore, it can be a tool to bypass inflation due to the fixed number of created tokens. Another interviewee added that there is no real-world usage so far. The tokens can store value and be used on innovative online platforms, but retail investors / users can hardly benefit from it. All interviewees agreed that the investment in cryptocurrencies as of 2021 is pure speculation which comes with a high level of volatility. Two users added that they felt confident about the future of cryptocurrencies. One specified that various other products and services have been digitalized thus, money can be digitalized too. Two other interviewees were concerned about the data security as events in the past have shown how easily creators of a cryptocurrency can vanish with the money of their investors. Moreover, they stated that if someone gets access to

the keys of a platform or individual investor, they could theoretically steal from their desk as everything is digital.

When the interviewees were asked if online brokerages and neo brokers should provide their customers access to cryptocurrencies, they stated that they believe traditional online brokerages should not offer cryptocurrencies as they are too risky, volatile, and work against them, as a lot of them aim to decentralize the financial markets. Moreover, they stated that neo brokers should provide access to the major cryptocurrencies. Two interviewees specified that a neo broker should aim to cover the access to the stock market as well as to cryptocurrencies to provide an all-in-one solution for its customers. Another one added, if someone really wants to take advantage of crypto payment options and gain access to all cryptocurrencies, they should consider using a product which solely focuses on cryptocurrencies. Further, the users of the neo broker stated that they only have access to seven different cryptocurrencies and can use it only as investment. There is no other function possible. These seven cryptocurrencies are Bitcoin, Ethereum, Litecoin, XRP, Stella, Bitcoin Cash and EOS. Moreover, they mentioned that the cryptocurrencies are an amazing feature but are not the reason why they decided to use a neo broker.

4.2. Quantitative Data

4.2.1. Data Gathering Method

The questionnaire aims to gather data which supports answering the research questions and testing the hypotheses. The questionnaire consists of two parts which explore the demographics, and the driver for the adaption or neo brokers. The first question aims to filter the responses and check if the participant is from Germany. If the participant is not from Germany, the survey ends. Moreover, the participants are asked to which age group they belong and which generation they are part of. If these two answers are not coherent, the response is not valid. This two-mechanism led to 23 non-valid and 279 valid responses. The non-valid responses were not used for the further research. The researcher developed scale that that aim to gather insights on the drivers which make people adapt neo brokers.

4.2.2. Sample Characterization

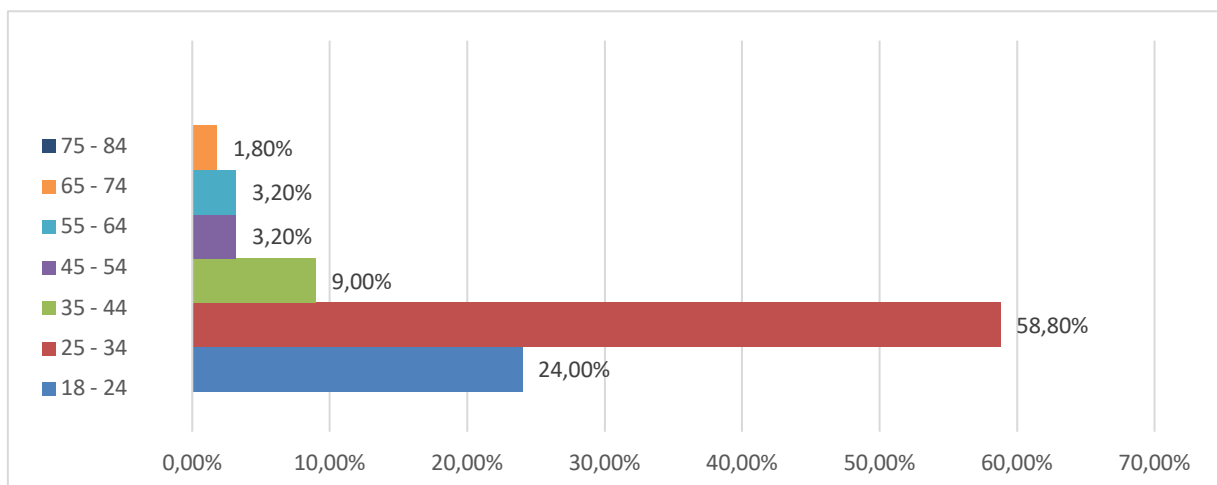
It is estimated that fifteen percent of the German population are holders of a brokerage account in the year 2020 (Dr. Fischer, Huebner, & Bulis, 2020). According to Destatis, the federal

statistical office of Germany, the number of inhabitants amounts to 83.155.031 million, of which 69.411.087 have a legal age (Current population of Germany, 2021). As fifteen percent of the inhabitants who reached a legal age do own a brokerage account, 85 percent do not own a brokerage account.

4.2.3. The Customer Profile

When analyzing the data of the 279 valid responses of the online survey, there is a specific customer profile. The following figures describe the demographic characteristics of the participants, which all come from Germany as this dissertation aims to assess the impact of the neo broker in Germany. The percentages are displayed with two decimal figures in the analysis. The analysis has shown that the majority of the participants are male, as 224 participants stated that they were male, while the remaining 55 participants stated that they were female. These figures correspond to 80.3% and 19.7% of all participants, respectively. When asking the participants which age group they belong to, they had six different options, which can be seen in the legend of figure 2. The following figure displays the distribution of the participants' answers.

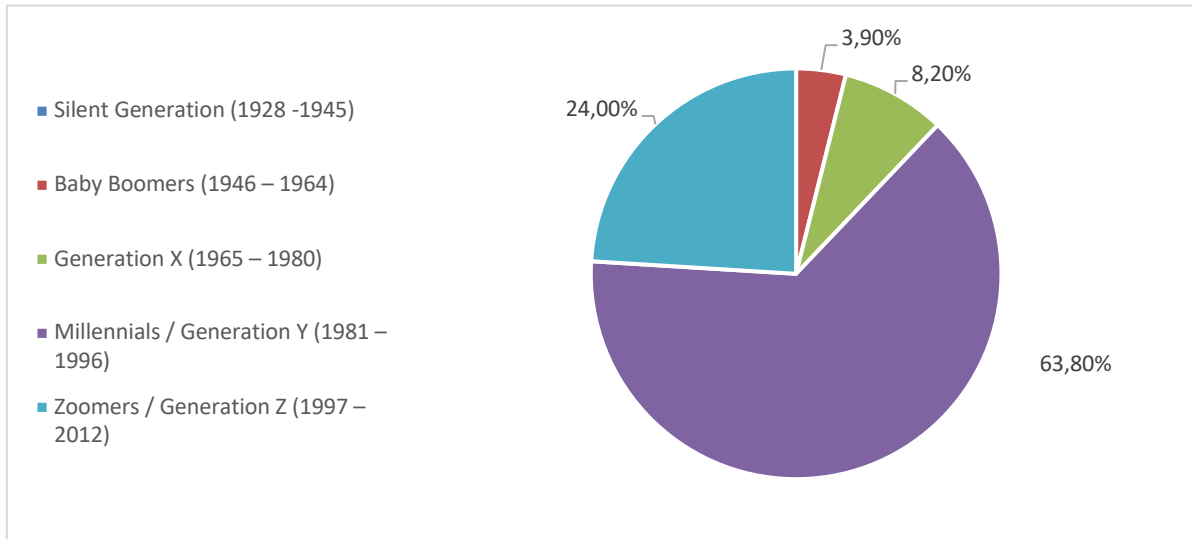
Figure 1: Overview Age Groups



Source: Own analysis

The two largest groups are 18 to 24 with 24% of all participant replies and 24 to 34 with 58.8% of all participant replies. As the mentioned age groups do not represent the generations, the participants were asked to answer to which generation they belong. The possible answers were Silent Generation (1928 -1945), Baby Boomers (1946 – 1964), Generation X (1965 – 1980), Millennials / Generation Y (1981 – 1996), and Zoomers / Generation Z (1997 – 2012).

Figure 2: Overview Generations

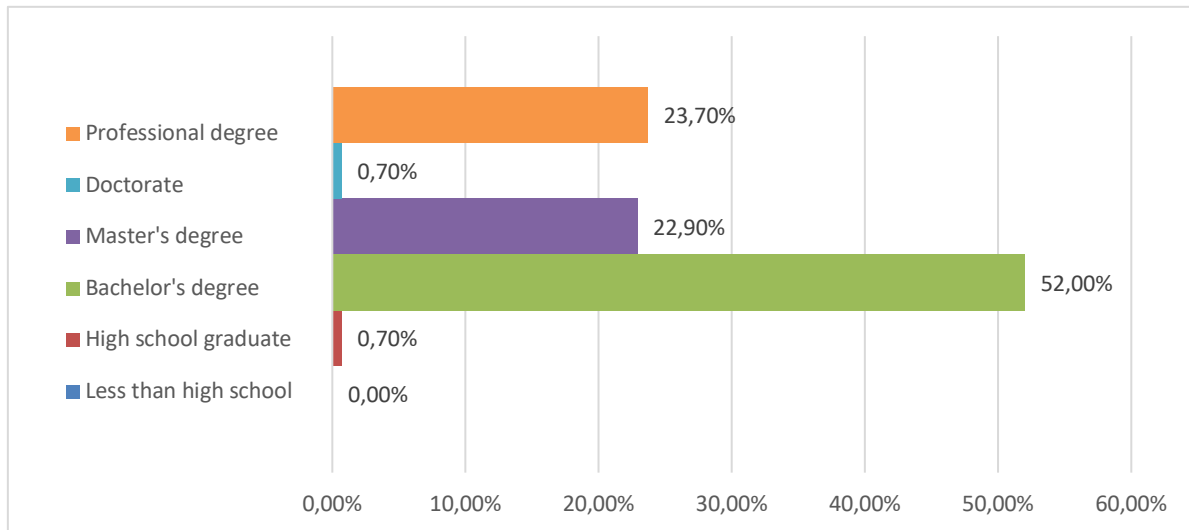


Source: Own analysis

As the two largest age groups were already known from the previous figure, there are only two possible outcomes being the Millennials / Generation Y and the Zoomers / Generation Z. The majority of the participants belonged to the Millennials / Generation Y which were born between 1981 and 1996. 178 of the participants consider themselves as part of the Millennials / Generation Y, which corresponds to 63.80% of all participants.

When the participants were asked what describes their highest level of education, there were six options for them which are the professional degree, doctorate, master's degree, bachelor's degree, high school graduate and less than high school. The following figure shows the results of the survey.

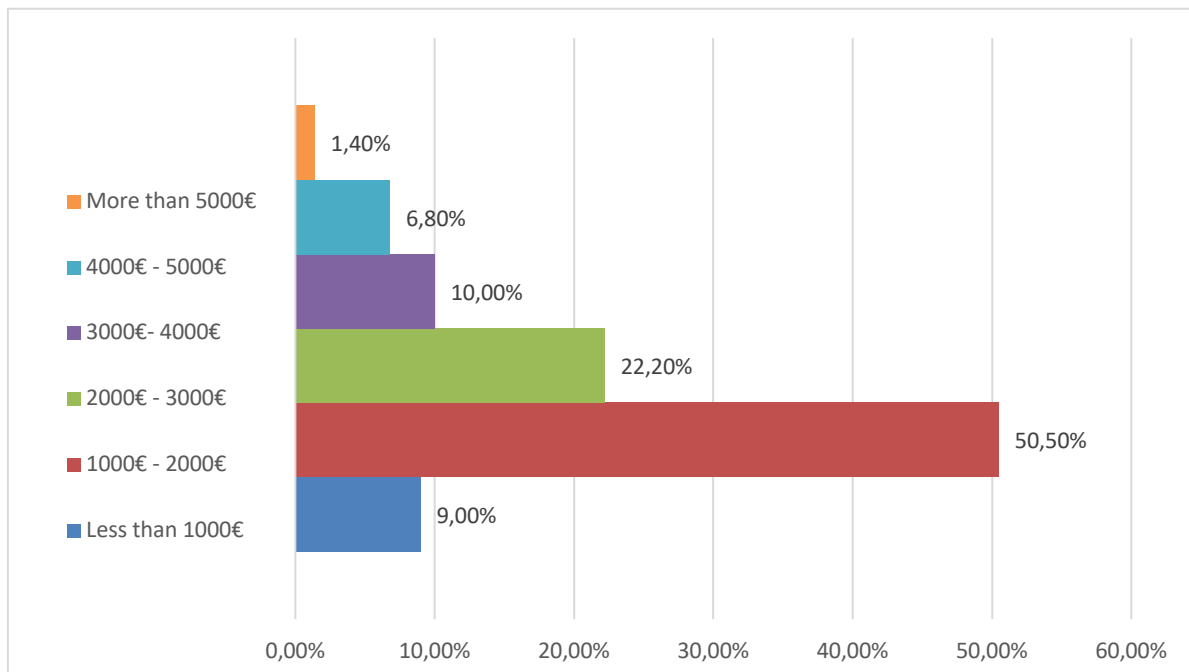
Figure 3: Overview Level Education



Source: Own analysis

The three major education levels are the professional, bachelor's and master's degree. The bachelor's degree represents the largest group with 52% of the responses of all participants. In question six of the survey, the participants were asked what their monthly income after tax is. The following figure shows the distribution of the given answers by the participants. The answer options can be seen in the legend of figure 4.

Figure 4: Overview Monthly Income After Tax

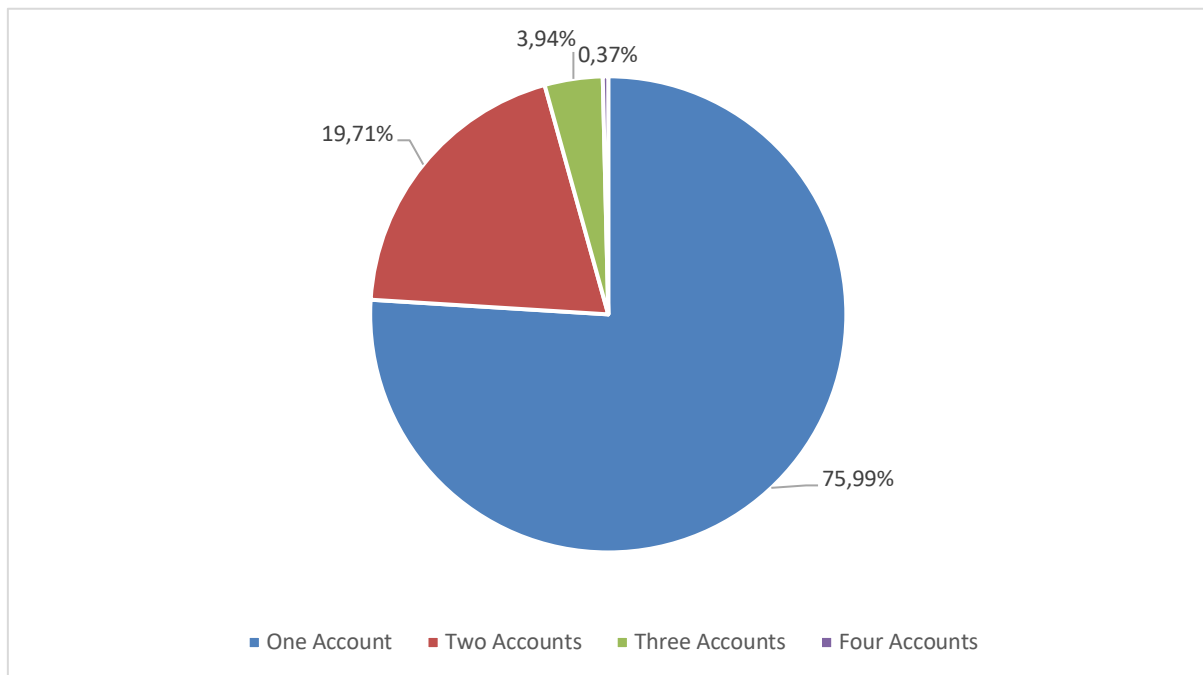


Source: Own analysis

The three major monthly income after tax groups are 1000€ - 2000€, 2000€ - 3000€ and 3000€ - 4000€. Out of all participants, 50.50% stated that they earn between 1000€ and 2000€. This corresponds to 141 out of 279 participants.

In the following figure, the participants were asked how many broker accounts they have in total. The participants were able to choose a number between one and four. 212 participants stated they have one account, which corresponds to 75.99% of all responses to this question. 55 participants stated that they have two accounts, which corresponds to 19.71% of all responses to this question. The answer for three and four accounts were the least chosen answers as eleven participants stated to have three accounts and one participant stated to have four accounts. These frequencies correspond to 3.94% and 0.37% of all responses to this question.

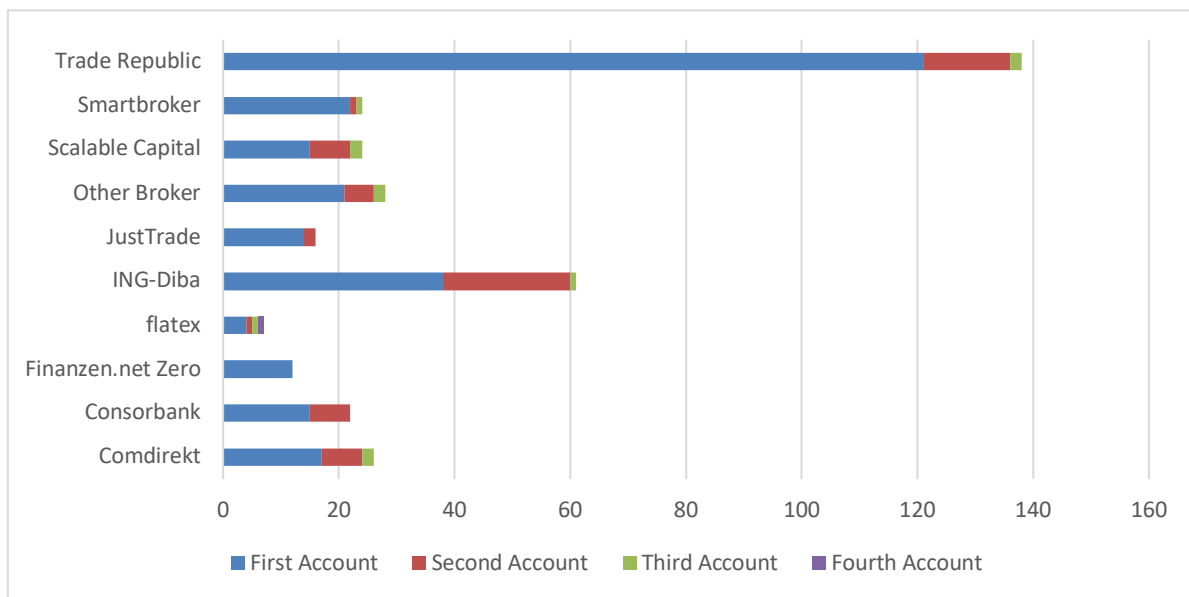
Figure 5: Overview Number Broker Accounts



Source: Own analysis

In the following question, the participants were asked on which platform they opened their first, second, third and fourth account. The following figures display the broker platform distribution of the participants. The figure provides insights on where the first, second, third and fourth account was opened. In total, the 279 survey participants opened 358 accounts distributed on several platforms.

Figure 6: Broker Distribution



Source: Own analysis

Figure 6 shows that the majority of customers have their first account with the German neo broker Trade Republic. Furthermore, the majority of the users have their second account with the ING-Diba. Trade Republic displays 138 out of 358 accounts which corresponds to 38.55%. The ING-Diba displays 61 out of 358 accounts which corresponds 17.04%. Barely any participants of the survey stated that they own three or more broker accounts. When further analyzing the distribution of the first account, it can be seen that 184 customers opened their first account with one of the above stated neo brokers, while 95 customers opened their account with one of the above stated online brokers.

When it comes to the frequency of the participants' investments, there are two major groups which are "Less than once a month" and "Once a month". 62 participants do invest less than once a month which corresponds to 22.2% of all participants. 172 participants do invest once a month which corresponds to 61.6% of all participants. Moreover, 31 participants stated that they invest twice a month, eight participants three times a month and six participants more than four times. These frequencies correspond to 11.2%, 2.9% and 2.2% out of all participants.

When the participants were asked what percentage they invest on average per month, 87.5% stated they invest up to ten percent a month. 9.3% stated they invest between 10% and 20% and 3.2% stated they invest between 20% and 30%. No other responses occurred.

The main investment strategy of the participants can be described as buy and hold strategy, as 180 participants, equivalent to 64.5%, stated that they use it. The dividend and growth investing are used by 37 and 30 participants. These frequencies correspond to 13.5 and 10.8% of all participants.

When the participants were asked about the time they spend on average in their broker application, the majority of 235 participants stated to spend less than 30 minutes per day. This corresponds to 84.2% out of all participants. The minority of the responses is represented by 31 – 60, 61 – 90, 91 – 120, and 121 – 150 minutes a day. These responses correspond to 8.6%, 3.9%, 2.2% and 1.15 out of all participants.

In the following table, the main characteristics of a neo broker user are provided.

The average user of a neo broker in Germany can be described as a male between 25 and 34 years old and who belongs to the Millennials / Generation Y generation, who was born between 1981 and 1996. They do have a bachelor’s degree and earn between 1000€ and 2000€ per month. They have one broker account and are primarily a customer at Trade Republic. They tend to invest up to 10% of their monthly salary per month. Their investment strategy can be described as buy and hold and they do spend less than 30 minutes in their brokerage application per day.

4.3. Descriptive Statistics

Table 1 provides the means and standard deviations of the general reasoning for the adaption to neo brokers.

Table 1: Descriptive Statistics - Reasons to Adapt to Neo Brokers

	N	Mean	Std. Deviation
Fees	279	4.10	1.014
BPHB	279	3.55	1.324
User Experience	279	3.88	1.058
Reputation	279	3.66	1.233
Available Products	279	3.71	1.271
AEV	279	3.39	1.350
Reliability	279	3.71	1.027
AtC	279	3.84	1.1161

Functions	279	3.66	1.194
Regulations	279	3.83	1.141
Data Security	279	3.84	1.089

BHPC (Broker Part of House Bank, AEV (Available Exchange Venues) AtC (Access to Cryptocurrencies)

The five highest means are fees, user experience, access to cryptocurrencies, regulations, and functions. The previously reasons were predominantly mentioned during the literature review and exploratory interviews as decisive factors for the adaption to fintechs.

4.3.1. Correlation Analysis

A correlation analysis was conducted to determine the relationship between the selected variables to be investigated further in this dissertation's statistical analysis. Pearson's r formula was used to identify the bivariate correlations that help to identify the relationship between two variables. According to the literature review and the outcome of the interviews, only fees, user experience, available exchange venues and access to crypto currencies were included as explanatory variables.

Table 2: Descriptive Statistics - Correlation Analysis

Variables	Gender	Generation	NBA	Fees	UE	AEV	AtC	Acceptance
Gender	1	-.137*	-.068	.198**	-.030	-.025	-.132*	-.419**
Generation	-.137*	1	.160**	-.090	-.151*	-.135*	-.048	-.095
NBA	-.068	.160**	1	.081	.032	.005	.021	.057
Fees	.198**	-.090	.081	1	.112	.096	.048	-.008
UE	-.030	-.151*	.032	.112	1	.040	.019	.195**
AEV	-.025	-.135*	.005	.096	.040	1	-.020	.192**
AtC	-.132*	-.048	.021	.048	.019	-.020	1	.129*
Acceptance	-.419**	-.095	.057	-.008	.195**	.192**	.129*	1

Note: *p<.05; **p<.01, NBA (Number of Broker Accounts, UE (User Experience), AEV (Available Exchange Venues) AtC (Access to Cryptocurrencies)

Table 2 provides the bivariate correlations. Only the main findings are considered for this dissertation. When looking at the first row of the table, the participant's gender correlates with the generations, the fees, access to cryptocurrencies and the overall acceptance of neo brokers. A negative correlation ($r = -.137^*$, $p < .05$) was found between the participant's gender and their corresponding generation. A significant positive correlation was found between the gender

and the fees ($r = .198^{**}$, $p < .01$). This leads to the assumption that female participants tend to look more after the fees of neo brokers.

Further, there is a negative correlation between the gender and the access to cryptocurrencies ($r = -.132^*$, $p < .05$). This implies that male participants tend to favor the access to cryptocurrencies within a neo broker. Moreover, there is a significant correlation between the gender and the acceptance of neo brokers ($r = .419^{**}$, $p < .01$). This means that female participants rather accept neo brokers over other available brokers. Further, there are negative correlations between the generation and the user experience ($r = -.151^*$, $p < .05$) as well as the access to cryptocurrencies ($r = -.135^*$, $p < .05$). This implies that the younger generation favors a good user experience as well as the access to cryptocurrencies.

When further analyzing the table, there is a correlation between the generation and the number of broker accounts, the user experience, and the access to available exchange venues. There is a significant correlation between the generation and the number of broker accounts ($.160^{**}$, $p < .01$). This leads to the assumption that the older the participants is, the more accounts they will have. When looking at the user experience, it can be seen that it significantly correlates with the acceptance of neo brokers ($.195^{**}$, $p < .01$). This leads to the assumption that an increased user experience leads to a higher acceptance of neo brokers. Further, there is a significant correlation between the available exchange venues and the acceptance of neo brokers ($.192^{**}$, $p < .01$). Thus, it can be assumed that more available exchange venues lead to a higher acceptance rate of neo brokers. Moreover, there is a significant correlation between the access to cryptocurrencies and the acceptance of neo brokers ($-.129$, $p < .05$). Given this result, it can be assumed that the access to cryptocurrencies leads to a higher acceptance of neo brokers.

4.3.2 Regression Analysis

Model Summary

The model summary table provides insights into the relationship of the model and the dependent variable as well as the characteristics.

Table 3: Descriptive Statistics - Model Summary

	R	R Square	Adjusted R Square	Std. Error of Estimate
1	.507	.257	.238	1.128

Predictors: (Constant) Access to Cryptocurrencies, User Experience, Number of Broker Accounts, Available Exchange Venues, Gender, Fees, Generation

R gives insights into the dependence between the independent and dependent variables. A value higher than 0.4, in this case 0.507, can be taken for further analysis. R Square gives insights into the total variation in which the dependent variables are explained by the independent variables and then 25.7% of the variation of one of the given variables. According to Cohen (1992) an r-square of .26 or above and above values indicates high effect size. The adjusted R Square gives insight into the generalization of the available results. There is a need of having a difference in between the R-Square and Adjusted R-Square. This case is given, as the values differ.

To conclude, the summary of the model is adequate in order to proceed to the next step.

4.3.3 ANOVA

Table 4: Descriptive Statistics – Analysis of Variance

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	119.239	7	17.034	13.392	<.001
Residual	344.697	271	1.272		
Total	463.935	278			

a. Dependent Variable: Acceptance

b. Predictors: (Constant) Access to Cryptocurrencies, User Experience, Number of Broker Accounts, Available Exchange Venues, Gender, Fees, Generation

Considering the p-value, a 5% significance level / 95% confidence interval was chosen for this dissertation. As the p-value in the given table is <.001 and therefore less than 0.05, there is a significant result. The F-ratio describes the improvement of a predicted variable. As the value is higher than one in the F-ratio yield efficient model, in this case 13.392, there is a significance in the analysis.

4.3.4. Coefficients

A regression analysis was conducted to test the hypotheses. Thus, the acceptance of neo brokers was used as a dependent variable, while the fees, user experience, available exchange venues and access to cryptocurrencies were used as independent variables. Further, the gender, generation and number of broker accounts were added as control variables as they were previously mentioned as decisive factors for the acceptance of neo brokers in Germany. The backward stepwise regression procedure was conducted, in order to check which explanatory variables should be included in the final model. To build the regression model, a backward procedure was conducted in order to determine which explanatory variables to include in the final model. The stepwise regression is a series of repeated searches and creates a comparison of models to determine the independent variables that have the most significant relationship with the dependent variable. It started with the potential explanatory variables and the least significant variables were discarded. Thus, it started with the potential explanatory variables and the least significant variable was discarded in a stepwise procedure. The focus of this table is the Sig. value. As this study was conducted with a level of significance of below 0.05 for a 95% confidence interval, the null hypothesis is rejected/ not rejected by the value of the significant value. Based on the regression model, the hypotheses are tested.

Table 5: Descriptive Statistics - Regression Analysis

	Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
(Constant)	3.802	.581		6.543	<.001
Gender	-1.358	.178	-.419	-7.644	<.001
Generation	-.201	.103	-.108	-1.963	.051
Number Broker Accounts	.090	.131	.037	.688	.492
Fees	.034	.069	.027	.489	.625
User Experience	.189	.065	.155	2.893	.004
Available Exchange Venues	.153	.051	.160	3.002	.003
Access To Cryptocurrencies	.074	.059	.067	1.256	.21

Notes: N=279, *p<.05;**p<.01

Table 6: Descriptive Statistics – Regressions Analysis Final

	Unstandardized B	Coefficient Std. Error	Standardized Coefficients Beta	t	Sig.
(Constant)	4.333	.468		9.265	<.001
Gender	-1.377	.172	-.425	-8.024	<.001
Generation	-.200	.101	-.107	-1.990	.051
User Experience	.195	.065	.160	3.016	.003
Available Exchange Venues	.154	.051	.161	3.041	.003

Notes: N=279, *p<.05; **p<.01

A positive association between the fees and the adaption of neo brokers in Germany was postulated in Hypothesis 1. During the regression analysis which can be seen from table 5 onwards, the fees are the last variable that is discarded as there is no significant association with the acceptance of neo brokers ($B=.034$, $SE=0.69$, $p > 0.625$). Thus, hypothesis 1 is not supported.

A positive association between the user experience and the adaption of neo brokers in Germany was suggested in Hypothesis 2. As analyzed from table 5 onwards, a significant result demonstrates a positive association between the user experience and the adaption of neo brokers in Germany ($B=0.189$, $SE=0.065$, $p < 0.004$). Thus, hypothesis 2 is supported.

A positive association between available exchange venues and the adaption of neo brokers in Germany was presumed in hypothesis 3. As analyzed from table 5 onwards, a significant result demonstrates a positive association between the available exchange venues and the adaption of neo brokers in Germany ($B=0.153$, $SE=0.051$, $p < 0.003$). Thus, hypothesis 3 is supported.

A positive association between the availability of cryptocurrencies and the adaption of neo brokers in Germany assumed in hypothesis 4. As analyzed from table 5 onwards, the result did not demonstrate a significant association between access to cryptocurrencies and the adaption of neo brokers in Germany ($B=0.74$, $SE=0.059$, $p>0.21$). Thus, hypothesis 4 is not supported.

Chapter 5. Conclusion

This dissertation's main purpose was to understand the reasoning behind the adaption of neo brokers in Germany. This dissertation explores the profile of people adapting to neo brokers (RQ1). Further, it explores the drivers which make people adapt neo brokers (RQ2). Lastly, this dissertation researched to what extent fees have an impact on the adaption of neo brokers (RQ3). This dissertation only focusses on the adaption of neo brokers within Germany.

When it comes to the first research question (RQ1), findings suggest that the average adaptor can be described as a male between 25 and 34 years old and belonging to the Millennials / Generation Y generation, who was born between 1981 and 1996. These findings are coherent to literature which already indicated these two generations (Dospinescu, Dospinescu, & Anastasiei, 2019). The primary research could further specify this; the average adaptor can be described as a holder of a bachelor's degree and has a monthly income between 1000€ and 2000€.

According to the literature, the possible adaption of neo brokers depends on the attitudes and values of the generations (Dospinescu, Dospinescu, & Anastasiei, 2019). The secondary research has shown that Generation Y as well as Generation Z specifically do value low fees and a good user experience when it comes to the adaption of neo brokers / fintech's (Carlin, Olafsson, & Pagel, 2017). When looking at the pricing strategy of neo brokers, they do offer a competitive pricing model which points towards low or non-existing fees (Parlour, Rajan, & Zhu, 2019). However, the result of the primary research further determines the drivers which are favored by the adaptors (RQ2). The fees and user experience were among these drivers too but also the access to cryptocurrencies, regulations, and data security.

Further, the third research question (RQ3) explored to what extent fees have an impact on the adaption of neo brokers. As mentioned above, the low fees are the major reason for Generation Y and Generation Z to adapt to neo brokers / fintech's (Carlin, Olafsson, & Pagel, 2017). However, the conducted analysis measured that the fees do not have a direct impact on the acceptance of neo brokers. Thus, concerning the third research question, it can be said that the results did not meet the anticipated outcome.

Chapter 6. Limitations and Further Research

During the writing process of this dissertation, some limitations were faced.

As a mixed method was used, gathering the best data possible out of both was attempted, but it is hard to estimate if the drawn results do represent the whole industry. However, the interviewees and survey participants provided an added value to this dissertation and gave a strong direction on an arising industry and competitive future.

Since neo brokers are still an emerging area, it was not easy to get in contact with leading industry experts and other stakeholders that have been working longer in this industry. Further, more participants and differentiated age-groups would have added a value to the research to get a more diverse view on the results.

As this dissertation was written during the full impact of the COVID-19 pandemic, all interviews were conducted via Zoom. This limits the human interaction and possibly the chance of gathering further data. Non-virtual interviews provide a higher degree of interactivity and grant the access to additional information.

Moreover, it was challenging to gather data with a high degree of validity for this emerging topic as it has not been researched like other areas. It can be said that neo brokers will have a strong impact on the entire investing industry and make investing more accessible than ever. Neo brokers could have a significant impact on traditional investment services and provide an accessible investment opportunity for a broader audience. For future research, it would be key to gather more information on what customers specifically want from their neo brokers and which features they really do use in the end. A focus on a qualitative data gathering method would be advantageous. This could help to find out more about their motivation and real-life situations rather than providing pre-set answers to choose from. Further, future research would be interesting on how long-established brokers react to the emerging neo brokers.

Appendices

1. Interview Guideline

1. The Competitive Environment

- a. What motivated you to look for a solution such as a neo broker / online brokerage?
- b. What made you choose a neo / online broker over a neo / online broker?
- c. Can you please elaborate on a situation in which your broker did not meet your expectations?
- d. What do you value about the innovativeness of a broker?

2. The Technological Demands

- a. On which platforms is your broker available and what platforms are you missing?
- b. Have there been and what is your opinion towards performance issues with the application itself?
- c. Is there any technology implemented which secures your data?
- d. Can you give me some insights about the time you spend in the application?
- e. Would you consider anything technology related in the application is saving you time and what is your opinion towards this?

3. The Customer Profile

- a. How would you illustrate a customer of a neo broker terms of social demographics, age group, trading activity and their targets?
- b. How would you describe your investing/trading behavior?
- c. Is there a social aspect in the application of your broker which let you connect with other users or professionals?
- d. What do you know about the regulations for your broker?

4. The Execution Process

- a. Could you walk me through an execution process of your neo broker / online brokerage?
- b. What do you enjoy about it and what is frustrating?
- c. Is there any buying advice given within the application? If yes, can you elaborate?
- d. Has there been a situation in which missed the opportunity to buy a specific share/crypto? (Technical issues or stop of trading)

5. The Costing Breakdown

- a. Could you give me some insights about the fees that you have to pay per execution order?
- b. What is your opinion towards these fees?
- c. Was there a situation, you faced unexpected fees?
- d. Would you consider your deposits as save at your broker?
- e. What are the offered payment solutions?
- f. What is your opinion about the time it takes to deposit or payout funds?

6. Exchange Venues and Products

- a. Can you give me some insights and your opinion about the available exchange venues?
- b. Has there been a situation in which you could not buy a specific share / crypto because of the unavailability of an exchange venue?
- c. Can you give me an overview of the products available in your application?
- d. Are you missing any products?
- e. Has there been a situation when you felt lost/overwhelmed when it comes to offered products and services?

7. Cryptocurrencies

- a. What is your opinion towards crypto currencies?
- b. Should crypto currencies be available in a neo / online broker?

The following Questions are neo broker specific:

- c. Can you give me insights about the available crypto tokens in your application?
- d. Are/would Cryptocurrencies a reason for you why you use a neo broker?

2. Interview with Fynn Bümmerstede

1a) I was advertised via social media and always wanted to invest. And since I found the entry via the depots of my bank or similar relatively difficult or did not have so much access to, this was the easiest way to do it, I downloaded the app and then just play around a bit. And if you have tried out a bit and understood the whole thing a bit, you could then be a bit more active and a bit more professional.

1b) I opened a custody account at Ing Diba before I was a customer at Trade Republic, has my custody account in the app. But so far honestly still do not know how I can buy shares, ETF or similar through the depot of ING Diba. In contrast, I can with my Neo Broker, can easily display the things, such as the past of the share or the ETF, the development and so on can make me smart about it and so is everything at a glance have,

1c) Personally, no I have ever noticed what genmir also gave to think, but me personally not.

1d) That I have as I said everything at a glance, the display of my ETFs and now also cryptocurrencies that I trade there, everything at a glance, the development and also how I can inform me about it. As I said, this simple at a glance everything perfect.

2a) Speak whether it is now meant as an app or as a browser, application.

I have only used the app so far. I think you can also use it in the browser. Because I but actually quite okay.

2d) Yes, I had me there a few times that the app im has nothing displayed. So neither my portfolio nor the charts of the stocks. I think that has two times so far. And what I have noticed with acquaintances of mine, that at a stock temporarily could not be sold. That but I think just still running. That concerns the whole thing, there was probably actually a technical malfunction. As I said, I could not display my portfolio at times. Those were however always disturbances, for which simply an hour or so were taken again.

2e) 2-factor authentication yes.

2f) Hard to say, yes to say or maybe also a bit stupid. But by the fact that one really one, two hours times purely looks the action stand, I would say already. So, a total of hour a day always pieced, every 30 to 60 minutes I do check everything for about 5 minutes or even if it is only a minute, but for sure 45 to 60 minutes a day.

2g) There is a buying advice and general info on buying stocks and in some cases there is the recommendation of analysts in the app. However, there is only one number that says e.g. 7 analysts recommend to buy. There is no background information about the analysts. Furthermore, there are the common metrics like market cap, bid, price ranges and the dividend yield.

3a) A typical Neo Broker client probably started investing at the beginning of the pandemic and is between 25 and 30 years old, maybe just in his first job earning his first money. And cryptocurrencies in particular are all the rage right now, in some cases Neo Broker does offer them. For me, it was the easy entry into investing. The older generation is, I think then but rather still at the house banks or at any investment banks.

3b) Okay, so I actually traded mostly only with crypto currencies or stocks. I must admit to have also participated in the shorting of shares, which one has certainly noticed at the beginning of the year within the news.

3c) That would be interesting. And if this platform has always been ready, it could be implemented easily. But that you can, for example, copy trades from any very successful traders. I would use it in any case, because my knowledge is also limited, and I have no professional trading education.

3d) I know that there is just also a clause or something similar and that should be banned. Why? I think because it is made way too easy for him, many people there to invest, too risky to invest. But I honestly can't deal with. I know there is something, but what exactly I know.

4a) First step is of course to fill my balance. There are now several options. I also find very well solved that you can load the account with credit card, Paypal and bank transfer and no longer has these long waiting times as before. And then I would, if I have already decided, for the action quasi select the share, press the buy button, then I see an overview of all costs and can release or reject the purchase.

4B) In itself very satisfied with the functions, it would be good if some functions would be better explained. You are thrown in at the deep end and can theoretically lose money quickly if you don't inform yourself enough.

4c) Already said Buying Advice and some other indicators.

4d) There were technical glitches, as the app could not be started. But I have noticed more often that stocks or especially smaller cryptocurrencies, bitcoin and such are not available in the app. I keep getting notifications that some are added, like XLM for example. But now these smaller ones are not there, which is why I just have a second cryptocurrency broker, through which I can buy most cryptocurrencies. But there have been some stocks that I've personally been interested in via Youtube videos, Instagram, and the like, about stocks and I haven't found those in my Neo Broker

5a) I honestly don't know. I think up to a certain amount a dollar and otherwise higher. I really don't know, mostly I just buy it and the cost is manageable.

5b) Um yes belongs to that I find now that yes with one. I also know brokers who offer quasi flat rate, that quasi for one to the basic amount in the month as many trades make as you want. Everyone must know that for himself. My order volume is now usually not so high that I would be worth it. Generally, I hold stocks longer and think a flat rate is out of the question for me. I'm fine with paying for the one dollar or three-dollar order.

6a) Yes, my deposits are regulated by the European law, up to 100.00 euro

6b) as mentioned before, bank transfer, pay pal and credit card

6c) They are instantly available; the bank transfer can take up to 2 days but that depends on the speed of you bank. Some offer instant deposits, these instant deposits come with additional fees. I am wondering why my payouts take up to two days until they're on my bank account. If an instant deposit is possible, an instant payout should be a possible as well.

7a) This is a good question, the exchanges are not listed per se. In the app I can only see the stocks per se.

7b) These were fintech stocks from America. I know it was an American company, will probably have been the startup Robin Hood. Furthermore, it happened that stocks that were already available at other brokers were not listed at my Neo Broker even after months.

8a) ETFs, stocks and cryptocurrencies. These are the things I use. I have not yet noticed other products within the application. This may also be due to the lack of expertise.

8b) Stand now I am satisfied, one could only expand the area of cryptocurrencies. There is still a lot of potential there.

9a) I see it as an investment with potential with great returns and also risks. Whether it's going to be the future now is up for debate, but you speculate. I use it actually only as it as an investment. More is not possible in my Neo Broker, for everything else I use my account at Coinbase.

9b) Yes, definitely. After all, there are other options. I mean, I still have the second Coinbase for cryptocurrencies. And it's just always annoying between the two back and forth and there one or the other prefer to do everything at a glance anyway or something. Now if you have the ability to do everything in one app, it would save time and be much more convenient.

9c) Ethereum, Bitcoin, Litecoin, XRP, Bitcoin Cash, Stellar, EOS.

9d) No it was the reason to buy shares. The cryptocurrencies came later. I had the broker already longer.

8.1.2 Interview with Marco Gießler

1a) Well, I use the online broker of my house bank, because I already had an account there and could do everything online. The stock account I opened is entirely online via an app where I can buy and sell quickly.

1b) So it's been a few years since I opened my online broker. Many friends advise me to use neo broker Trade Republic. However, I decided against it because I was afraid for my deposits

and there was no trust in the company yet. Therefore, I decided to go to a traditional bank, especially because I trade stocks and options. For me, the risk was too great that the Neo Brokers, could not execute the order as quickly and reliably. There were a few scandals that, for example, neo brokers such as Trade Republic and Co of an instant as a scandal to the Wirecard or to a Co that the order volume was too large, and the order could not be executed or extremely delayed. In comparison, a traditional bank would have and would be able to handle such a volume. Not executing or executing too late resulted in losses for many investors. To me, it seems that Neo brokers always advertise one euro order fees but, in the end, still have hidden costs as they too must monetize their service. I think that the spread costs are partly a tool to make money.

1c) In addition to normal investing, I still invest in Cryptocurrencies on the platform Binance, because they are not available at ING-Diba. And something else quite good, that is so. The app of ING-Diba is kept very simple, you can only place orders. That works very well in itself, only a few info on certain stocks or even industries would be interesting. The app itself is also not very intuitive, for example, you can only search for shares with their codes and not with the name of the company.

1d) Yes, that. I have to say I have only had good experiences with ING-Diba and like the fact that everything is in one app. That is, my normal call money account and my stock portfolio. The app is very easy to understand, but sometimes you notice that it is outdated. The support leaves something to be desired, as it is virtually impossible to get a human advisor on the phone in case of problems. It is sufficient for my needs in any case. The costs are much higher than with a Neo Broker, but I can live with that. There are not enough reasons for me to switch yet.

2a) Accessible on all platforms like Android, iOS and of course via the web browser.

2d) Performance problems have not yet occurred with me.

2e) I have to authorize myself with a password and then I can open the app. If the password is saved, this is also possible with Touch ID.

2f) So I am already more often in the app. I would say five times a day and then minimally for 20 seconds. Because the broker and account are in one app, you subconsciously look directly at the portfolio, of course, if you only want to check the account balance.

2g) No, and I think that's a good thing. It would be too much for me to be recommended several stocks every day. That would only tempt me to buy something that I did not know at that time. It would be good to have the option and be able to customize the app as desired, let's say you could then display the news and recommendations every day. On the other hand, there are platforms like finanzen.net that give me the option to analyze stocks and get news from different

industries. My question would also be directly where these stock recommendations come from. I don't want to get recommendations that are not well researched.

3a) The wants to always have quick access via smartphone, thus be able to buy and sell stocks quickly. I would say tends to be under 30 years old and fairly independent in character. Otherwise, I would think users are more risk tolerant and have a shorter investment horizon.

3b) Risky, as I tend to invest in stocks rather than savings plans. I know that savings plans, ETF's, would be the safer option, but rich I like to invest in companies whose business model I like. Also I like to invest in oennystocks.

3c) No, they don't exist.

3d) I know about the deposit guarantee up to 100000 euros. This is a guarantee from the state which is a bit surreal. If there is a crash, I doubt that deposits could be replaced as well as paid out without further problems. I see this regulation partly as an incentive for private people to invest so they feel protected. As far as I know there are two options for Neo brokers, either they have their own bank license or a traditional bank works in the background. I believe that Neo Brokers in Germany are heavily regulated by BaFin as well as by law. If a traditional bank is involved in the background, I imagine the operations to be even more professional.

4b) I really like the execution process itself. I enter the number I looked up before and then it shows me the current rate directly. Then I can choose if I want to buy via direct trade or a marketplace. At ING-Diba, direct trading is always cheaper than other marketplaces. The process can be done in under five seconds, so to speak.

4c) Is unfortunately not given, would be partially interesting. As previously said, you would like to know who advises you to buy.

4d) Yes, this has happened with the broker Binance. When the Chinese government banned the trading of cryptocurrencies, the company moved to Malta. Accordingly, it was not possible to make purchases for several days. In the course of the move, payment options were massively restricted and you could temporarily only pay with a credit card.

5a) I just had a look at this. That is 0.25% of the market value up to 69.90€. However, the savings plan function is free.

5b) So the ING-Diba is more expensive than the competition, but the costs are still manageable in my opinion. Before I signed up there, I looked at price comparisons of online brokers and the ING-Diba made it into the top five cheapest. The price is okay for me, because I know that I pay with it an established bank and the security.

5c) And in no case, everything is disclosed before purchase. Now that you bring up the subject of costs again, I remember an article analyzing the extremely high spread costs at Neo brokers. I am pretty sure that these are marginal or non-existent at ING-Diba.

6a) In itself, you can always lose your money with stocks. Do I trust my bank? That's a resounding yes. ING-Diba comes from the Netherlands and is one of the largest banks in Europe. What is particularly good is the all-in-one solution. The bank offers an all-round service, and you don't need different providers for the call money account and the share deposit.

6b) In general, I don't have many payment options. Since my account is linked to the share deposit, the amounts are debited directly from there. That is, you would have to load the account with a transfer, so that enough credit is available. If you do not have an account and only the share deposit at ING-Diba, the app says that you need a credit card.

6c) If the account is funded, the money is debited directly. Withdrawals also arrive within one to two days. In some cases, they are faster but that is rare.

7a) There are all kinds of trading venues, but ING-Diba offers direct purchase, which means they have their own trading venue, which then brings no additional fees for customers.

7b) In itself no, there are of course times where you cannot buy, but a purchase can mark. Some stocks they are not available immediately after the IPO. I must say that there are also companies that are simply not listed. A good example of this would be Rivian. After the IPO on 11/10/2021, the stock is still not available for me to buy. In retrospect, had I invested, I would have made a profit.

8a) There are really all products available that could be associated with shares. For the inexperienced private investor as well as for the longtime investor with know-how.

8b) Cryptos would be a great thing, but otherwise I am completely satisfied.

8c) After signing up, you are thrown in at the deep end. Explanations about functions and products seem to be out of place here. I have acquired all knowledge through other platforms and the university. I think it would make sense to make it easier for new investors to get started with investing, for example through explanatory videos or a trial trading account where you can try out the functions without real money until you feel confident enough to take the step into the real world of investing. Every now and then there are pop-up windows that tell you that there are new functions.

9a) To give my general opinion. Well, I think a little bit of crypto is part of every portfolio. One says meanwhile already that Bitcoin could be the digital gold and also is not really susceptible to inflation, that the amount is capped at 21 million Coins. But I would recommend a maximum of ten to 15 percent in something like that. In my opinion, all coins except Bitcoin and Ethereum

are pure speculation. You should be aware of the danger that you can lose your money even much faster than with shares, because many Coins are not regulated and are rather projects. In addition, the price fluctuations are extreme, sometimes there are Coins that have risen by more than 1000 percent within a week. This is what every shareholder dream of. But it can also be just times within a day all gone. The best example is the Squid Game Token, where thousands of investors were cheated out of their money. The "developers" of the coin disappeared with the money, and you could no longer do anything with the worthless coins.

9b) Great for me as an investor, but I don't think the traditional banks will include anything in their product portfolio that is quasi against them. Decentralized Finance clearly speaks against the banks' business model. On the other hand, I could imagine co-existence. Maybe even the opposite of the classic banks is the difficult thing with classic banks. But maybe we have to differentiate a bit between classic banks and neo-brokers, because in my opinion they address different target groups. What I could imagine would be a cooperation of a traditional bank with a neo broker that specializes solely in cryptocurrencies. So as an example, ING-Diba would start a cooperation with Coinbase or Binance. So, they would profit from cryptos without offering them directly.

3. Interview with Maikel Kooijmans

1a) Clearly the one that the cost factor and on the other hand also the technical ease to trade, so if you would compare it now with a savings bank. So per purchase and sale of my position up to 10 euros pay and it is complicated to buy what is. Neo brokers make it yes relatively easy to open an account and trade and with quite low costs, especially if you do not have a lot of starting capital. Also, it's fast and you have a completely digital solution.

1b) On the one hand, the cost, but also the ING-Diba was so one, two years ago that was now not so particularly good in terms of technical. Generation Y and Z generation is also taken in the design of applications. Neo brokers sometimes offer more functions and do everything a traditional bank can do faster and cheaper.

1c) Never. Considering the traditional bank as benchmark in Germany, you don't have too high expectations. I would rather consider Trade Republic as a benchmark for them. When I was in America, I was also lucky. That was a bit of my personal yardstick, but I think anyone, including European neo-brokers, can get there, because the wheel has not been reinvented.

1d) I think Neo Brokers appeal to the younger generation and make the stock market more accessible. The application itself, works entirely through the smartphone and it takes less than 20 minutes to open an account. You can start investing even without much prior knowledge. This also has its dangers. However, the user interface also stays away from difficult finance words that users might have to google first. To top it off, the all-digital solution without any real-life point of contact was one of the deciding factors for me.

2a) On the app and web

2d) When logging in I could of course first crashes or short delays of the graphics. But nothing serious, so rather actually small things.

2e) There is Pin, Puks

2f) There is the Analyst View, this indicates in the info field of a stock, how many analysts advise to buy. Other than that it saves tremendous time that only the most important features are there. The average investor should not have to deal with this. You don't have to search for stocks or ETFs for a long time, it's just a few clicks and the order is through. I had to make my first stock purchase at the bank back in the day and now it's just a few clicks from my smartphone.

3a) Customers come from a wide range of age groups. The base of the young generation can be called newcomers to investing. This is the first broker they have downloaded. As for the capital of the clients there are people who have monthly transactions of less than 50 euros but also investors who have portfolios in the millions. The clients that are a bit harder to pick up are actually the older generation, who are not quite as technology affine now and who are not quite proficient in the English language. To sum it up, there's a really wide range of customers from all income levels and age groups. But when you get to the young people. The young people tend then already more to take the Neo Broker, because they just so simple whole sign-up procedure and so on, but still also older people interested in investing. But have now and then a bit of the technological aspect still not quite under control probably.

3b) I would describe my investing behavior as passive, I value fundamental analysis and have a long-term investment horizon.

3c) No social media like feature. I personally don't need it. Sure, I like to have a forum to talk to people about it, but I think such things tempt me to invest riskily. I like to inform myself and deal with reasonable or my own well-informed knowledge. Otherwise, I would also give my money but a friend of mine and does he. I see there a danger that people would no longer do their research themselves and simply follow other investors.

3d) So Germany, the regulations are very strict. So of course you have to follow the rules, the BaFin rules. To get a license in Germany, you have to comply with a lot of regulations. As far as I know, Trade Republik has a banking license and so the funds of the clients are secured up to 100,000 euros. As a German broker you have to comply not only with the German laws but also with the regulations of the European Union. Some brokers move their business abroad, such as Malta, to have more freedom in their business.

4a) I go to the search function, if I do not have the shares anyway already in my watchlist. Then I actually only need to type in Tesla, after just three letters it already shows the stock correctly. Then I click on Tesla. Then there is a buy button. There I can choose the number of shares, then the order type. Then two more clicks and the order is completed.

4b) No, I am very satisfied. If you make it even faster it would increase the risk of making a purchase even more. The application is already extremely tempting to make a purchase, because it is really only a few clicks and you can operate the application virtually like a game. Every now and then, it's easy to lose track of your money and order something that you haven't really analyzed. The keyword here would definitely be penny stocks.

4c) No, it is only a trading app that does not give recommendations.

4d) Never through technical issues. If the trading hours are over, you can just order but they are not directly executed. I have not experienced it in my own trading, but I know that during the GameStop short squeeze there was a trading halt and as a result many customers left the broker. In my opinion, it is absolutely not okay to deny customers a purchase.

5a) It costs one euro per order. That would mean that you have a total of two euros in fees for buying and selling a share. This can be recovered with a relatively small investment. Times like this

5b) You need a lot more initial capital to make a reasonable investment. This would really not be for everyone, because it is simply too expensive. With order fees of twenty euros, you think very carefully about what you order and to what quantity, because you have to drive in principle first again twenty euros profit to make up for these costs again. With small orders this is virtually impossible. The shows that show then only again investing rather what is for the elite and not for everyone.

Trading with such high fees would be even more prohibitive.

5c) No, actually not because everything was to be seen in documentation. If you deal with the broker a bit, you know what costs are coming. You should of course inform yourself beforehand about the trading venues and also of course consider the spread. However, these are rather

marginal costs for small orders. If I had larger orders, I would deal with this topic even more intensively.

6a) So and this is of course due to the regulations that exist in Germany with the banking license. I feel secured not only by the broker, but also by the German and European legislation, which is quite secure. I see no danger here that my deposits could disappear.

6b) Available are ApplePay, the bank transfer, credit card and

6c) Either instantly or up to two working days.

7a) In any case the Lang & Schwarz. And then it also depends a bit on the products and on. For example, crypto is through Bitgo and derivatives are of course agreed with the individual providers. I think it would be interesting to have access to other venues and digital asset management companies. They will probably add a few in the future.

7b) There is sometimes the situation that, for example, something like an interesting IPO and is not listed directly. But this is not necessarily due to the trading venue, such as Lang und Schwarz, but rather due to the IPO itself. In most cases, there are no key figures for the German market until the IPO is admitted, which is something that cannot be influenced. If everything goes smoothly, the IPOs are usually listed the next day and available for purchase.

8a) Buy stocks, ETFs, derivatives, crypto. I think commodities can also be included somehow.

8b) So sure, so things that if you are a long-term investor and funds there are there of course still that are not quite little risk associated, but they are associated with very, very much cost and by that I went extra to Trade Republic to not have these costs.

8c) My investing time has already started before Trade Republic and therefore I already had the opportunity to gain some experience. There are certainly some options that can be better explained. On the other hand, trade Republic is a trading platform and not a training platform. An example of more complex products are certainly the derivatives. If you are not really familiar with it now, you will not understand many keywords.

9a) I like the technology, just the currency I think is highly speculative and very, very risky. Who knows what the future holds. However, I am not quite so convinced of it, because I think I could now have my own cryptocurrency created within me within 10 minutes. And if I have enough reach on social media networks and platforms, you can pump-and-dump strategies with an ease. And that unfortunately happens way too often right now. What's actually quite interesting for many is there or there are several small businesses that have seen this as an investment opportunity, they just create their own cryptocurrency and thus make their business more liquid. It's just an intrinsic value that you can't grab, even less than a stock. On the other hand, I think everything evolves over time. So money can be digitized after all?

9b) I like the idea of having everything in one application. So an onestop store. The bigger risk is having investments spread across multiple applications and vendors, because it's easier to lose track. And I think it can actually be possible for any Neo Broker to build a reasonable setup for this.

9c) 8 or 9 pieces. They are there only as an investment and I can continue to trade.

9d) Main reason for me to consider a Neo Broker were stocks, Cryptos are a great extension but not a must have.

4. Interview with Harmke Jan Lüken

1a) The simplicity, that I can simply log in online, that I don't have to go to a bank, that I don't have to call anyone to somehow make a trade or to buy something. With the bank for example, that's what I did, I could register online and then they sent me the codes that I needed for the login to my address and that was very simple, and you can do all that.

1b) I didn't want to have that much to do with the Neo Brokers because I don't trust them. They are all still very new on the market and I took for example ING - Diba, because that is a traditional bank. And that means my shares are guaranteed special assets there. I know what happens to them. And with the neo brokers with things like fractual shares I don't feel comfortable. So I buy their Amazon stock for example, because I can't pay for the whole stock, and I find that attractive with the brokers. But on the other hand also very insecure and it feels wrong to me because I don't really own the stock, I only own a quarter of the stock or a right to the stock. And those were the main reasons why I went to such a classic online broker.

1c) I had that with the now recently, I have namely now no access to my account and that is relatively annoying, because the ING- Diba sometimes has the problem that you get despite correct password entry the message that your password is wrong. If that happens three times, then your account is locked and that's what happened to me and that was really quite annoying because you then have to reset it by mail. Then you want to buy a stock or something. Or adjust your savings plan and then you can't get into your account and have to wait 5 business days for the new codes to arrive. On top of that, I'm on the road a lot and can't always be at home.

1d) I would title the ING-Diba, which is already innovative for German conditions, because you can regulate this just really relaxed. You have a code and the order is executed quickly. But ING-Diba is not that innovative. The Neo brokers are more innovative with the customer interface and things like that. They fulfill the minimum. So you can fill out the order online and

it's all very relaxed, but compared to what kind of service you get somehow at Trade Republic or whatever Robin Hood in the U.S., that's not comparable.

2a) Broker is available, web-based, by phone. So you can also execute the order by phone. When you call there, then some computer answers and then you can say here stock number XY and Z of this please buy 10 pieces. So, and then it does that. You have to enter a code and the order is executed. What I use most is the app or web based version.

2d) Yes, just the password thing. That was annoying and the irony was: Yes, you can then unlock it again via your phone, but on the phone there was also the password to log me into the app. That didn't make any sense at all and that's when you're already in a precarious position and very helpless. And then you can't talk to a customer service representative on the phone, you can't get them on the phone. The hotline is computer based and all you can do there is request a new pin by mail.

2e) They're under strict regulations of the government because they have an official banking license. Moreover, there's the banking secrecy and the German and European law which protect the customers and their data. I don't think anyone can get hold of my data or my shares. I would consider this situation as very unlikely.

2f) Maximum 15 minutes a day, I would say.

2g) In terms of execution, that's the savings plan feature. I personally Core Satellite Strategy, so 80 percent of what I can save, I put in so two big world associations, so MSCI World, MSCI Emerging Markets and I don't worry about that anymore. And I use the savings plan function. So that's automatically every month. On the 15th it's executed and that. That always goes out and that makes life a lot easier. You don't have to enter the funds again and can have everything done automatically.

3a) Customers of a Neo Broker are for me often young people who have not been in contact with shares before. They are up to 30 years old and now through the Neo Broker have found access to it. And these are often young people who have always been interested in shares, but who don't want to run to their local Volksbank to open a securities account and then somehow pay per share or 5 euros for a share that costs 20 euros. And these are the classic people who now all invest on Neo Brokers. For me personally, I often associate Neo Broker with trading and not investing.

3b) Buy and Hold

3c) I think there are some. EToro is called never, but that does not exist at ING-Diba so. So there is only the function to build a watchlist itself, where I can put together a watchlist of funds and stocks that I find interesting, so I can follow the. But that's very cumbersome. That's not

something that I use Active. I did that in the beginning, but don't do that anymore. Because that a separate, login and you had to go back to another platform to watchlist winzusehen.

3d) Banks secret and that too halt. I think also on the connection you could make a deposit protection of up to 100000 euros. That is, if you just sold something and the bank goes bust at the same moment, then you are there it 100,000€ insured and that is special assets. I can't take that away from you. And this? I just know that.

4a) You click on the app and then you enter your self-selected code or via Face ID. Then you have access to your app and then you see two accounts, one is your custody account and the other is your clearing account. With that you can invest and then I search for a stock using the search function, say Palantir, and then I click on order. Then I select the number of shares and through which stock exchange I want to buy it. Then it also shows me directly where I pay what fees and where the stock is cheaper. And then the cheapest option is automatically selected. But I always take the without order costs, because the amount of my orders is rather small. Then I click on execute order and then I enter in the internet code that I have selected before. This is different from the login code and with the code I then confirm the order and then it is executed at the next possible time.

4b) What bothers me about it is sometimes the speed with which the order is executed, because sometimes it's a bit slower. Even if the stock exchange is open, it can sometimes take another 3, 4, 5 hours before the order is actually executed and the share appears in my securities account.

4c) There are just these classic warnings. So here you can with shares and so they have halt of the classic risk. This is a bit like the terms and conditions, no one reads through.

4d) I haven't had that situation yet. but. The technology is simple but reliable. Partly there are funds not I want to invest. Mainly sustainability funds that already exist in the US. The largest selection are the funds from iShares.

5a) Yes, most of them are free. So the funds that I put my money in are free. I think they have a selection of like 800 funds that you can save with a savings plan for free. The rest just costs and

5b) The costs are too high for small investors. It's enough if you invest with small amounts. Let's say you save 50 euros every month and then you want to put it in a fund. But the savings plan is not free, then each order costs one euro or so and is that is already somehow two percent of what the order cost. Then you have to make two percent to make up for the order. And I find that mega annoying. In my opinion, that's too much for funds. With shares, you also have higher order costs, depending on which stock exchange you buy.

5c) No, there were no hidden costs. Before each order you get an overview of the total costs.

6a) Yes, regulated by Eu and Germany

6b) You have to transfer the money from your account to your bank account or you let the savings plan run by direct debit. And that I have so my savings plan runs by direct debit through my normal account, which I have at my house bank and perfect.

6c) That can take up to two days. I know there are other providers that offer faster payouts. The ING-Diba should offer the same in my opinion. I mean, my bank account is connected to the brokerage account. Thus, this shouldn't take that long.

7a) that have, the classic Stuttgart, Hamburg and so. Such things, so you can actually everything that is so in the German area, you can buy there all exchanges in Germany

7b) Not yet happened.

8a) Yes, so there are classic funds and shares and so. And I think what the biggest difference to the Neo Broker is is that you just can't buy these partial shares. You just can't buy part shares of Amazon or so and there are no offers on crypto.

8b) I don't miss crypto. I personally don't have that much to do with it. It's just too risky for me, the volatility. I don't want to deal with that, I don't want to trade. If you want to trade, crypto is certainly super interesting, but I do buy and hold. And what I miss otherwise are some funds that are also from very large providers such as Vanguard or iShares or so just such funds as, for example, the classic VOO, which is the classic SNB 500 fund from Vanguard. I think it is now also available in Germany, but ING-Diba needs ages to include it.

8c) The app is very good, it is very intuitive and very simple. What is not so good is the interface of the website. It's a bit cumbersome at times.

9a) Regarding crypto, I can say that I find blockchain technology very interesting, the basic technology behind it is great and that we are sort of advancing the new internet with data processing and the disclosure of contracts. That's going to make a lot of things easier. But I don't think cryptocurrencies like Ether or Bitcoin or Dogecoin will not become common means of payment. It's all speculation and my opinion is that so much money is being put into it because the inflation rate is so high right now and interest rates are so low. Quasi a trickle down effect where investors then resort to getting riskier investments to still get the return they need to beat inflation etc. And yeah, so if you're a company now, let's say and you have blockchain technology, you don't want that to be a very volatile currency. You want to be in a stable system where contracts are recorded and nothing that's kind of traded. Also, I wonder how the security is granted, since everything is digital one hack can be enough to scam millions of funds. Thieves

can sit behind their desks and steal intrinsic values with some knowledge. That is basically a new form of digital robbery.

9b) I don't think you should be in the online broker available because the risk is too high. The current hype can be compared to the dotcom bubble, and I am curious what is still to come for the economy.

5. Interview with Colin Stradinger

1a) Yeah, I mean, I've been reading a lot about investing lately then or a year ago. And of course, then you pick your options. The bottom line is you just want a trustworthy broker, but one that you can also reach quickly and digitally and have motivated.

1b) Me to go to a Neo broker like Trade Republic for example, simply because I had the opportunity to complete that directly with my cell phone and then also really access it daily. Simply the whole process is not as complex as with other banks etc.. That's why it was simply the best solution for someone in my generation, also very digitally fulfilled.

1c) I have to say, I'm satisfied with Trade Republic. Um, so far, I can't really name a situation, except of course during the Game Stop Hype or in the Stark Hype the second Republic made a few maybe in hindsight mistakes. I see that white. I can't necessarily name all of them specifically right now. A few shares you just could not trade and then you just have to. That takes away a little bit of the trust of such a broker, of course, but it didn't really affect me personally, even with my portfolio. And therefore, it has not significantly influenced my opinion. But of course, one takes a little bit of that.

1d) Yes, I would say Trade Republic is already very innovative. Of course, they have copied the business model from the USA, from Robin Hood in particular. But here in Europe, they are already one of the pioneers who are transferring mobile trading and online trading, this whole uncomplicated process that we already know from fintech's like N26, somehow to brokers and that's why I would say we were very, very innovative. What initially bothered many users was that there was only one app for the smartphone. I think they are one of the pioneers in Germany.

2a) iOS and Android, of course, mobile, and now the desktop version was added.

2d) Sometimes there are minor problems when logging in, which has just actually often This lures you over the phone always with a pin a four-digit pin. Sometimes it does not work for me, although I enter the correct pin and then I have to wait a minute or two until I can try again. So sometimes login difficulties and otherwise the platform actually works mostly smoothly, except

for example with the GameStop Short squeeze or some minor dropouts. But you have to get over that. It is just currently also turbulent time on the market.

2e) In the app is a 2-factor authentication associated with the cell phone number. I don't honestly know what encryption techniques are behind it, but I feel at least relatively safe with Trade Republic. It's one of the most well-known brokers and the deposits are secured as well. That's the most important thing for me.

2f) If you calculate it down now, then on the day 30 minutes, sometimes times up to 60 minutes. I'm a big fan of passive investing and therefore very much about savings plans. And then an asset allocation is made. At the end of the month in a portfolio a little bit restructured, but in the end it's a very small-time frame that I spend as in the app.

2g) Yes, I mean user interface is already good, it is kept very simple. You have the most important key figures at a glance. It's very intuitive when you scroll through the app. Yes, it is simply very intuitively designed for many people from our generation. Just like other apps where, if you compare it with various banks like Volksbank, for example, you look inside some apps. They're just not intuitive. That's already perfect with Trade Public.

3a) Yes, I would say that most of them are young professionals who have just finished their studies. Many also with economic background, but also otherwise the awareness is always higher. Especially in the direction of passive investing. Therefore, I would say so the typical customer is mid to late twenties. Just in the first job, earns good above average salary in Germany probably over 50,000 a year, probably on average here the customers or Neo Broker customers even a bit more and deal with investing. And yes, otherwise I would say im very digital affine. In any case probably most even with university degree probably students.

3b) Passive investing with buy and hold strategy + savings plans.

3c) Something like this is not available in Trade Republic's app.

3d) Uh, I know, I don't even know if they need a banking license or something. Then deposit insurance up to 100000 euros. Data security must be granted, this is of course something that concerns all IT platforms. I think that this will be granted via current encryption options.

4a) So in the end here in the app there is a search function browser. Now you can just search for Tesla stock for example. In the end, it is relatively easy to place the purchase and then I enter how many shares I need. And I always say Long Tesla I buy my 1000 shares and the bottom line is you can just execute that. But so for the somewhat savvy investor you can also set stop and loss. You can put at orders, you can put your orders. I can also just set an automated at order, at a certain price or an automated or stop loss. But it's all in the app. The good thing

is, there are simpler functions like the normal purchase of a stock or ETF but also more sophisticated and complex options for more experienced investors.

4b) It's just simple and intuitive. You could perhaps say it tempts you too much to buy shares because it is so simple and in the end, if you buy here Trade Republic commission for one euro per order. I mean by that, you don't have to buy any for 10 euros or more, which doesn't make much more sense for a small order volume. And one is enticed in any case to the point of buying more often. This is also the business model of the brokers.

4c) Yes, one has an analyst opinion, which say to what extent the share is a buy recommendation. However, one only knows how many analysts recommend buying or selling. Insight into who those analysts are is not available. And there are still the metrics, there you can look at all possible KPIs.

4d) No, not really. I personally can't think of any situation. At Trade Republic, you can't buy all cryptos now, where the bitcoin Ethereum released, so to speak. In total, "only" seven Crypto currencies are available and that as a pure investment. One has just often with volatile stocks or just with crypto one has just volatility warnings and one needs then partly more capital in the account. So to speak, more money in the account than the actual purchase amount, because the prices are so volatile. To counteract this, you can otherwise set an automated buy order at a certain price.

5a) So I pay 1 Euro per share purchase, so to say per trade. And savings plans are completely free and also no monthly fee etc..

5b) And I like the model very much because it is him very flexible model. Especially for me. Since the savings plans as well cover the main part of the portfolio and buy individual shares at a flat price, it is then just very convenient.

5c) Not really unexpected. But what I know is that they have a certain spread. So the prices are just sometimes adjusted a little bit. So you sometimes don't buy at the cheapest rate. You have to be aware of that. You can not expect completely free broker, so it is yes also service they offer and clear.

6a) Yes, yes, of course. Definitely. So first of all covered by deposit insurance and secondly it's a reputable neo broker with one of the biggest names here in Europe. So I don't really see a problem there.

6b) A good question. I always do it by bank transfer. So, with me just the savings plans with me are automated from the bank account. Otherwise, I would know credit card. Apple pay and bank transfer are possible. As I said, I use transfer at the bank.

6c) So I transfer so 2 days on average I would say, sometimes a little less. By the fact that I have the savings plans, I do not know for sure. I have of course also set them with the date certain date. I think I have direct debit usually a day before the order. It always works out well. I guess with credit card it will be instant. I have never paid out because my investment horizon is long-term.

7a) I don't even know if you can see it in the app, but I know it's the trading place of Lang & Schwarz. I hope they add more venues because some shares are not available through them.

7b) Yes, sometimes recent initial public offerings are not listed on my broker. I mean I just don't trade that much and it's more savings plan based. I also try to stay away from penny stocks. And other than that, I've never had a problem now with any kind of well-known companies and stocks that you couldn't buy them.

8a) Definitely ETFs and I find a huge selection of those. That's also one of the reasons why I decided to do it. Then of course individual stocks in every different way, commodities and of course now cryptos. And of course in ETFs you can also trade as Reads of course Real Estate Investment Trusts, so ETF, software, real estate in the end ah yes, and otherwise you can trade just also different certificates. So, you can trade with options, you can use leverage, leverage everything that your heart desires.

8b) The available products do meet my needs.

8c) Bitcoin is you can trade but not so long. I definitely missed the desktop version at the beginning, because otherwise you have to do everything with your cell phone. Should the deposit value at some point become larger, ie 10,000 euros or more, I could imagine my deposit to move to a provider who is more traditional and has more experience.

The most important things are there just option, if you want to use leverage or leverage, there are also and then ETFs only partially, if you are looking for really specialized ETFs, then of course it can be times that something is missing. But by that I think the ETF partner of trade Republic is iShares, one of the largest ETF providers. You actually have the largest selection or a very large selection.

8d) I have informed myself before very well, therefore yes of course. There are simply very many, also ETFs and shares. You just have to do a little bit of research yourself and research an awful lot about products, then also outside the platform. Functions like stop loss, automated order, leverage option etc.. Of course, these are a bit more complex. On the other hand, I must say, the platform praises these functions now also not so extreme, as it I now not so suggested. "Hey, why don't you do an option on that or Hey, if you buy the ETF, why don't you do a 50 leverage on it". That's why you have to say that Trade Republic is actually pretty good that it

was more like that. I sometimes feel like it's already so hidden. So until I find the stop loss function, I have to watch some tutorials. Honestly.

9a) I see great potential for the future with the technology. I just see so far just the application areas not yet given to 100 percent and the crypto hype is just a hot market for me. Is it a bubble? Well, you can go with that. But yes, blockchain, the technology behind it, will accompany us into the future. And that's why I'm invested in Bitcoin and Ethereum myself. As of now, I think it's a bubble. In the long term, I see it as having great potential to reinvent money.

9b) Yes, I think I already Neo brokers should offer cryptos at least. On the other hand, it's not so bad if not. I mean there are enough other platforms, but it's pretty easy to have a broker. Cryptos as well. Even if there are a few disadvantages at Trade Republic because you don't own the cryptos 100 percent. A sub-company holds the purchased cryptos for the client and you can only use them as an investment. Say you could not use it to make a payment or send someone cryptos. I think as a Neo Broker should at least offer the option to invest in the most common Cryptos.

9c) In total there are seven different cryptocurrencies in my Neo Broker. These are Bitcoin, Ethereum, Litecoin, XRP, Stella, Bitcoin Cash and EOS.

9d) Nah, rather less. For me, the point was the choice of ETFs. Would I only want to buy crypto currencies, would also have been okay just to trade at Coinbase or use or other crypto broker. It would not have been my exclusion criterion now. Selection clearly ETFs and fees.

6. Survey

1. Are you a customer from Germany?

- Yes
- No (End here)

2. What gender do you identify with?

- Male
- Female
- Non-binary / third gender

3. What is your age?

- Under 18
- 18 – 24
- 25 – 34
- 35 – 44
- 45 – 54

- 55 – 64
 - 65 – 74
 - 75 – 84
4. What Generation do you identify with?
- Silent Generation (1928 -1945)
 - Baby Boomers (1946 – 1964)
 - Generation X (1965 – 1980)
 - Millennials / Generation Y (1981 – 1996)
 - Zoomers / Generation Z (1997 – 2012)
5. What is your highest level of education?
- Less than high school
 - High school graduate
 - Bachelor's degree
 - Master's degree
 - Doctorate
 - Professional degree
6. What is your monthly income after tax?
- Less than 1000€
 - 1000€ - 2000€
 - 2000€ - 3000€
 - 4000€ - 5000€
 - More than 5000€
7. How many broker accounts do you have?
- One
 - Two
 - Three
 - Four
 - More than four
8. I opened my first account with ...
- Trade Republic
 - Scalable Capital
 - Smartbroker
 - JustTRADE
 - Finanzen.net zero

- Consorbank
 - Comdirekt
 - ING-Diba
 - flatex
 - Other
9. I opened my second account with ...
- Same answers as above
10. I opened my third account with ...
- Same answers as above
11. I opened my fourth account with ...
- Same answers as above
12. How frequently do you invest your money with help of a neo broker / online broker?
- Once a month
 - Twice a month
 - Trice a month
 - Four times a month
13. How many percent of your income do you invest on average per month?
- Up to 10%
 - 10% - 20%
 - 20% - 30%
 - 30% - 40%
 - 40% - 50%
 - 50% - 60%
 - 60% - 70%
 - 70% - 80%
 - 80% - 90%
 - 90% - 100%
14. What describes your investing strategy best?
- Buy and Hold
 - Value Investing
 - Growth Investing
 - Dividend Investing
 - Other investment strategy
15. How many minutes do you spend in your neo broker application per day?

- Less than 30 minutes a day
- 31 – 60 minutes a day
- 61 – 90 minutes a day
- 91 – 120 minutes a day
- 121- 150 minutes a day
- More than 150 minutes a day

16. To what extent do you accept neo broker within the industry?

(Please use the metrics 1 (strongly disagree) to 5 (strongly agree))

17. What would the reasoning to adapt to a neo broker?

(Please use the metrics 1 (strongly disagree) to 5 (strongly agree))

- Fees
- Broker is part of the house bank
- Reputation / Company
- User Experience
- Execution process
- Quality of the reporting, e.g., the analyst recommendation
- Easy sign-up procedure
- Available products
- Available exchange venues
- Quality and performance of the application
- Access to cryptocurrencies

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