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How did the financial investment behavior of Swedish retail investors change after the outbreak of COVID-19?

A survey on the impact of a pandemic on financial investment

by
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Abstract

The aim of this thesis is to investigate how the financial investment behavior of retail investors in Sweden has changed after the outbreak of the COVID-19 pandemic. The first part of the method used to investigate this consists of collecting data using a survey that was filled out by investors. The second part of the method includes comparing and analyzing the data and interpreting it into results. The result that is found from the survey is that retail investors have changed their investment behavior in various ways after the COVID-19 outbreak compared to before. Investors claim to have become more knowledgeable about investing, they invest more frequently and a larger share of their income. The allocation of investors' portfolios seems to have changed and many investors have turned from stocks and stock funds to cryptocurrencies. Investors' risk-taking behavior has increased when it comes to financial investments as well as the general optimism regarding this. Many investors also claim to have changed their behavior because of the specific consequences of this pandemic crisis. When controlling for different groups, I find that middle aged men claim to have increased their knowledge about investing more than other groups after the outbreak of the pandemic. Women seem to have increased their investment rate more than men in terms of frequency and share of income invested. I also find that men have become more risk-taking than women. Older investors also appear more optimistic than younger. A discussion of the results and the observed changes is held in the presence of previous literature and applied theories. I show that some of the observed changes can be confirmed by the results from previous research. I also find that some of these changes do seem to deviate from the financial behavioral theories; flight to quality and flight to liquidity, as well as from previous research regarding what is supposed to happen during times of crisis. The fact that COVID-19 is an unprecedented crisis might help explain such deviations and thereby help confirm observations and make the results more credible. This paper contributes to the literature by investigating the changes in financial investment behavior among retail investors as opposed to professional investors. Further on, this paper contributes by exploring the Swedish market and by focusing on the ongoing COVID-19 crisis.

Keywords: Financial behavior, investment, COVID-19, Sweden, retail investors, survey

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1. Introduction

There are many different theories and conclusions suggesting what should happen with investors' behavior in times of crises. In this paper, I focus on some theories and conclusions from previous research papers regarding financial investment behavior. As the theories and conclusions presented will show, there are certain behaviors that can be assumed to occur in times of crises and uncertainty. However, there are also results and arguments in previous literature suggesting that the effects are not necessarily as certain as they might appear. This paper focuses on the ongoing COVID-19 pandemic and how this crisis has affected investors' behavior. More specifically the paper will explore the consequences of the pandemic on Swedish retail investors and their financial investment behavior. My ambition with this research paper is to add and contribute to the literature and research on this topic.

The COVID-19 pandemic took the world by surprise and was according to the World Health Organization (2020) declared a pandemic on March 11, 2020. It is of general knowledge that the COVID-19 outbreak has caused not only a global health crisis but also a global economic crisis. In February of 2020 the global stock market crash started as a consequence of increasing spread of COVID-19 and the public's fear of a pandemic (Smith 2020). Even though both The Dow and S&P 500[1] experienced record falls during the stock market crash in February of 2020, these stock market indices also bounced back faster than ever before observed (Banerji, 2020). In September of 2020, the stock market had returned to the same levels as before the stock market crash (Banerji, 2020). A similar sort of fast recovery also occurred on the Swedish stock market (Avanza, 2021), as well as the global stock markets in general (Statista, 2021a). In the meantime, SCB[2] (2021a) states that the number of stock market investors in Swedish households have increased with some 80 000 individuals in 2020 - an increase of almost 7 percent compared to the year before. The fact that these seemingly noticeable changes have all occurred during an ongoing health-related and economic crisis give rise to the question: How did the financial investment behavior of Swedish retail investors change after the outbreak of COVID-19?

[1] The Dow and S&P 500 are two of the largest and most followed stock market indices in the world and cover the 30 and 500 largest companies respectively - listed on the market in the United States (Pant, 2021). These indices are by many investors considered as indices reflecting the general condition of the global stock market and the economy.

[2] Statistics Sweden

The method I use to answer the question addressed in this thesis consists of collecting data and comparing and analyzing the data in order to interpret it into results. The data was collected using a survey that was filled out by the investors. Based on the interpretation and comparison of the data, a discussion is held in the presence of previous literature and applied theories. The conclusion summarizes the lessons learned from the survey.

The result I find is that retail investors have changed their investment behavior in several ways after the COVID-19 outbreak compared to before. Investors claim to have become more knowledgeable about investing, they invest more frequently and a larger share of their income. The allocation of investors' portfolios seems to have changed and many investors have turned from stocks and stock funds to cryptocurrencies. When it comes to financial investments, investors' risk-taking behavior has increased as well as the general optimism regarding this. Many investors also claim to have changed their behavior specifically because of the consequences following this pandemic crisis. When controlling for different groups, I find that middle aged men claim to have increased their knowledge about investing more than other groups after the outbreak of the pandemic. Women seem to have increased their investment rate more than men in terms of frequency and share of income invested. I also find that men have become more risk-taking than women. Older investors also appear more optimistic than younger. In this paper, I show that some of the observed changes can be confirmed by the results from previous research. I also find that the observed changes do not rarely seem to deviate from the suggestions of previous research and the theories of behavioral finance; flight to quality and flight to liquidity. Although some of the results I find are not possible to credibly confirm or reject due to these deviations, it can still be concluded that the observed changes in investment behavior have occurred among Swedish retail investors based on the answers from the survey. The fact that the COVID-19 pandemic is an unprecedented crisis is used as an argument to confirm that unpredictable changes might occur when investors experience uncertainty in extreme and unique times of crisis. Thus, this argument is used to confirm the credibility of the result in this paper.

The following disposition of the thesis is organized accordingly. In section 2, relevant background information regarding the following parts of the thesis is presented. Section 3 includes a presentation of earlier research on related topics. Section 4 covers the methodology in which a discussion of the methods used will also be included. Section 5 covers the actual results from the survey as well as an ongoing discussion of the results. Section 6 is made up of

the conclusion of the thesis. The references are presented in section 7 and appendices in section 8.

2. Background

2.1. Financial assets

The financial assets that I focus on in this paper are those that can generally be considered as financial investments by private investors - as well as traded with on financial markets. Financial assets in this sense are investments in financial instruments such as stocks and stock funds, bonds, currencies, cryptocurrencies, commodities, and other derivatives. In the following sections I present each of these assets and briefly describe what they are and some characteristics.

2.1.1. Stocks and stock funds

Stocks and stock funds belong in the equity market and investors on the equity market vary from banks and various funds to retail investors (Byström, 2014). According to Byström (2014), individuals investing in stocks and stock funds are exposed to a lot of risk since they might lose their entire investment. He states that the higher risk is the price the investor pays for potentially receiving higher earnings.

2.1.2. Bonds

Bonds are a type of loan in which the investment part consists of the investor lending money to either a company or government and in return asks for getting the loan repaid as well as receiving interest (Byström, 2014). According to Byström (2014), government bonds are bonds generally associated with low risk - and corporate bonds with a higher risk since companies generally have a higher credit risk than governments. The author writes that the government bond market is a very liquid market due to its size and trading frequency.

2.1.3. Currencies

Currencies as assets are traded and invested in on the global currency markets and can be traded on the spot market, as well as through other derivatives and future contracts (Byström, 2014). In this paper I will mainly focus on currencies as assets that can be traded and delivered without various future contracts. Investing in currencies is not risk free since currencies might increase and decrease in value depending on different economic factors and causes (Byström, 2014).

2.1.4. Cryptocurrencies

According to Sveriges Riksbank[3] (2019), cryptocurrencies are very volatile as well as difficult to use and pay with in many cases. Cryptocurrencies do not have the same function as money and normal currencies and are also an asset type targeted by speculative investors (Sveriges Riksbank, 2019). Thus, cryptocurrencies can probably be considered both a risky and illiquid asset. Finansinspektionen[4] (2021) confirms that cryptocurrencies are very risky assets and that they are not recommended to most retail investors.

2.1.5. Commodities

Commodity assets are for instance gold, silver, oil, and natural gas - and can be traded with in similar ways as other financial derivatives (Byström, 2014). According to Byström (2014), various types of commodities differ a lot from each other in terms of what they are made of and therefore commodities as a general asset might differ quite a lot depending on which commodity one considers. For instance, gold is a commodity that investors tend to turn to in times of crises and uncertainty and therefore this commodity normally tends to increase in value in times of crises when other financial assets might decrease in value (Byström, 2014).

2.1.6. Other derivatives

Other derivatives are for instance forwards, futures, and options. Forwards and futures are contracts that allow the investor (buyer) to know what he or she will pay for a certain financial asset in the future (Byström, 2014). According to Byström (2014), future and forward contracts should therefore be considered as safer assets. He writes that options - the right to either buy or sell the financial asset of choice - should also be considered a low-risk asset although this asset has become riskier with time because of speculative investing.

2.2. COVID-19 crisis in perspective

As this paper aims to investigate the effects of COVID-19 on retail investors' financial behavior, it seems appropriate to include a section that presents the consequences of this crisis on the markets where investors are present. To put the COVID-19 pandemic and the market uncertainty caused by this crisis into perspective, some observed effects on economic

[3] Sweden's central bank.
[4] The Financial Supervisory Authority of Sweden.

as well as financial markets are presented.

2.2.1. Economic recession and financial instability

As presented in Gopinath's blog post (2020) for the International Monetary Fund (IMF), the COVID-19 pandemic has caused the largest recession in modern time - far larger than the Great Recession in 2008. He also states that COVID-19 has also caused the largest recession since the Great Depression. Many central banks around the world have intervened in order to maintain financial stability threatened by the consequences of the COVID-19 pandemic on financial markets (IMF, 2021). Mosser (2020) states that The Federal Reserve has acted both faster and to a greater extent in terms of money and width than during previous crises - including the financial crisis of 2007-2008.

2.2.2. Global stock market crash and recovery

The global stock market crash of 2020 began in February of 2020 (Smith 2020). In the US, the indices The Dow and S&P 500 both dropped in record time and fell 35 percent during a 6-week period in 2020 (Banerji, 2020). Despite this record fall, the indices managed to return to previous levels faster than ever before observed and had recovered in August of 2020 – from the initial fall in February the same year (Banerji, 2020).

Another index is the Morgan Stanley Capital International (MSCI) World Index, which is a stock market index made up of stocks from countries and markets all over the developed world and thus can be regarded as an index reflecting the global stock market performance (Statista, 2021a). According to Statista (2021a), the MSCI World Index reached its highest yearly value recorded - between 1986-2020 - in 2020. This despite the outbreak of the COVID-19 pandemic this same year. This same index had reached its previous highest yearly value one year earlier, in 2019 (Statista, 2021a). Other major economic crises such as the global financial crisis in 2008 and the Dot-com bubble in 1999 were followed by significant drops in the MSCI World Index the following year or couple of years after the crisis (Statista, 2021a). Looking at the effects of COVID-19 on the MSCI World Index, the index seems to have defied this previous pattern of earlier crises and instead reached an even higher value during the same year of which the crisis occurred.

2.2.3. Cryptocurrency in times of COVID-19

CoinMarketCap (2021) presents data on the combined market value of the world's cryptocurrency assets. It can be observed that on 31 January 2020 - before the outbreak of the pandemic and the global stock market crash following - the total market value of cryptocurrencies was 258 billion USD (CoinMarketCap, 2021). As of 12 May 2021, the global market value of cryptocurrency has increased to about 2523 billion USD (CoinMarketCap, 2021). This equals an increase in almost 1000 percent.

Data provided by Statista (2021b) shows that the value of the cryptocurrency Bitcoin has risen from roughly 117 billion USD in March 2020, to about 1186 billion USD on 14 April 2021. Bitcoin is according to Finansinspektionen (2021) the largest and most used cryptocurrency on the market. The rising value of Bitcoin during COVID-19 equals a total increase of more than 1000 percent in a little more than one year.

2.3. Swedish investors and financial markets

Since I focus on Swedish investors in this paper it is relevant to present some facts about the Swedish investors as well as the Swedish market in general.

2.3.1. Swedish retail investors

According to SCB (2021a) the market value of the stocks available Swedish stock market in 2020 increased from 7868 billion SEK to 9619 billion SEK. In the meantime, the number of stock owners in Swedish households increased with some 80 000 individuals from 10.4 percent to 11.1 percent of the Swedish population (SCB, 2021a). The group accounting for the largest increase amongst stock owners were primarily men and younger adults (SCB, 2021a). According to data from SCB (2021b), the value of stocks owned by men and women in households differ. The data - stretching up until 31 December 2020 - show that men in all age groups own more than women do (SCB, 2021b). This difference is particularly large for men and women older than 44 years - where men own more than twice the value of that of women (SCB, 2021b). The difference in the value of owned stocks between men and women younger than 44 years old is significantly less than for all other groups, although men still own more than women do (SCB, 2021b). According to data from SCB (2021d), Swedish investors over the age of 65 accounted for more than half of the households' total assets in stocks. As of June

2019, men owned about two thirds of the Swedish households' total assets in stocks and women owned approximately one third SCB (2021d).

According to SCB (2021c), Swedish households saved more money than ever before recorded during the last quarter of 2020. Swedish households have increased their savings more during the COVID-19 crisis than previous crises such as the financial crisis of 2008-2009 as well as the financial crisis following the Dot-com bubble in late 1990s and early 2000s (SCB, 2021c).

In a report by Klapper, Lusardi and van Oudheusden (2016), the financial literacy of various countries - including Sweden - is presented. In the report financial literacy is discussed and referred to as the knowledge and understanding of financial investments and similar. According to the authors of the report, it can be observed that Sweden has a relatively high financial literacy rate of somewhere between about 65-75 percent among adults. Swedish adults thereby have one of the highest literacy rates in the world, along with other northern European countries such as Denmark, Germany, and the United Kingdom, as well as the United States and Canada (Klapper, Lusardi & van Oudheusden, 2016). According to the authors, there is on average a difference between men and women in terms of financial literacy in all global economies - including advanced economies and those mentioned. The authors of the report conclude that women are on average 5 percentage points less financially literate than men are. The authors also state that financial literacy is dependent on age and that the age group 36-50 account for the highest (63 percent) rate in major advanced economies, such as Sweden. They also conclude that the financial literacy rate is on average lower for all other age groups, and that it seems to be lower for older adults (51+) than younger (15-35).

2.3.2. Swedish stock market crash and recovery during COVID-19

According to Avanza (2021), the Swedish stock market index OMX Stockholm 30 (OMXS30) fell more than 30 percent between 20 February 2020 and 16 March 2020, when the index reached its lowest point during all of 2020. On 11 November 2020 the OMXS30 index had recovered to the same level as before the initial fall began in February 2020 (Avanza, 2021).

2.3.3. Swedish investors and cryptocurrencies

According to a survey conducted by Finansinspektionen (2021), the number of Swedish investors who own cryptocurrencies increased from less than 5 000 individuals in 2016 and beginning of 2017, to more than 35 000 individuals in early 2018. Since early 2018, when the

number of Swedish investors who owned cryptocurrencies were the largest observed, the number of investors has decreased and as of 10 November 2020 this number was approximately 27 000 (Finansinspektionen, 2021).

2.4. Theories

In this section, I will shortly describe the two main theories that may be linked to financial investment in times of uncertainty.

2.4.1. Flight to quality

As explained by Chen (2020), flight to quality - or flight to safety - is a financial behavior that occurs in times of uncertainty and risk when individuals tend to change their composition of assets by replacing risky assets with less risky and thus find safer investment alternatives. According to Opitz and Szimayer (2018) this sort of behavior occurs during various crises, such as financial ones. The authors continue and argue that one outcome of this behavior could be that investors decide to replace their investments in stocks with bonds. They claim that during crisis times - when flight to quality is of presence - relationships between risky and less risky assets will no longer apply. The authors exemplify this happening with stocks and bonds and how they go from positively correlated in times not associated with uncertainty, to investors turning to bonds and abandoning stocks in times of uncertainty. The theory of flight to quality would imply that in times of uncertainty and crisis, such as that of the COVID-19 pandemic, investors will turn to financial assets that are considered less risky rather than generally risky assets.

2.4.2. Flight to liquidity

Kenton (2020) explains flight to liquidity as a financial investment behavior that - in conformity with flight to quality - occurs during financial market uncertainty. According to him, this theory explains a behavior which results in investors turning to liquid assets as opposed to illiquid assets. Liquid assets are assets that can "...quickly be turned into cash without losing value" (Curry & Marquit, 2021, n.p.). According to Bell (2016) an asset should not be considered simply as liquid or illiquid, although such characterization is not rarely used. He argues that when it comes to an asset's liquidity, this can be positioned accordingly with a liquidity spectrum, where various assets are arranged from the most liquid ones to the least (i.e. illiquid).

In his paper, Ben-Rephael (2017) concludes that flight to liquidity has indeed occurred during previous crises and times of uncertainty between the period of 1986-2009. The theory of flight to liquidity implies that during a crisis such as the COVID-19 pandemic, investors will turn from illiquid assets to liquid assets.

3. Literature review

The theories described in the background section helps to generate some hypotheses that may be tested with data. Empirical research provides new insights to how these theories might actually work in reality. In this literature review section, I provide an overview of some existing papers and previous research. These papers provide some explanation of what is predicted to happen when it comes to financial investment behavior in times of uncertainty and risk.

3.1. Previous literature

As stated by Leahy and Whited (1996), there are many different theories within economics that can be used to explain how investments and uncertainty correlate with one another. They argue that with this knowledge in mind, the relationship between investments and uncertainty can be of different implication depending on what theory one would use to try to describe it.

In one of his articles, Greenspan (2004) writes about the consequences of uncertainty and risk and the effects such factors might have on investors' financial behavior. One thing he states is that individuals who face uncertainty will try to change their investment behavior by extending their initial medium-ranged investment horizon to a longer horizon. In doing so, he claims that investors will change their priorities by starting to value safer investment as well as liquidity over riskier and illiquid assets. The author continues by presenting some examples of crises where this sort of behavior has occurred and where investors have turned away from illiquid assets in order to turn these into liquid assets instead. He mentions the crises of the September 11 attack in 2001, the Russian default of 1998 and the stock-market crash of 1987 as examples of such crises. According to the author, all these crises have in common that they have all led to the central bank having to intervene to a large extent. The examples from Greenspan's article are evidently related to the two theories within financial investment behavior commonly known as flight to quality and flight to liquidity.

In one research paper by Caballero and Krishnamurthy (2008), the flight to quality phenomena is investigated. In their paper, the authors focus on time periods of uncertainty during which flight to quality has occurred. More specifically, they study the effects of monetary policies used by central banks on this matter. In their paper, the authors claim the theory of flight to

quality and state that financial instability as well as macroeconomic instability in general are fueled by periods in which investors take part in the flight to quality behavior. They confirm that such behavior occurs because of various shocks and crises and - in addition to the crises mentioned by Greenspan (2004) - add the example of the Penn Central Railroad default in 1970 to the list of such events. The authors exemplify the flight to quality behavior with how investors reacted during the 1987 stock market crisis when withdrawing from the market because of uncertainty. However, according to Caballero and Krishnamurthy (2008) it is not certain that a withdrawing behavior similar to which occurred during the stock-market crisis of 1987 must be applicable to all similar crises. The authors state that investors - especially professional investors - nowadays incorporate financial effects in times of uncertainty and therefore are prepared for such effects. From doing so, the authors suggest that the investment behavior when it comes to flight to quality does not have to be the same for crises occurring today as previous ones.

In his paper, Ben-Rephael (2017) confirms flight to liquidity phenomena in times of uncertainty and shows that the theory is most certainly true amongst professional investors. He focuses on professional investors running mutual funds through which they represent retail investors. However, although the theory appears to be of existence, he argues that there are as a matter-of-fact different theories and opinions when it comes to the forecasting of the actual type of assets being liquidated. In his paper he focuses on data from the stock market and does so during a time period of great uncertainty. By using the volatility index VIX, he measures the uncertainty of the market and defines larger volatility as greater uncertainty or larger risk in the financial market. The author concludes that although flight to liquidity seems to occur in times of uncertainty it is yet not obvious which assets investors should turn to. He also concludes that the selling of illiquid assets by professional investors in times of crises is the result of retail investors selling their securities in funds run by these professional investors.

In another research paper, Vayanos (2004) investigates both the theory of flight to quality and flight to liquidity, as well as how these theories are related to one another. In his equilibrium model, he uses two variables; assets and how they vary in terms of liquidity, and the level of uncertainty which is measured as the volatility of the reward received by various assets. In his paper, he uses volatility as a measurement of uncertainty in line with what Ben-Raphael (2017) does in his paper. The model he uses suggests a compensation for liquidity, which increases with volatility. From this, he concludes that flight to liquidity is positively correlated with high

volatility. He also concludes that the theory of flight to quality is also related to increasing volatility. According to him, individuals who invest will become more risk averse because of increasing volatility. Further on, he argues that flight to quality applies since inventors will require more compensation - in terms of risk premium - as volatility increases. It is of relevance to underline that Vayanos (2004) discusses and analyzes the different theories as well as the connections between them in the light of financial crises and under the presumption that financial investors are considered professional.

Another investment behavior that is being discussed is one acknowledged by Carruth, Dickerson and Henley (2000). In their paper, the authors discuss the literature when it comes to investment under uncertainty and compare the various methods, models, data, and results used by authors within this area. Based on their literature review the authors conclude that in times of higher uncertainty, the general rate of investments will be lower.

Given the timing of COVID-19, the research literature studying its impact on financial behavior is still limited at the time of writing this thesis. However, recent work by Huber, Huber and Kirchler (2021) investigates how the financial investment behavior amongst investors has changed due to COVID-19. In their paper, the authors focus specifically on risk-taking behavior and use two groups, one of professional investors and the other of non-professional investors. The authors performed an experiment in which both professional and non-professional investors participated in an investment task where the result of their investment decisions were observed. The authors found that professional investors did in fact invest less during the outbreak of COVID-19 compared to before. They also find that non-professional investors did not change their behavior when it comes to risk-taking. In their paper, the authors also underline the fact that the COVID-19 pandemic has caused an unprecedented crisis since it is not only an economic crisis of global scale but also a globally ongoing health crisis. They underline the fact that the COVID-19 crisis is a one-of-a-kind crisis and argue that this might affect investors in different and unpredictable ways.

3.2. My contribution to the literature

With this paper I aim to add the dimension of retail investors' response when it comes to financial investment behavior during times of uncertainty. In doing so, I will draw focus to how individual investment behavior has changed when it comes to financial investing. I will - in this

thesis - deviate from the general focus on professional investors that previous research papers investigating similar topics tend to have. Unlike much of the previous literature, I will focus on the ongoing COVID-19 crisis: a crisis that compared to many of the previously mentioned crises and shocks is not only an economic and financial crisis, but also a global health crisis. By investigating the COVID-19 crisis, I hope to be able to understand if there are consequences of this crisis in particular that are decisive when it comes to answering the thesis of this paper. Finally, I will apply already existing theories and conclusions within behavioral finance from previous literature to the Swedish investors and the Swedish market, which I have strictly focused on in this paper.

When it comes to the method and data being used, this paper differs from the papers previously presented in the literature review. My main method includes a self-constructed survey exploring how Swedish retail investors themselves consider how their financial investment behavior has changed after the outbreak of COVID-19 compared to before. The other part of my method will consist of analyzing and comparing the data from the survey in order to obtain a result. Thus, the data I use differ from earlier research papers since I focus data on retail investors and not professional investors and do so more specifically by using my own unique data. By using the unique survey data, I analyze how individuals themselves consider their behavior to have changed after the outbreak of COVID-19 compared to before. The dimension of how individuals themselves consider their financial investment behavior to have changed can be added to the discussion regarding how individuals react and change their financial investment behavior in times of uncertainty.

I believe that it is relevant to investigate the retail investors' own judgment of how their behavior has been affected. This is important to consider since the individual's own judgment might, to some extent, be a pillar on which a general retail investor bases his or her investment decisions on. With this consideration, one can assume that investors' behavior - and thereby plausibly their investment strategies - are somewhat based on their own judgements and opinions of the situation. Therefore, I believe that it is both necessary and relevant to collect and analyze the data from this survey. I believe that this dimension can contribute to the existing literature on similar topics.

4. Methodology

4.1. Research method

The method used in this empirical research paper consists of collecting data on financial investment behavior amongst retail investors. Financial investment behavior will be considered a behavior related to investments in financial assets. The paper will focus on retail investors, also referred to as non-professional investors. The data is analyzed and compared in order to interpret the result into behavioral changes and see how these differ from before - and after - the outbreak of the COVID-19 pandemic. Thus, the methodology is carried out in two steps accordingly. The first step includes collecting the data on how retail investors' financial investment behavior before - and after - the outbreak of the COVID-19 pandemic. The collection of data is done using a self-constructed survey. In the survey, several questions about the financial investment behavior of the investors - and how this behavior has changed because of the COVID-19 outbreak are asked. The second part of the methodology includes summarizing and presenting the data from the survey, to be to analyze and compare this data. Based on the collected, presented and analyzed data, a discussion of the results is undertaken in order to answer the research question by presenting a conclusion. Essentially, once the data is collected, the method includes analyzing and comparing this data and discussing the result in the presence of applicable theories and concepts from previous literature and research. This is the research method used to answer the thesis of the research paper.

4.2. Survey

Here, I describe and present some more information about the survey as methodology.

4.2.1. Motivation for survey

The aim of the constructed survey was to investigate how the behavior of retail investors in Sweden has changed after the outbreak of the COVID-19 pandemic. One of the primary reasons why I constructed my own survey was due to the lack of data I was interested in. When looking for data, I realized that direct data on certain behavior in terms of financial investing was of shortage. Most data available seems to focus on professional investors and not retail investors. In addition, the data often focus on investors in the United States and generally countries outside

of Sweden. Finally, there appears to be a lack of data regarding the ongoing COVID-19 crisis since most of the existing data covered previous crises and shocks. Because of many different obstacles regarding the data, I was looking for, it seems unlikely - if even possible - to find online. Thus, I decided to collect the data on my own by constructing a survey.

4.2.2. Construction of survey

The survey is constructed of written questions about retail investors' own judgement of their financial behavior both before and after the COVID-19 outbreak. The survey is constructed as an online survey[5] for participants to fill in. The survey consists of a total of 19 questions, where the first 5 questions consist of questions controlling for gender, age, occupation, number of children and marital status. These factors are controlled for since they are of interest when discussing the potential impact such variables might have on the result. The following 14 questions asked the participants about their investment behavior and aimed to give answers to how this behavior has changed from before the COVID-19 pandemic outbreak compared to after. The questions in the survey are formulated and constructed in a way which enables for the survey to capture data on financial investment behavior amongst retail investors that can be generally interpreted and used. The questions in this survey investigate how the participants' risk behavior have changed according to their own judgment. In other words, the participants were asked how they consider that their risk behavior has changed explicitly according to themselves and not through other implicit methods. This approach was taken intentionally in order to facilitate the individuals' participation in the survey.

4.2.3. Targeting participants

In this thesis, I focus on the behavior of Swedish retail investors, as investors in various countries may be following different investment patterns and may be subject to different financial markets, investment culture and investment possibilities. Thus, a cross-country comparison would be quite difficult to be made and outside of the scope of this thesis. To control for the survey aiming for Swedish citizens and/or people living in Sweden, the survey was constructed in Swedish. This is necessary since the thesis aims at describing the Swedish behavior, which I define as the participant being either a Swedish citizen or living in Sweden permanently. This definition of being either a Swedish citizen or living permanently in Sweden can thereby be thought of as being able to fill out the survey in Swedish.

[5] Using Google Forms.

To control for the survey being conducted among retail investors who have been investing in financial assets both before the COVID-19 outbreak and after, the description of the survey (Appendix A), and the introduction (Appendix B) specify the target group. It is also specified what financial investments intend. A definition of what is meant with financial assets is also given.

4.2.4. Distribution of survey

As mentioned, the group targeted in this survey are Swedish retail investors who have been investing in financial assets both before and after the outbreak of the pandemic. To reach out to this group of investors, the survey was distributed within various financial investing groups online[6]. A link to the survey[7] was posted in each group[8] with a description of the aim of the survey as well as of the adequate participant (Appendix A).

4.2.5 Discussion of survey as methodology

There are several aspects that can be discussed in terms of the credibility and usage of a survey in general. As mentioned, my ambition with this thesis is to have the possibility to contribute and add to the current literature and available research. Thus, it is of course relevant and important to discuss and ensure whether such a contribution is justified. Here, I discuss some of the potential problems with the survey used in this paper. The intention of discussing these potential problems is to emphasize certain aspects in the methodology that can potentially affect the result.

The number of participants who filled out the survey added up to a total of 328. When constructing the survey, the aim was to reach at least 100 participants that could complete the survey. There is no doubt that an even larger share of participants would most likely reflect a more accurate representation of the general Swedish retail investor. However, like with almost all quantitative studies, this sort of limitation is always existing.

[6] Through Facebook and LinkedIn.

[7] Link to Google Forms.

[8] Daytrading Sverige, Aktietips, TA Gruppen - tekniska analyser av aktier, index, valutor mm, Aktier, sparande och privatekonomi, Aktier och Sparande, KryptoSverige, Bitcoin Sverige, Aktier Och Placeringar, Aktier, Småbolagsjakten, Kryptovalutor & Blockchain Sverige - Bitcoin, Ethereum, Litecoin m.fl., Aktier och privatekonomi.

Another potential issue regarding the method and survey involves the possible vagueness when referring to participants as “active investors”. This concept was implicitly defined as having invested regularly, both before and after the outbreak of the pandemic. It might be difficult to control for “active investors” actually filling the survey out. Thus, it seems reasonable to suggest that an evident definition of what an active investor is, or some sort of question controlling for it, could have been included. However, since the construction of the questions in the survey is based on the assumption that the participants conducting it are active investors, it is difficult to fill it out without being an active investor. The survey is likely to be experienced as illogical and inconsistent if a participant would fill it out without being an active investor and thereby not having invested regularly before and after the outbreak of COVID-19. There is a dilemma of keeping the survey simple enough for individuals to be willing to take time and make the effort to fill it out. Longer descriptions and various definitions might affect the result and credibility negatively in that sense.

4.3 Data

The data used is described throughout the methodology chapter in section (4.1. and 4.2.).

As mentioned, the data used in this paper was collected through a survey posted and distributed in various groups online. The data was gathered between 15 April and 4 May 2021.

5. Results

5.1. Results from survey

In this part of the paper, the responses to each question in the survey are summarized and presented in tables and figures with the purpose of illustrating and clarifying the outcome of the respondents' answers in the survey.

The following tables and figures are constructed based on the responses from the 328 participants that took part in the survey. The responses to each question will be given both in numbers and as a percentage share of the total responses.

5.1.1. Control variables

Table 1. Participant gender

Gender:	Number of responses:	Percentage:
Man	256	78.0%
Woman	71	21.6%
Other	1	0.3%

Table 2. Participant age

Age:	Number of responses:	Percentage:
0-17	3	0.9%
18-24	94	28.7%
25-34	140	42.7%
35-44	47	14.3%
45-54	21	6.4%
55-64	21	6.4%
65-74	1	0.3%
74+	1	0.3%

Table 3. Participant occupation

Occupation:	Number of responses:	Percentage:
Student	111	33.8%
Self-employed	20	6.1%
Employed	184	56.1%
Unemployed	6	1.8%
Retired	2	0.6%
Other	5	1.5%

Table 4. Participant number of children

Number of children:	Number of responses:	Percentage:
0	238	72.6%
1	28	8.5%
2	46	14.0%
3	13	4.0%
More than 3	3	0.9%

Table 5. Participant marital status

Marital status	Number of responses:	Percentage:
Single	100	30.5%
In a relationship	156	47.6%
Married	63	19.2%
Divorced	6	1.8%
Other	3	0.9%

Here, I will shortly summarize the most noticeable results following the answers from the control questions. The majority (78 percent) of the participants in the survey were men (see Table 1). In Table 2, it can be observed that more than 70 percent of the participants were between the ages of 18-34. More than half of the participants were employed or self-employed and about a third were students (see Table 3). From Table 4 it can be seen that more than 70

percent of the participants did not have any children. Lastly, almost half of the respondents were in a relationship, almost 20 percent were married and approximately 30 percent were single.

The results from Table 1 and Table 2 can be related and compared to the data presented by SCB (2021a), where it was observed that men and younger adults account for the largest increase in households owning stocks during 2020. Although the data from SCB (2021a) refers specifically to the increasing ownership in stocks, a similar distribution of gender and age can be observed in terms of financial investments in general from these control questions.

Throughout the presentation and discussion of the result from the survey (section 5.1.2.), observed and significant differences between groups controlled for are discussed accordingly.

5.1.2. Results and discussion of survey responses

When asked about their knowledge on investing pre and post the outbreak of the COVID-19 pandemic, the participants answered accordingly (see Figure 1 & Figure 2).

Question 1: *I consider my knowledge about investment before the COVID-19 outbreak to have been:*

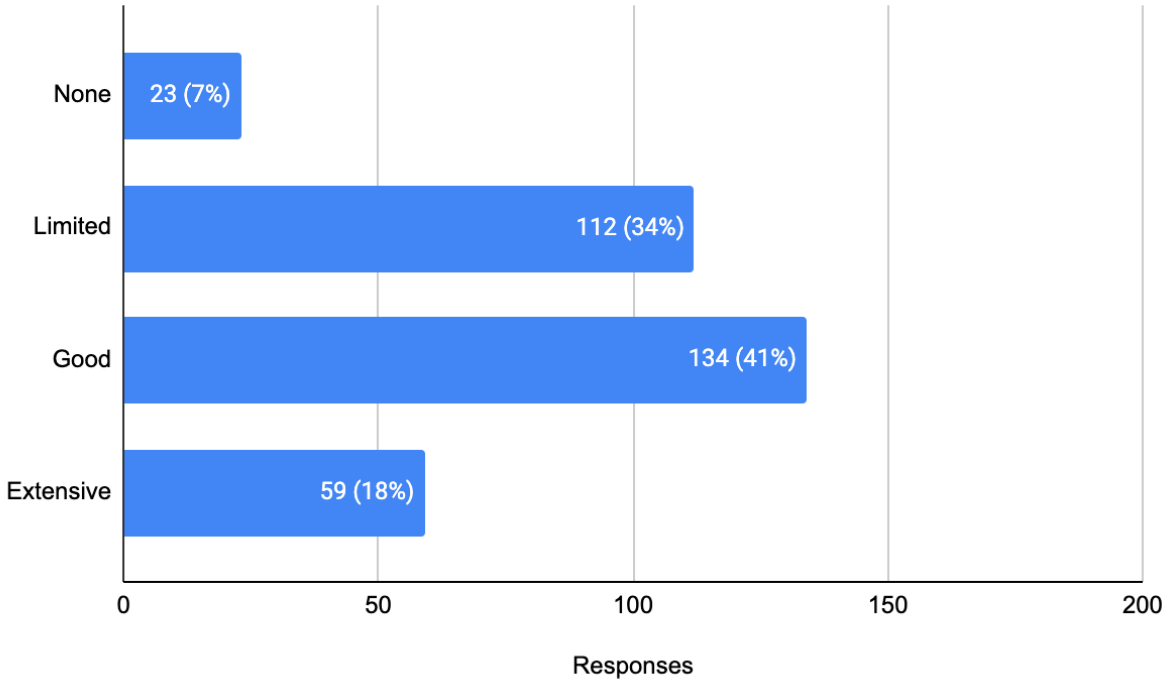


Figure 1. Responses to Question 1 in numbers and (percentage)

Question 2: *I consider my knowledge about investment after the COVID-19 outbreak to be:*

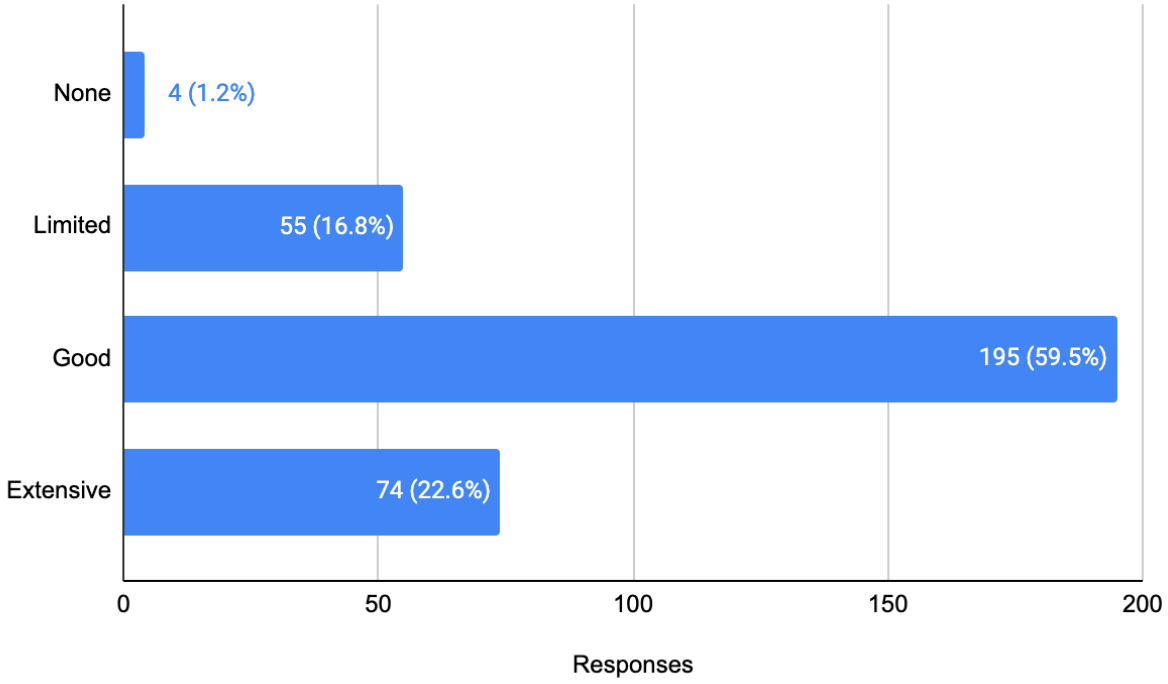


Figure 2. Responses to Question 2 in numbers and (percentage)

From comparing Figure 1 and Figure 2 it is possible to see that changes have occurred in terms of how the participants regard their own knowledge to have changed as a consequence of the outbreak of the pandemic. The share of respondents who consider their knowledge as "Good" and "Extensive" has increased to more than 80 percent combined, compared to approximately 60 percent before the outbreak of COVID-19. In the meantime, the share of participants who consider their knowledge to be "None" or "Limited" has decreased from 41 percent before the outbreak to 19 percent after. This result indicates that individuals consider their knowledge about investment to have changed and that they are more knowledgeable after the outbreak than they were before. With this result in mind, it seems legitimate to assume that the retail investors - represented by the participants of this study - have increased their knowledge about investing since the COVID-19 outbreak.

As of the result presented in Figure 1 and Figure 2 it is also relevant to discuss what a self-experienced change in investment knowledge might say about retail investors' behavior. The fact that a majority of the participants considered their knowledge as either "Good" or "Extensive" might be interpreted as that many of the investors consider their knowledge as more of a professional kind rather than a non-professional. Such a reflection is difficult to discuss further without being able to compare the result with that of professional investors. Therefore, this observation opens up for a suggestion of improvement as of this thesis. A group of professional investors can be asked to fill out this same survey as the non-professional investors. In doing so, it will be possible to compare the results from the conducted survey between non-professionals and professional investors and see if it will be any different. This sort of comparison between professional and non-professional investors was done by Huber, Huber and Kirchler (2021) in their paper.

When comparing the answers to Question 1 and Question 2 and controlling for various groups, the result appears somewhat different compared to that of Figure 1 and Figure 2 - where no such controlling was undertaken. The increase in knowledge in terms of the share of individuals who believe that their knowledge is "Good" or "Extensive" before - as well as after - the outbreak is noticeably larger for men than women. One can assume Question 1 and Questions 2 to work as a proxy for financial literacy among the investors. Thus, the difference in result when comparing men and women might be explained from the report presented by Klapper, Lusardi and van Oudheusden (2016), in which they present data of how men in general have a

higher financial literacy rate in major advanced economies such as Sweden. When controlling for age, the participants who considered their knowledge as "Good" before the outbreak was significantly larger among the age group 35-55. The same age group had a significantly larger share of respondents who claim that their knowledge was "Good" or "Extensive" after the outbreak. These results might also be explained by Klapper, Lusardi and van Oudheusden (2016) since, according to them, adults between the ages 36-50 - approximately the same age group as the ones controlled for - account for a higher rate of financial literacy than any other age groups. However, as mentioned the answers are based on the respondents' own judgement of their knowledge which is necessary to keep in mind. No other significant differences were found in terms of occupation, number of children or marital status.

A sense of the frequency level of the participants' investments is given from the answers below (Figure 3).

Question 3: *I invest more frequently after the COVID-19 outbreak than before:*

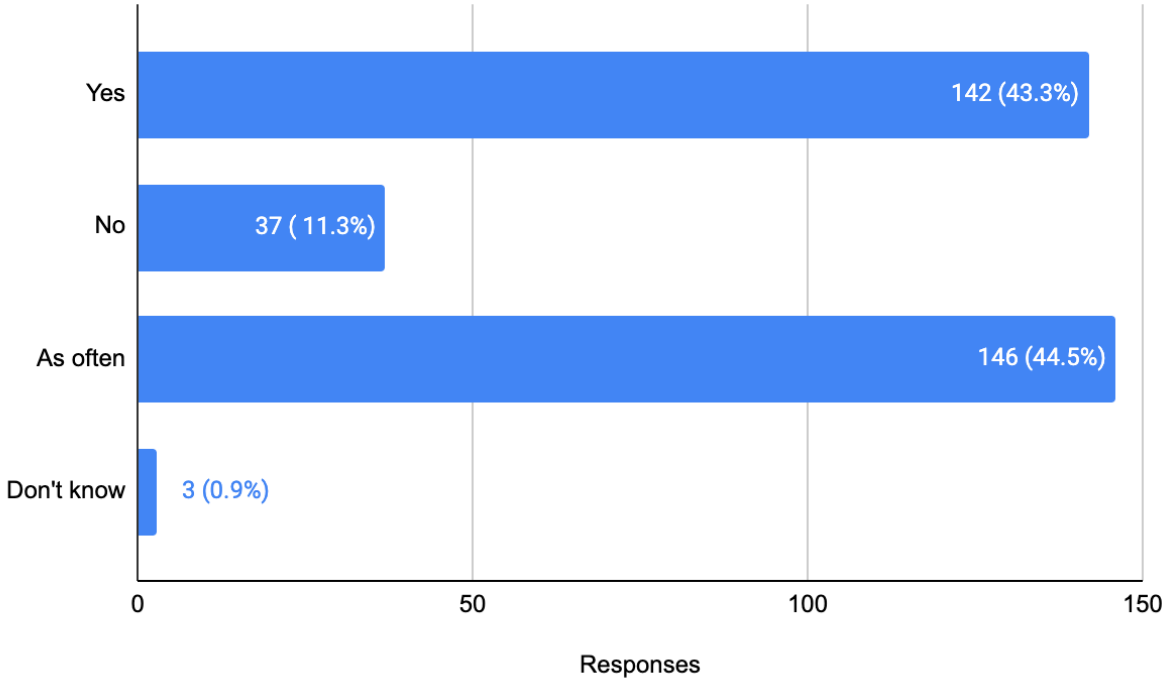


Figure 3. Responses to Question 3 in numbers and (percentage)

Based on the responses shown in Figure 3, a vast majority (87.8 percent) of the participants answer that they invest either more frequently or as frequently as they did before the COVID-19 outbreak. This result can be discussed in the light of the conclusion that Carruth, Dickerson and Hensley (2000) present in their article, which is that during times of uncertainty, investment rates will be lower. As found in the literature review, times of higher uncertainty are generally associated with times of crises. Therefore, it seems reasonable to suggest that the result observed in Figure 3 goes somewhat against that suggested by Carruth, Dickerson and Hensley (2000).

A somewhat larger share of women seems to invest more frequently than men when comparing these two groups with one another. There were no other significant differences observed between the various control groups when analyzing the results from Question 3.

The participants' answers when it comes to how their monetary share in terms of investment has changed from before the outbreak of the pandemic to after can be seen in Figure 4.

Question 4: *I invest a larger share of my income after the COVID-19 outbreak than before:*

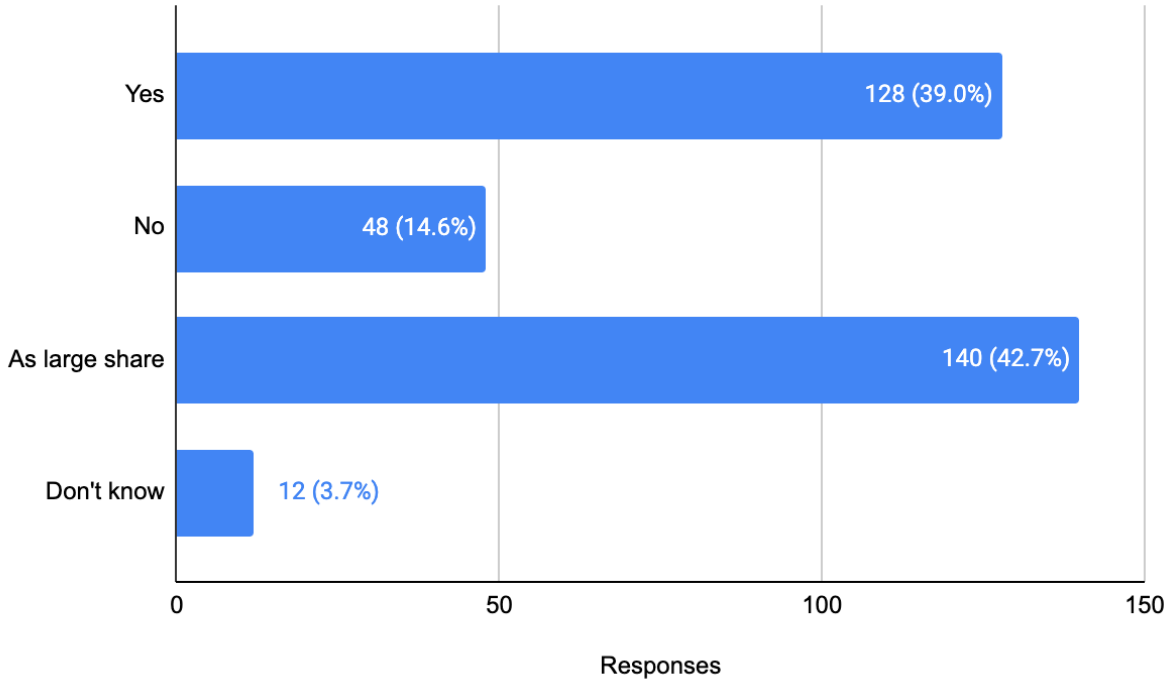


Figure 4: Responses to Question 4 in numbers and (percentage)

From the result in Figure 4, it can be observed that a majority of the participants (81.7 percent) spend either as large - or a larger - share of their income on financial investments after the outbreak compared to before. The share of individuals who say that their spending share in investment has increased after the outbreak of COVID-19 exceeds that of those who say they spend less of their income by approximately 24 percentage points. The investment rate can be interpreted as referring to both investment frequency and investment share - of income or similar. If one were to consider the investment rate as a combination of these two measurements, then the observed increase in share of income spent on investments could also be interpreted as the investment rate having increased. Based on this interpretation, it is possible to - once again - apply the conclusion by Carruth, Dickerson and Hensley (2000) that in times of uncertainty, the investment rate will be lower. Based on their conclusion, the investment share of the investors observed in Figure 4 income should be lower. However, this does not seem to be the case.

It is possible to compare the COVID-19 crisis with the stock market crisis of 1987 - where according to Caballero and Krishnamurthy (2008), investors fled to quality by abandoning the market. Based on the results presented in Figure 3 and Figure 4, investors do not seem to have fled to quality by abandoning the market when it comes to the COVID-19 crisis. If investors would have reacted as they did during the previous crisis, then this should mean that the investment frequency - as well as share of income invested - should be less after the COVID-19 outbreak compared to before. Since this is not the case, it seems legitimate to suggest that the phenomenon of flight to quality has not occurred in the case of the COVID-19 crisis. It is however important to have in mind that Caballero and Krishnamurthy (2008) do not specify the time period of which the flight to quality phenomena stretched and persisted during the 1987 stock market crash. It is possible to suspect that flight to quality did indeed occur during the early stage of the outbreak of the pandemic - when global stock markets crashed because of the spread and fear of COVID-19 (Smith, 2020). As far as this paper investigates, it remains unknown and unexplored whether flight to quality in fact did occur because of the stock market crash in the earlier stage of the outbreak of the pandemic.

The seemingly surprising results observed in Figure 3 and Figure 4 might be explained by the fact that the COVID-19 crisis appears to be a crisis like no other. This can possibly be confirmed by statistics from SCB (2021c), where they mention that Swedish households saved more than ever before during the last quarter of 2020. Another argument to why the COVID-19 outbreak

could be considered an unprecedented crisis is because of the record time recovery of the US stock market as mentioned by Banerji (2020). The fact that the MSCI world index according to Statista (2021), reached its highest yearly point during an ongoing pandemic in 2020 also strengthens the argument that the COVID-19 crisis is a crisis like no other. Huber, Huber and Kirchler (2021) confirm that COVID-19 is indeed an unprecedented crisis and that this might have unpredictable consequences on investors' behavior.

The share of women who invest a larger share of their income after the outbreak of COVID-19 than before was approximately 51 percent - compared to that of 36 percent among men. When taking the observed difference between men and women in terms of frequency from Question 3 into account, it seems reasonable to claim that women do seem to have a higher investment rate than men after the outbreak of the pandemic. This observation can possibly be explained by the fact that women account for a lower share of Swedish households that own assets in terms of stocks (SCB, 2021d). Due to this, women might have a larger possibility to increase their share of investments compared to men, which would explain this result. I do not find any other significant differences when comparing other control groups with one another based on the answers to Question 4.

The respondents' answers regarding their spending on financial investments as a share of income are summarized before the outbreak in Figure 5, and after in Figure 6.

Question 5: *How large of a share of your income did you invest in financial assets before the COVID-19 outbreak?*

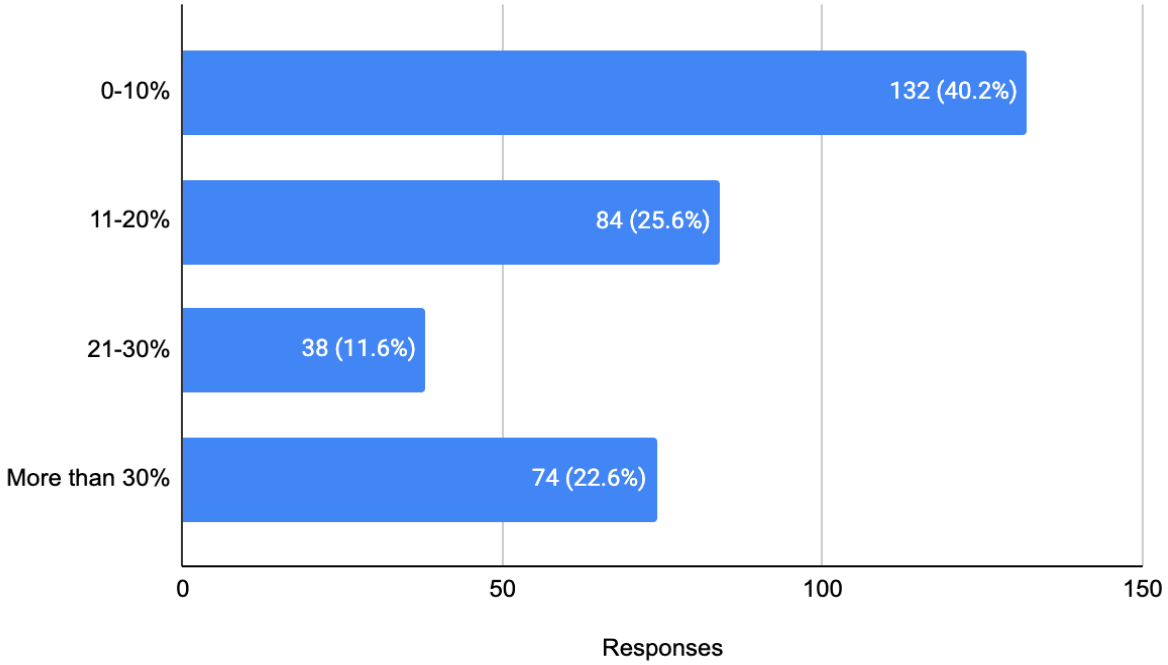


Figure 5. Responses to Question 5 in numbers and (percentage)

Question 6: *How large of a share of your income do you invest in financial assets after the COVID-19 outbreak?*

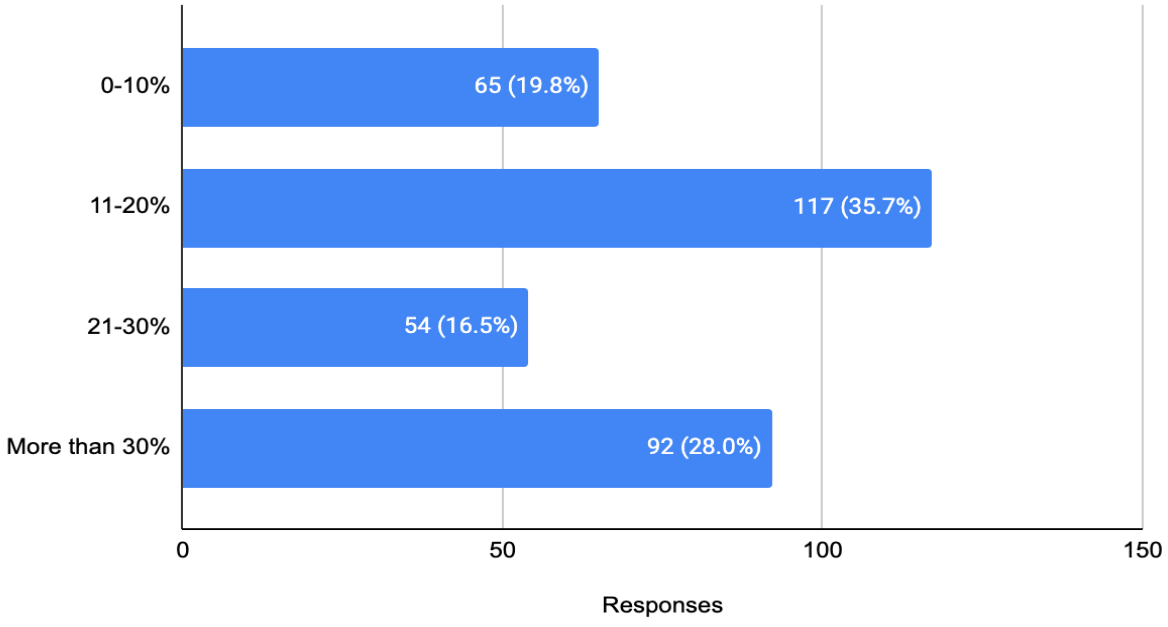


Figure 6. Responses to Question 6 in numbers and (percentage)

The data presented in Figure 5 and Figure 6 confirms the result from the data in Figure 4 by specifically showing how large a share of the respondents' income that is invested in financial assets. By comparing the result from before the outbreak (Figure 5) and after (Figure 6), it is possible to observe that the share of the respondents who previously invested 0-10 percent of their income has decreased approximately 20 percentage points. The share of investors who invest 11-20 percent, 21-30 percent and more than 30 percent have all increased.

I do not find any significant difference between the various control groups when analyzing the results from Question 5 and Question 6.

The participants' planned investment horizon before the outbreak (Figure 7) and after (Figure 8) can be summarized below.

Question 7: *Before the COVID-19 outbreak, I planned to withdraw a larger share of my total investment within:*

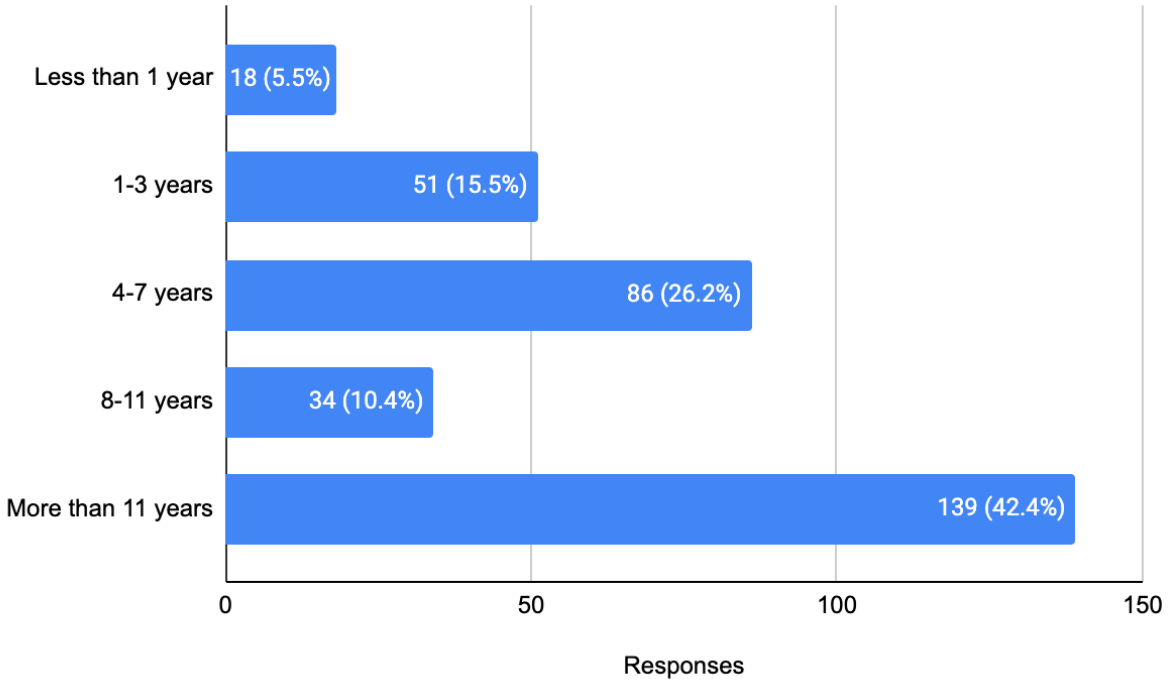


Figure 7. Responses to Question 7 in numbers and (percentage)

Question 8: *After the COVID-19 outbreak, I plan to withdraw a larger share of my total investment within:*

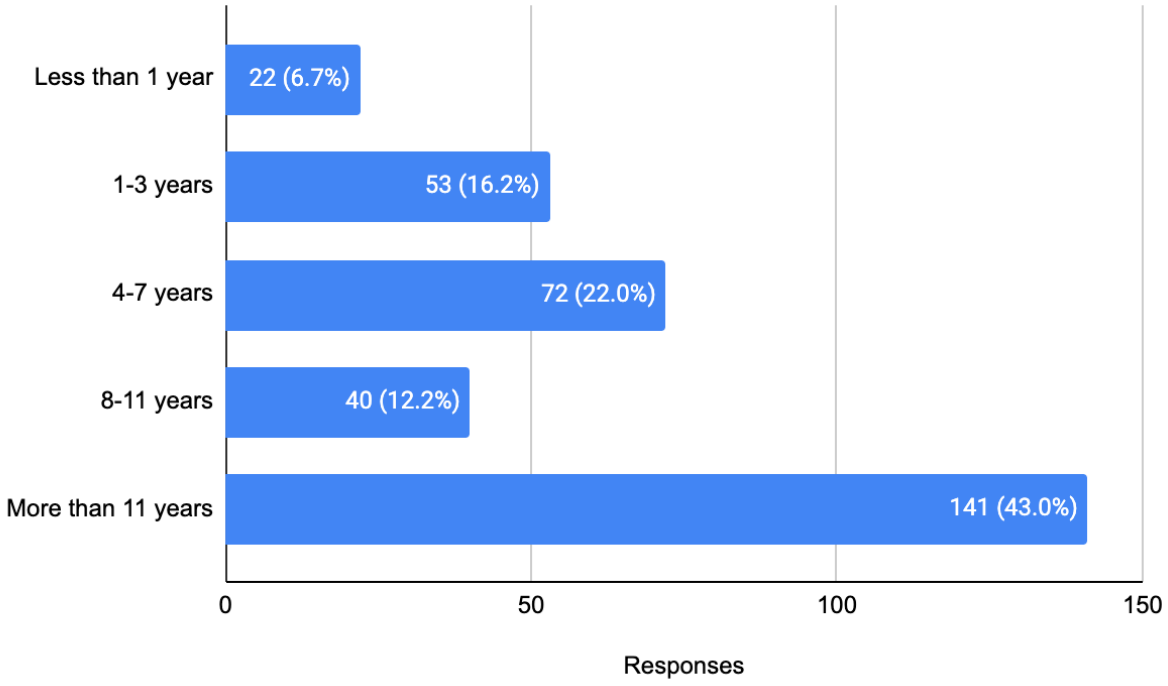


Figure 8. Responses to Question 8 in numbers and (percentage)

According to the results presented in the figures, the outcome looks relatively similar before the pandemic (Figure 7) as it does after (Figure 8). Some relatively smaller changes can be observed in terms of respondents having extended their investment horizons by giving up their shorter perspectives. Investors with a horizon of 4-7 years before the outbreak of the pandemic belong to the group which behavior seems to have changed the most. This result seems to go along with the statement presented by Greenspan (2004) which is that in times of uncertainty, investors with an initial medium-range horizon will extend their horizon. Although the observed change is relatively small, it is possible to confirm with this statement.

When analyzing the answers to Question 7 and Question 8 and comparing these based on different control groups I find that the group of younger adults age 18-34 - also accounting for a majority of the respondents - have a significantly large share of investors claiming that their investment horizon is somewhere between 1-7 years. This observation is made both before and after the outbreak of the pandemic. This observation is compared with investors who are 35 years and older. The age groups older than 35 years have a smaller share of investors within the investment horizon of 1-7 years and a larger share in the investment horizon of more than 7

years. However, despite this observation there does not seem to be any correlation between ages and investment horizons. I do not find any other significant correlations between investment rate and other groups controlled for.

When asked what the portfolio of their financial investments looked like before (Figure 9) and after (Figure 10) the pandemic, the participants answered accordingly.

Question 9: *Before the COVID-19 outbreak, my investment share (of total investment) in the following assets consisted of:*

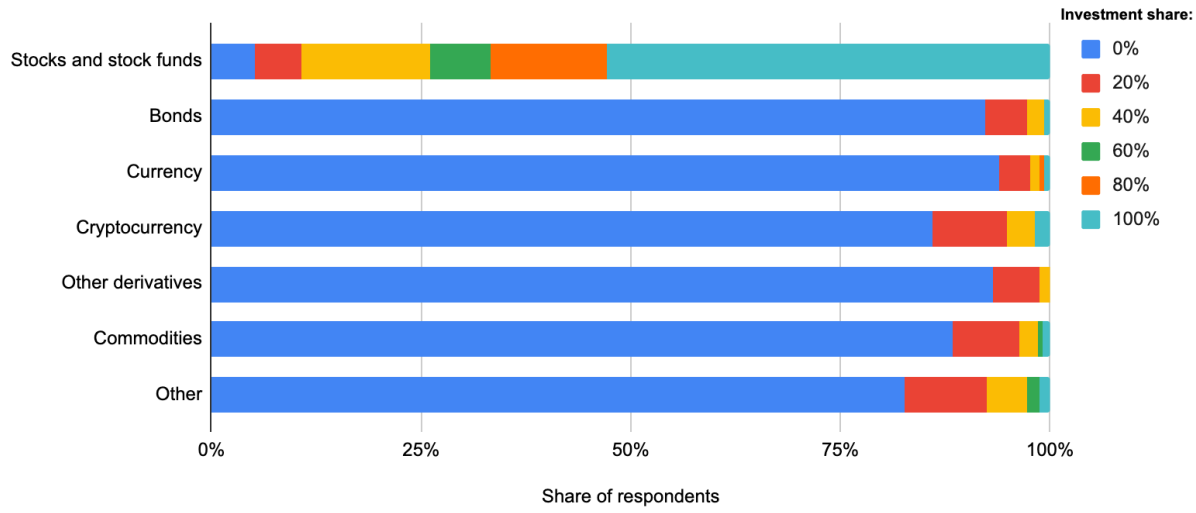


Figure 9. Responses to Question 9. Each chart shows the composition of the corresponding asset in terms of what investment share (0%, 20%, 40%, 60%, 80% or 100%) of the respondents' total investment the asset accounts for.

Question 10: *After the COVID-19 outbreak, my investment share (of total investment) in the following assets consists of:*

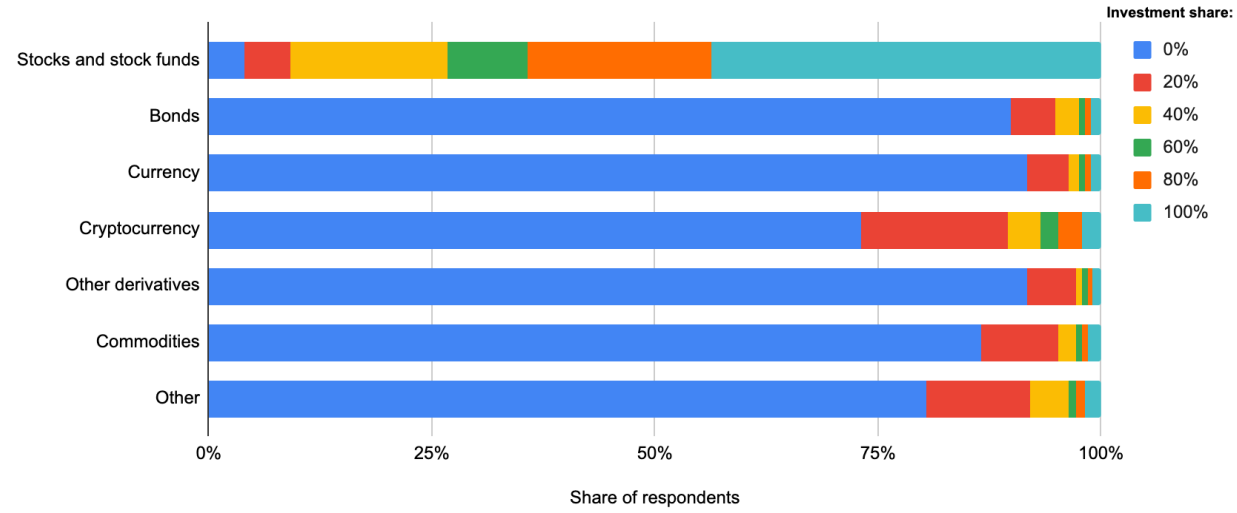


Figure 10. Responses to Question 10. Each chart shows the composition of the corresponding asset in terms of what investment share (0%, 20%, 40%, 60%, 80% or 100%) of the respondents' total investment the asset accounts for.

When looking closer into this data from Figure 9 and Figure 10, it is possible to observe that one of the largest shifts in how people have changed the composition of their portfolios - in terms of percentage of total investment allocated in the financial assets of availability - has occurred amongst stocks and stock funds. The share of respondents who had 100 percent of their investments in stocks and stock funds before the outbreak of the pandemic was approximately 52 percent. The corresponding share after the outbreak of the pandemic is approximately 43 percent. This change indicates that investors have moved from owning only stocks and stock funds as their financial asset, to owning at least some other asset too. In the meantime, the share of respondents who placed 80 percent of their investments in stocks and stock funds has increased from approximately 14 percent to 21 percent. These observed results give rise to the question of which assets investors have turned to when abandoning their previous 100% allocation of stocks and stock funds.

If one looks more closely into how the allocation of the participants' assets has changed, it is possible to see that the share of investors who have gone from not owning any bonds to at least owning some has increased slightly. The same type of change can be observed when analyzing the changes of the other assets available for the respondent; currency, cryptocurrency, other

derivatives, commodities and other. Although these changes are noticeable, they are relatively small. When it comes to almost all assets of pertinence, the observed increase in shifts account for approximately 1-2 percent of the share of respondents changing their allocation from owning nothing to owning at least some in these assets. However, when it comes to cryptocurrency, the share of inventors who have turned from owning nothing to owning some share has increased by 12.5 percent. Before the pandemic, the share of investors who did not own any cryptocurrency at all was about 86 percent. After the outbreak the corresponding share was approximately 73 percent.

The theories of flight to liquidity and flight to quality previously presented and discussed can be applied in order to interpret and explain the result from Figure 9 and Figure 10. If the theory of flight to quality does apply, that will mean that people turn to safer investments and in the meantime abandon less safer investments (Chen, 2020). This logically leads to the question of what is to be considered a safe investment. One could discuss the grade of which various assets are considered as more or less risky. As previously mentioned, the one asset that has seen a relatively large increase in terms of new investors is cryptocurrency. Thus, it is relevant to discuss the theory of flight to quality based on the level of risk associated with cryptocurrencies as well as stocks and stock funds. If cryptocurrencies are considered as less risky assets compared to stocks and stock funds, then this implies that flight to quality has indeed occurred. However, if cryptocurrencies are generally considered as riskier than stocks and stock funds then this shift can most likely not be explained by the theory of flight to quality itself. If one considers the statement by Finansinspektionen (2021), which is that cryptocurrencies are not recommended for most retail investors, then it might be possible to assume that cryptocurrencies are considered riskier than stocks and stocks funds in general. Sveriges Riksbank (2019) does also confirm that there is a relatively large risk associated with cryptocurrencies. With this knowledge in mind, it is not possible to claim that flight to quality is the obvious cause for the observed change in allocations when it comes to stocks and stock funds and cryptocurrencies. A rejection of this theory might also be strengthened by the fact that no significant change occurred in terms of investors turning to bonds instead of stocks and stock funds. This is one example of what is predicted to happen with investors' behavior following the theory of flight to quality and is also confirmed by Opitz and Szimayer (2018).

When it comes to flight to liquidity, the discussion of which assets that are considered liquid and illiquid is of relevance. Cryptocurrency is the one asset that has experienced the

significantly largest change in terms of new investors after the outbreak of the pandemic. Therefore, it also is relevant to discuss whether cryptocurrency can be considered a liquid asset - or at least more or less liquid than stocks and stock funds. If one could argue that cryptocurrency is more liquid than the other assets, then the theory of flight to liquidity would fit the observation of investors turning to this asset specifically. However, if cryptocurrency is not considered a more liquid asset than other assets - primarily stocks and stock funds - then this shift in asset allocation can most certainly not be explained by the theory of flight to liquidity. Based on the information given by Sveriges Riksbank (2019), cryptocurrencies could most likely be considered rather illiquid compared to stocks and stock funds. With this insight, it is not possible to confirm that flight to liquidity has occurred when it comes to cryptocurrencies and the asset shifts observed.

The answers and results from Question 9 and Question 10 do not seem to differ in any significant way when controlling for gender, age, occupation, number of children or marital status.

When it comes to how respondents consider their investment behavior based risk-taking, the following answers were given before the outbreak of COVID-19 (Figure 11) and after (Figure 12).

Question 11: *Before the COVID-19 outbreak, I considered my investment behavior as:*

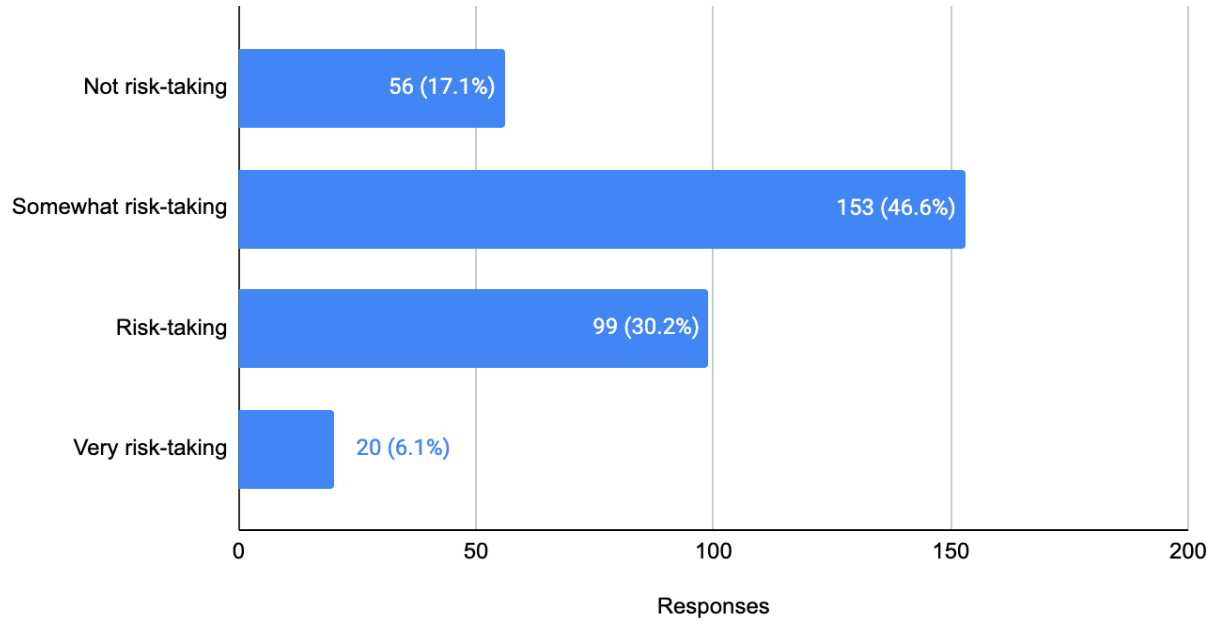


Figure 11. Responses to Question 11 in numbers and (percentage)

Question 12: *After the COVID-19 outbreak, I consider my investment behavior as:*

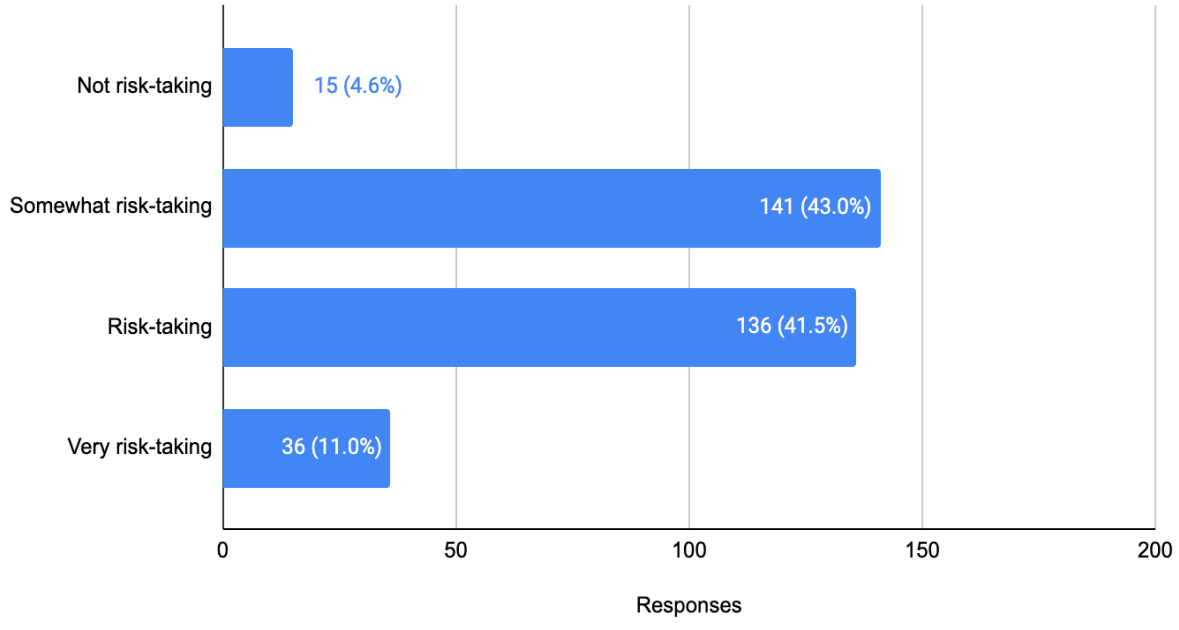


Figure 12. Responses to Question 12 in numbers and (percentage)

When comparing Figure 11 and Figure 12 it can be observed that the share of respondents who previously considered their investment behavior as “Not risk-taking” has decreased from 17.1

percent to 4.6 percent. The share of respondents who consider their investment behavior as "Somewhat risk-taking" has decreased a little but remains relatively similar both before and after the outbreak. Respondents who consider their investment behavior as "Risk-taking" and "Very risk-taking" have increased significantly. Thus, a summary of the respondents' investment behavior when it comes to risk-taking is that the general financial risk-taking has increased amongst retail investors.

The observed result from Figure 11 and Figure 12 can be compared with the result of Huber, Huber and Kirchler's (2021) paper, in which they conclude that non-professional investors - unlike professional investors - did not change their risk-taking behavior during the COVID-19 crisis. When taking their result into account, the observations from comparing Figure 11 and Figure 12 seem strange. However, it is important to remember that in their study, Huber, Huber and Kirchler (2021) defined the time of crisis as the crash occurring between 16 March and 31 March 2020. In the study used for this paper, the corresponding time period was defined as "after the COVID-19 outbreak". This difference could of course have an impact on the result. Since Huber, Huber and Kirchler's (2021) study focuses on a more concentrated time period during which the stock market experienced a rapid decrease in prices, this could reasonably influence their results. This can be compared with the research of this paper, where I did not focus on a concentrated time period but instead on a more general time period occurring after the outbreak of COVID-19.

From the results in Figure 11 and Figure 12 it can be observed that the average risk-taking behavior when it comes to financial investing has increased amongst retail investors. Vayanos (2004) concludes that the theories of flight to liquidity and flight to quality are both positively correlated with increasing uncertainty. He uses volatility as a proxy for uncertainty and further claims that increasing volatility should in fact mean less risk-taking amongst investors. Based on the conclusion of Vayanos (2004), the result from Figure 11 and Figure 12 is surprising. According to the conclusion presented by the author, risk-taking should decrease in times of crises and uncertainty. His statement regarding risk-taking underlines one recurring problem with the approach and method used in this paper. This problem is that the COVID-19 crisis is an ongoing crisis, and the participants of the survey were not given a very specific time period to relate to other than "after the COVID-19 outbreak". Because of this, it is difficult to measure the level of uncertainty during the time of where changes in investment behavior have been observed among the investors participating in the survey. It is also difficult to determine and

compare the degree of uncertainty of this crisis compared to that of previous crises. This makes it difficult to either reject or accept the conclusions by Vayanos (2004). His conclusions are based on financial crises of the past and not ongoing crises. Volatility can potentially be used as a proxy to measure the level of uncertainty of the ongoing COVID-19 crisis. However, the method and approach used in this paper - given the way the participants were asked questions - impedes such a suggestion. It is difficult to specify the volatility of the time period referred to as "after the COVID-19 outbreak" in this research paper.

When comparing the different control groups and their answers about risk-taking (Question 11 & Question 12), most of the comparisons are negligible. However, men stand out in terms of accounting for the entire increase of the total share of investors who consider their behavior as "Very risk-taking" after the outbreak compared to before. The share of women who consider their behavior as "Very risk-taking" is the same (11.3 percent) both before and after the outbreak of the pandemic. Among previous research papers investigating this topic, Byrnes, Miller and Schafer (1999) find that women are on average more risk averse than men. Thus, the fact that men claim to be more risk-taking than women might not be very surprising. I did not find any significant differences when controlling for age, occupation, number of children or marital status.

In the last multiple-choice question of the survey, the respondents got to answer how they consider their attitude towards financial investing in general - after the outbreak of COVID-19 compared to before. The responses are given in Figure 13.

Question 13: *How do you assess your attitude towards investing after the COVID-19 outbreak compared to before?*

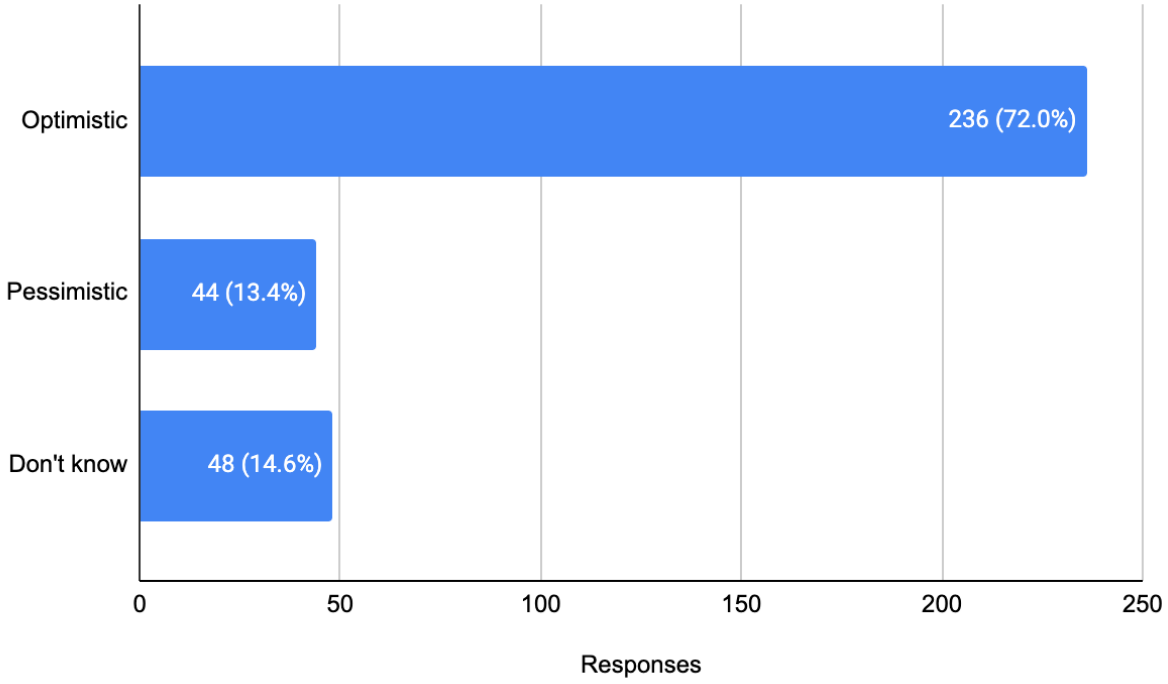


Figure 13. Responses to Question 13 in numbers and (percentage)

As seen in Figure 13, a clear majority (72 percent) of the investors consider their attitude towards investing in financial assets to be more optimistic after the outbreak than before. Such a result can be interpreted as an indication that there is a generally optimistic attitude towards financial investing amongst retail investors.

Further on, the result presented in Figure 13 opens for a discussion of what a generally optimistic attitude towards financial investing might say about referring to a time period as "after the COVID-19 outbreak". Although not firmly established in any of the previous research or theories presented in this paper, one could suspect that in times of crises investors should have a generally more pessimistic attitude towards financial investing rather than optimistic. With this in mind, it becomes relevant to emphasize to what extent investors regard the time period - referred to as "after the COVID-19 outbreak" - as being a time of crisis and uncertainty. Unlike many of the crises exemplified in previous research papers in the literature review, the COVID-19 pandemic is not only an economic crisis with effects on the financial markets. This pandemic is also a global health crisis. This ascertainment should be taken into consideration

since one can suspect that an unprecedented crisis, like COVID-19, might affect the behavior of investors differently. Such an argument goes along with that presented by Huber, Huber and Kirchler (2021) in the literature review - where they claim that the COVID-19 pandemic is an unprecedented crisis that might have unpredictable consequences.

When controlling for age groups, increasing age seems somewhat positively correlated with optimism. Investors in the range 18-34 years old are less optimistic and more pessimistic than investors who are 35 years and older. When controlling for other groups I did not find any significant difference between these based on the answers from Question 13.

The last question of the survey (Question 14) is a non-mandatory open answer question. I will here summarize the most generally common and relevant answers given from this qualitative question.

Question 14.

Question 14: *Is there anything else you wish to add in terms of how your financial investment behavior has changed as a result of the COVID-19 outbreak?*

The first thing that should be mentioned based on the answers to Question 14 is that many investors have stated that the increasing knowledge about financial investment - as observed in Figure 1 and Figure 2 - is mainly due to various aspects and consequences of this specific COVID-19 crisis. Many investors explain that the consequences of the pandemic - for instance various restrictions - has given them more time to do research on financial investments. By spending more time at home as a consequence of the pandemic, investors claim that they have had more time to spend on studying, reading and in other ways collecting information about financial investing. The statements claiming that investors spend more time at home after the outbreak of COVID-19 can be confirmed in a report by Folkhälsomyndigheten (2021). According to this report, Swedes have changed their pattern in terms of decreasing their domestic and international travels in general, and by working more from home (Folkhälsomyndigheten, 2021). The investors state that the change when it comes to how their time is being spent seems to have increased their knowledge about investing. This result can explain that the observed increase in knowledge - following the outbreak of the COVID-19 pandemic - is a consequence of the effects of this crisis in particular. Many investors also claim

that their increased knowledge in investing is a direct effect of financial markets such as stock markets and the markets for cryptocurrencies performing well. Thus, investors also seem to have expanded their knowledge because of these markets having been favorable when investing.

Another type of answer that is given rather frequently is that investors seem to have increased their investment rate as a result of having more money to spend on investing. These answers indicate that the restrictions following the pandemic mean that individuals are no longer able to - or simply do not prefer to - spend their money on the same sort of entertainment as before the pandemic. Examples of such entertainments are given and include visiting nightclubs, buying clothes, and travelling. The report by Folkhälsomyndigheten (2021) confirms that Swedes do travel significantly less and spend more time at home during the pandemic compared to before the pandemic. The fact that people go out and travel less is likely to lead to people also having more savings to spend on other alternatives. SCB (2021c) confirms that there has indeed been an increase in savings amongst Swedish households during the pandemic. These arguments could be used to reinforce and confirm the results observed in Figure 3 and Figure 4 as well as Figure 5 and Figure 6, which is that retail investors invest more frequently as well as a larger share of their income after the outbreak of the pandemic compared to before.

A third type of answer frequently given can be summarized as investors claiming to have increased the diversification of their portfolio because of the COVID-19 outbreak. Many investors state that the increase in diversification means a higher investment rate in other financial asset types - one of them being cryptocurrency. Investors seem to have become aware that crises do occasionally strike and that there will most likely come new crises in the future once the COVID-19 crisis is over. The increase in willingness to diversify seems to be a consequence of investors becoming more aware of the risks on financial markets after the outbreak of the COVID-19 crisis. Given these answers, the change in asset allocation among investors observed in Figure 9 and Figure 10 can possibly be explained by a larger will to diversify as a direct consequence of the pandemic and the increased awareness of risk. Thus, this argument can explain why investments in cryptocurrencies have increased significantly, as observed in the results.

I did not find any noticeable results when comparing the open answers from Question 14 with different control groups.

When it comes to the results from the survey, there are some aspects and perspectives that are relevant to add to this discussion. First, as already discussed in relation to financial risk-taking behavior (Figure 11 and Figure 12), one should have in mind that the result from the survey is based on the relatively broad time period referred to as "after the COVID-19 outbreak". Such a definition gives the participants a lot of freedom when it comes to answering questions about their financial investment behavior. In other research papers investigating the same sort of financial investment behavior, the time period was generally much more precise and not ongoing. This ascertainment can of course influence the responses to other questions of this survey and is therefore important to underline.

As confirmed by Greenspan (2004), in times of crisis and uncertainty such as that of COVID-19, the theories of flight to quality and flight to liquidity are applicable as investors turn from risky to less risky assets - and from illiquid to more liquid assets. However, Caballero and Krishnamurthy (2008) argue that flight to quality does not have to occur during all crises just because it has previously occurred during a similar crisis. With this argument in mind, it does not appear strange that flight to quality seems to be non-existing based on the results from the survey. It should however be mentioned that Caballero and Krishnamurthy (2008) primarily focus on professional investors when presenting their theory. Vayanos's (2004) conclusion that flight to quality and flight to liquidity are both positively correlated with increasing volatility provides another argument to why these theories might not be able to confirm in this research. To be able to confirm these theories, the volatility of the time period referred to as "after the COVID-19 outbreak" needs to be measured and compared. When it comes to flight to liquidity, Ben-Rephael (2017) claims that although this phenomenon seems to appear in times of uncertainty, it is not certain what assets in particular that investors will actually turn to when searching for liquidity. This conclusion is important to keep in mind when analyzing how the asset allocation amongst the retail investors has changed since it indicates that there does not have to be certain absolute assets that individuals turn to in terms of liquidation. Thus, with Ben-Rephaels's (2017) conclusion in mind, the observed increase in cryptocurrency as seen in Figure 9 and Figure 10 might be the result of flight to liquidity - but it might as well be a consequence to be explained by some other theory.

Finally, it should be considered that none of the previous research papers and literature discussed have focused on Sweden and Swedish investors. Many of these papers have focused on the markets of the United States as well as the investors active there. The effects that

COVID-19 outbreak has had on the Swedish stock market index OMXS30 and the US stock market indices The Dow and S&P 500 look relatively similar when comparing the data from Avanza (2021) with that Banerji (2020) claims in his article. According to the report conducted by Klapper, Lusardi and van Oudheusden (2016), Swedish investors have a relatively high financial literacy rate, in common with other northern European countries as well as for instance the United States. Based on these comparisons, there is no general obvious reason to believe that the theories and various conclusions from the literature review to be remarkably different when applied to Swedish investors and the Swedish market. Other potential differences between Sweden and other countries can of course be of influential character when comparing financial investment behavior. However, since no obvious differences or explanations are found in previous literature as well as applicable theories and data, the discussion throughout this thesis has been performed with the assumption that previous literature and theories are generally applicable on Sweden and Swedish investors.

5.2. Policy implications

The observed increasing interest in cryptocurrency, seemingly on behalf of previously - and arguably traditionally - preferred assets stocks and stock bonds, should be considered by policy makers within the financial sectors. In parallel with the observed increasing interest for cryptocurrency, the global market value of cryptocurrencies has also increased (CoinMarketCap, 2021). The observed increase in interest and in market value have occurred in the presence of the pandemic. This appears to be quite a remarkable change in investment behavior when considering the relatively fast time period during which it seems to have occurred. Both Sveriges Riksbank (2019) and Finansinspektionen (2021) have expressed skepticism regarding cryptocurrencies when it comes to the validity and risk associated with these types of assets. It therefore seems reasonable to suggest that these observed changes from the results might have future implications. Thus, policy and system makers - particularly Sveriges Riksbank and Finansinspektionen - should be aware of these observations.

5.3. Future research

To improve the research in this paper, it can first be relevant to investigate how investors have changed their behavior during a more precise time period than what was done in this thesis. If

the respondents are given a more precise time period to base the answers of the survey on, then the result would potentially be more accurate and credible. In that case it is possible to assume a result in which the investors consider the same precise time periods when comparing their own behavior. From doing so, it is possible to further investigate more in detail what the measured level of uncertainty might be in the time periods of which the result is based on. One example of doing so would be by using volatility as a proxy for uncertainty as suggested in the literature. This makes it possible to draw conclusions based on the level of uncertainty and thereby compare the COVID-19 crisis with other crises in terms of level of uncertainty.

A second addition to further research is to add a group of professional investors to fill the survey out. This enables a comparison between non-professional investors and professional investors. The potential differences and similarities between the two can be analyzed and compared to see whether the result is in fact any different.

A third suggestion for future research is to include a way of objectively determine the level of liquidity - as well as a more detailed risk determination associated with each financial asset. This can probably facilitate the predictions of what is supposed to happen with the allocation of financial assets in terms of flight to quality and flight to liquidity.

Finally, future research could focus on including data on investors from other countries than Sweden. Including data from other countries generates results that open for a cross-country comparison with the result of Swedish investors.

6. Conclusion

The purpose of this thesis was to investigate how Swedish retail investors have changed their financial investment behavior following the COVID-19 pandemic. To do so, data about retail investors' behavior was collected using a survey. The data was later analyzed and compared.

Based on the results from the data from the survey it is possible to claim that the respondents' investment behavior has changed following the COVID-19 pandemic. There are however some aspects that need to be considered before answering the thesis of this paper. First, the data on which the conclusion of this paper is based upon has not been used before. Although it is possible to answer the thesis based on the information given by this data, it is also important to underline that the data used is completely based on the participants' answers in the survey. Secondly, it should also be emphasized that the results are based on the respondents' own judgement of their investment behavior and their comparisons before and after the outbreak of the pandemic. Finally, it is relevant to mention that the results and conclusion of this paper are based on the fact that the observed changes have occurred in the presence of the COVID-19 pandemic outbreak. Although some of the changes appear to be direct consequences of the pandemic itself, it is not further investigated whether all changes observed are consequences of the actual pandemic or other parallel factors.

With this in mind, it can be concluded that Swedish retail investors have become more knowledgeable about financial investing since the outbreak of the pandemic. They invest more frequently as well as a larger share of their income after the outbreak than before, which defies the theory of lower investment rates in times of crises presented by Carruth, Dickerson and Hensley (2000). The higher investment rates also seem to defy the theory of flight to quality. The investment horizon among the investors remains relatively unchanged although a minor increase from medium range to a longer range is observed and does seem to confirm the theory suggesting this presented by Greenspan (2004). There is a notable change in the retail investors' allocation of financial assets. In general, the investors have turned from stocks and stock funds to other types of assets. Most of the shifts in asset types are of negligible change although the shift to cryptocurrency does stand out in terms of the share of respondents now preferring this asset over stocks and stock funds. The reason for this change seems difficult to explain based on the theories of flight to quality and flight to liquidity. The degree of risk-taking behavior

when it comes to investing has increased among retail investors. This result might appear strange since it deviates from that of previous research presented by Vayanos (2004), where he claims that the opposite should happen in times of crises. Finally, investors seem to have a more optimistic view towards financial investing after the outbreak of the pandemic compared to before. This result is not claimed to be predicted to happen and neither is it rejected. It does however open for a discussion of what the consequences of the pandemic being an unprecedented crisis might have for investors and their financial investment behavior. The fact that the COVID-19 crisis is an unprecedented shock is confirmed by the results from the last open question of the survey. Investors claim to have experienced certain changes mainly because of the restrictions and other specific consequences related to the pandemic. Thus, although some of the observed changes in financial investment behavior might appear surprising when discussed in the presence of previous research and commonly used theories, these results should not be rejected promptly. The conclusion of this is that the observed results might be possible to confirm in terms of credibility. An unprecedented crisis such as the COVID-19 crisis can have unpredicted consequences and results following.

It can also be concluded that when controlling for different groups: gender, age, occupation, number of children and marital status, the results from the survey differed somewhat. In most cases these comparisons were not significant and could most likely be considered negligible. Some more significant differences did recur in terms of comparing men and women as well as age groups. I find that middle aged men claim to have increased their knowledge about investing more than other groups after the outbreak of the pandemic. Women seem to have increased their investment rate more than men in terms of frequency and share of income invested. I also find that men tend to be more risk-taking than women, which is confirmed by previous research. Older investors also appear more optimistic than younger.

The observed increasing interest and investment in cryptocurrencies in the presence of the COVID-19 crisis should according to me be considered by policy and system makers - not least Sveriges Riksbank and Finansinspektionen.

Future research can suggestively include an investigation and measurement of the level of uncertainty during a more precise time period. Adding these dimensions - and a method of determining the risk and liquidity level of various assets - to the research would help to either confirm or reject the theories of flight to quality and flight to liquidity and conclusions of

previous research. Data on other countries than Sweden as well as on professional investors can also be used to compare and understand the result better.

7. References

Avanza. (2021). OMX Stockholm 30, Available online: https://www.avanza.se/index/om-indexet.html/19002/omx-stockholm-30 [Accessed 12 May 2021]

Banerji, G. (2020). Why Did Stock Markets Rebound From Covid in Record Time? Here are five reasons, The Wall Street Journal, 15 September, Available online: https://www.wsj.com/articles/why-did-stock-markets-rebound-from-covid-in-record-time-here-are-five-reasons-11600182704 [Accessed 11 May 2021]

Bell, M.R. (2016). The Liquidity Spectrum [pdf], Available at: https://www.cnlsecurities.com/core/fileparse.php/196/urlt/va-the-liquidity-spectrum.pdf [Accessed 16 April 2021]

Ben-Rephael, A. (2017). Flight-to-Liquidity, Market Uncertainty, and the Actions of Mutual Fund Investors, *Journal of Financial Intermediation,* [e-journal] vol. 31, Available through: LUSEM Library website http://www.lusem.lu.se/library [Accessed 25 April 2021]

Byrnes, J.P., Miller, D.C., & Schafer, W.D. (1999). Gender Differences in Risk Taking: A meta-analysis, *Psychological Bulletin*, [e-journal] vol. 125, no. 3, Available through: LUSEM Library website http://www.lusem.lu.se/library [Accessed 18 May 2021]

Byström, H. (2014). Finance, Sweden: Studentlitteratur

Caballero, R.J., & Krishnamurthy, A. (2008). Collective Risk Management in a Flight to Quality Episode, *The Journal of Finance,* [e-journal] vol. 63, no 5, Available through: LUSEM Library website http://www.lusem.lu.se/library [Accessed 22 April 2021]

Carruth, A., Dickerson, A., & Henley, A. (2000). What do We Know About Investment Under Uncertainty?, *Journal of Economic Surveys,* [e-journal] vol. 14, no 2, Available through: LUSEM Library website http://www.lusem.lu.se/library [Accessed 11 May 2021]

Chen, J. (2020). Flight to Quality, Available online: https://www.investopedia.com/terms/f/flighttoquality.asp [Accessed 15 April 2021]

CoinMarketCap. (2021). Global Cryptocurrency Charts: Total market capitalization, Available online: https://coinmarketcap.com/charts/ [Accessed 12 May 2021]

Curry, B., & Marquit, M. (2021). Understanding Liquidity: Why you need liquid assets, Available online: https://www.forbes.com/advisor/investing/liquidity-and-liquid-assets/ [Accessed 14 May 2021]

Finansinspektionen. (2021). Finansiella Instrument med Krypto-tillgångar som Underliggande Tillgång [pdf], trans. J Erlandsson, Available online: https://www.fi.se/contentassets/5c49cce9660d44be860b5a9b70509c41/fi-tillsyn-21-finansiella-instrument-kryptotillgangar-ny.pdf [Accessed 13 May 2021]

Folkhälsomyndigheten. (2021). Rapport om Rörelse- och Resemått, vecka 18 2021, trans. J Erlandsson, Available online: https://www.folkhalsomyndigheten.se/smittskydd-beredskap/utbrott/aktuella-utbrott/covid-19/statistik-och-analyser/analys-och-prognoser/veckorapport-om-rorelsedata/ [Accessed 18 May 2021]

Gopinath, G. (2020). The Great Lockdown: Worst economic downturn since the Great Depression, web blog post, Available at: https://blogs.imf.org/2020/04/14/the-great-lockdown-worst-economic-downturn-since-the-great-depression/ [Accessed 15 April 2021]

Greenspan, A. (2004). Risk and Uncertainty in Monetary Policy, *The American Economic Review,* [e-journal] vol. 94, no.2, Available through: LUSEM Library website http://www.lusem.lu.se/library [Accessed 15 April 2021]

Huber, C., Huber, J., & Kirchler, M. (2021). Market Shocks and Professionals' Investment Behavior - Evidence from the COVID-19 crash [pdf], Department of Banking and Finance, working paper, no.2020-11, University of Innsbruck, Available online: https://www2.uibk.ac.at/downloads/c4041030/wpaper/2020-11.pdf [Accessed 25 April 2021]

IMF. (2020). Central Bank Support to Financial Markets in the Coronavirus Pandemic [pdf], Available at: https://www.imf.org/~/media/Files/Publications/covid19-special-notes/en-special-series-on-covid-19-central-bank-support-to-financial-markets-in-the-coronavirus-pandemic.ashx?la=en [Accessed 12 May 2021]

Kenton, W. (2020). Flight to Liquidity, Available online: https://www.investopedia.com/terms/flight-to-liquidity.asp [Accessed 15 April 2021]

Klapper, L., Lusardi, A., & van Oudheusden, P. (2016). Financial Literacy Around the World: Insights from the Standard & Poor's ratings services: Global financial literacy services [pdf], Available at: https://gflec.org/wp-content/uploads/2015/11/3313-Finlit_Report_FINAL-5.11.16.pdf?x49160#:~:text=Source%3A%20S%26P%20Global%20FinLit%20Survey.&text=The%20countries%20with%20the%20highest,of%20adults%20are%20financially%20literate [Accessed 17 May 2021]

Leahy, J.V., & Whited, T.M. (1996). The Effect of Uncertainty on Investments: Some stylized facts, *Journal of Money, Credit and Banking,* [e-journal] vol. 28, no 1, Available through: LUSEM Library website http://www.lusem.lu.se/library [Accessed 22 April 2021]

Mosser, P. C. (2020). Central Bank Responses to COVID-19 [pdf], Available at: https://link.springer.com/article/10.1057/s11369-020-00189-x [Accessed 15 April 2021]

Opitz, S., & Szimayer, A. (2018). What Drives Flight to Quality? [pdf], Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2665193 [Accessed 12 May 2021]

Pant, P. (2021). What Are the S&P 500, Nasdaq and the Dow?, Available online: https://www.thebalance.com/the-sandp-500-nasdaq-dow-jones-what-is-this-stuff-453745 [Accessed 26 May 2021]

SCB. (2021a). Aktieägarstatistik december 2020, trans. J Erlandsson, Available online: https://www.scb.se/hitta-statistik/statistik-efter-amne/finansmarknad/aktieagarstatistik/aktieagarstatistik/pong/statistiknyhet/aktieagarstatistik-december-2020/ [Accessed 11 May 2021]

SCB. (2021b). Hushållens Ägande Efter Ålder och Kön, trans. J Erlandsson, Available online: https://www.scb.se/hitta-statistik/statistik-efter-amne/finansmarknad/aktieagarstatistik/aktieagarstatistik/pong/tabell-och-diagram/hushallens-agande-efter-alder-och-kon/ [Accessed 13 May 2021]

SCB. (2021c). Lugn Avslutning på Historiskt År, trans. J Erlandsson, Available online: https://www.scb.se/hitta-statistik/statistik-efter-amne/nationalrakenskaper/amnesovergripande-statistik/sveriges-ekonomi-statistiskt-perspektiv/pong/statistiknyhet/sveriges-ekonomi--statistiskt-perspektiv-nr-3-2021/ [Accessed 12 May 2021]

SCB. (2021d). Aktieförmögenheten På Ny Rekordnivå, trans. J Erlandsson, Available online: https://www.scb.se/hitta-statistik/statistik-efter-amne/finansmarknad/aktieagarstatistik/aktieagarstatistik/pong/statistiknyhet/aktieagarstatistik-juni-2019/ [Accessed 13 May 2021]

Smith, E. (2020). Global Stocks Head For Worst Weeks Since the Financial Crisis Amid Fears of Possible Pandemic, CNBC, 28 February, Available online: https://www.cnbc.com/2020/02/28/global-stocks-head-for-worst-week-since-financial-crisis-on-coronavirus-fears.html [Accessed 11 May 2021]

Statista. (2021a). Development of the MSCI World Index from 1986 to 2020, Available online: https://www.statista.com/statistics/276225/annual-trend-of-the-msci-world-index-since-1969/ [Accessed 15 April 2021]

Statista. (2021b). Market Capitalization of Bitcoin from April 2013 to April 14 2021, Available online: https://www.statista.com/statistics/377382/bitcoin-market-capitalization/ [Accessed 15 April 2021]

Sveriges Riksbank. (2019). Betalningsmarknaden Digitaliseras, trans. J Erlandsson, Available online:

https://www.riksbank.se/sv/betalningar--kontanter/sa-betalar-svenskarna/sa-betalar-svenskarna-2019/betalningsmarknaden-digitaliseras/kryptovalutor-ar-inte-vanliga-pengar/ [Accessed 12 May 2021]

Vayanos, D. (2004). Flight to Quality, Flight to Liquidity, and the Pricing of Risk [pdf], Sloan School of Management, working paper, no.10327, Massachusetts Institute of Technology Available online: https://www.nber.org/system/files/working_papers/w10327/w10327.pdf [Accessed 15 April 2021]

World Health Organization. (2020). WHO Director-General's Opening Remarks at the Media Briefing on COVID-19 - 11 March 2020, Available online: https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020 [Accessed 15 April 2021]

8. Appendices

8.1. Appendix A: The attached message when distributing the survey online

Hej!

Jag håller just nu på att skriva mitt examensarbete där jag undersöker hur individers finansiella investeringsbeteende påverkats av Covid-19-utbrottet.

Om du investerat i finansiella instrument (aktier, valutor, etc..) - både före och under Coronapandemin - så hade jag verkligen uppskattat om du tog dig tid att fylla i denna enkät.

Tack på förhand.

8.2. Appendix B: The outline of the survey

Enkät om finansiellt investeringsbeteende

Syftet med denna enkät är att undersöka hur individers finansiella investeringsbeteende har ändrats till följd av Covid-19-utbrottet i mars 2020. Enkäten riktar sig till individer som aktivt investerat i *finansiella tillgångar innan och under Coronapandemin.

*Med finansiella tillgångar avses placeringar i finansiella instrument (aktier, obligationer, valutor, råvaror och andra derivatinstrument).

Enkäten består av fem kontrollfrågor och 14 st flervalsfrågor och tar ca 3-4 minuter att genomföra.

* Required

1. Jag är: *

Mark only one oval.

- ◯ Man
- ◯ Kvinna
- ◯ Annat

2. Min ålder: *

Mark only one oval.

- ◯ 0-17
- ◯ 18-24
- ◯ 25-34
- ◯ 35-44
- ◯ 45-54
- ◯ 55-64
- ◯ 65-74
- ◯ 74+

3. Min sysselsättning: *

Mark only one oval.

- ◯ Student
- ◯ Egenanställd
- ◯ Anställd
- ◯ Arbetslös
- ◯ Pensionär
- ◯ Annat

4. Hur många barn har du? *

Mark only one oval.

- ◯ 0
- ◯ 1
- ◯ 2
- ◯ 3
- ◯ Fler än 3

5. Civilstånd: *

Mark only one oval.

- ◯ Singel
- ◯ I ett förhållande
- ◯ Gift
- ◯ Skild
- ◯ Annat

6. 1. Jag betraktar mina kunskaper om investeringar före Covid-19-utbrottet att ha varit: *

   Mark only one oval.

   - ◯ Inga
   - ◯ Begränsade
   - ◯ Goda
   - ◯ Omfattande

7. 2. Jag betraktar min kunskaper om investeringar efter Covid-19-utbrottet att vara: *

   Mark only one oval.

   - ◯ Inga
   - ◯ Begränsade
   - ◯ Goda
   - ◯ Omfattande

8. 3. Jag investerar oftare efter Covid-19-utbrottet än före: *

   Mark only one oval.

   - ◯ Ja
   - ◯ Nej
   - ◯ Lika ofta
   - ◯ Vet ej

9. 4. Jag investerar en större andel av min inkomst efter Covid-19-utbrottet än före. *

Mark only one oval.

- ◯ Ja
- ◯ Nej
- ◯ Lika stor andel
- ◯ Vet ej

10. 5. Hur stor andel av din inkomst investerade du i finansiella tillgångar före Covid-19-utbrottet: *

Mark only one oval.

- ◯ 0-10%
- ◯ 11-20%
- ◯ 21-30%
- ◯ Mer än 30%

11. 6. Hur stor andel av din inkomst investerar du i finansiella tillgångar efter Covid-19-utbrottet: *

Mark only one oval.

- ◯ 0-10%
- ◯ 11-20%
- ◯ 21-30%
- ◯ Mer än 30%

12. 7. Före Covid-19-utbrottet planerade jag att frigöra en större andel av min totala investering inom: *

Mark only one oval.

- ◯ Mindre än 1 år
- ◯ 1-3 år
- ◯ 4-7 år
- ◯ 8-11 år
- ◯ Mer än 11 år

13. 8. Efter Covid-19-utbrottet planerar jag att frigöra en större andel av min totala investering inom: *

Mark only one oval.

- ◯ Mindre än 1 år
- ◯ 1-3 år
- ◯ 4-7 år
- ◯ 8-11 år
- ◯ Mer än 11 år

Notera:
Din totala "score" i fråga 9 ska addera till 100%

14. 9. Före Covid-19-utbrottet utgjorde min investeringsandel (av mina totala investeringar) i följande tillgångar: *

Mark only one oval per row.

	0%	20%	40%	60%	80%	100%
Aktier och aktiefonder	◯	◯	◯	◯	◯	◯
Obligationer	◯	◯	◯	◯	◯	◯
Valuta (ej krypto)	◯	◯	◯	◯	◯	◯
Kryptovaluta	◯	◯	◯	◯	◯	◯
Andra derivatinstrument (optioner, swappar, etc)	◯	◯	◯	◯	◯	◯
Råvaror (guld, olja, etc)	◯	◯	◯	◯	◯	◯
Annat	◯	◯	◯	◯	◯	◯

Notera:
Din totala "score" i fråga 10 ska addera till 100%

15. 10. Efter Covid-19-utbrottet utgjorde min investeringsandel (av mina totala investeringar) i följande tillgångar: *

Mark only one oval per row.

	0%	20%	40%	60%	80%	100%
Aktier och aktiefonder	◯	◯	◯	◯	◯	◯
Obligationer	◯	◯	◯	◯	◯	◯
Valuta (ej krypto)	◯	◯	◯	◯	◯	◯
Kryptovaluta	◯	◯	◯	◯	◯	◯
Andra derivatinstrument (optioner, swappar, etc)	◯	◯	◯	◯	◯	◯
Råvaror (guld, olja, etc)	◯	◯	◯	◯	◯	◯
Annat	◯	◯	◯	◯	◯	◯

16. 11. Före Covid-19-utbrottet betraktade jag mitt investeringsbeteende som: *

Mark only one oval.

- ◯ Ej risktagande
- ◯ Något risktagande
- ◯ Risktagande
- ◯ Väldigt risktagande

17. 12. Efter Covid-19-utbrottet betraktar jag mitt investeringsbeteende som: *

Mark only one oval.

- ◯ Ej risktagande
- ◯ Något risktagande
- ◯ Risktagande
- ◯ Väldigt risktagande

18. 13. Hur bedömer du din inställning till investering efter Covid-19-utbrottet jämfört med före: *

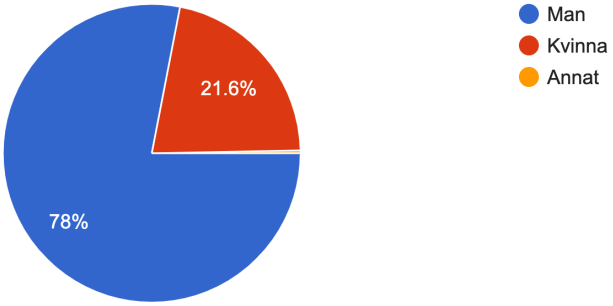
Mark only one oval.

- ◯ Optimistisk
- ◯ Pessimistisk
- ◯ Vet ej

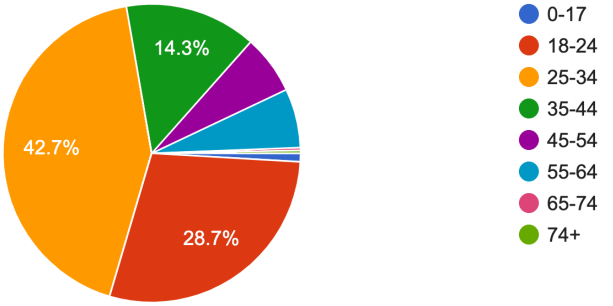
19. 14. Finns det något annat du vill tillägga om hur ditt finansiella investeringsbeteende har ändrats till följd av Covid-19-utbrottet?

8.3. Appendix C: Answers from survey (initial form)

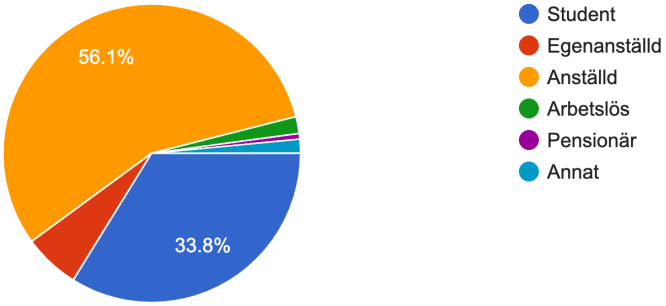
Jag är:
328 responses



Min ålder:
328 responses

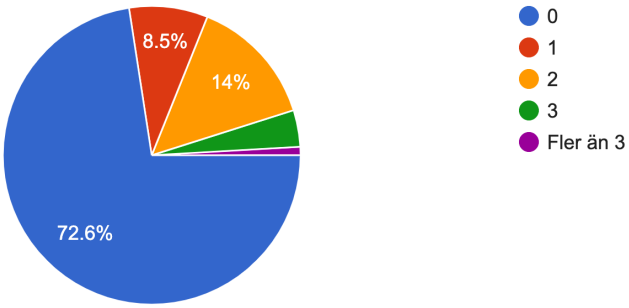


Min sysselsättning:
328 responses



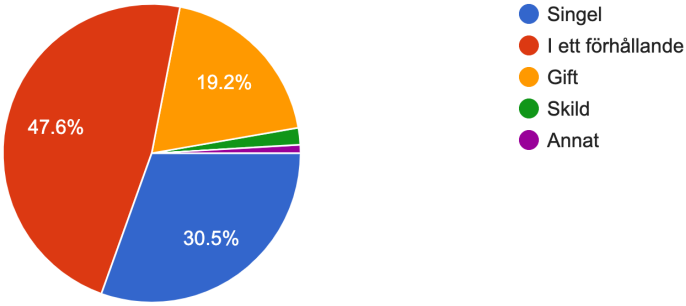
Hur många barn har du?

328 responses



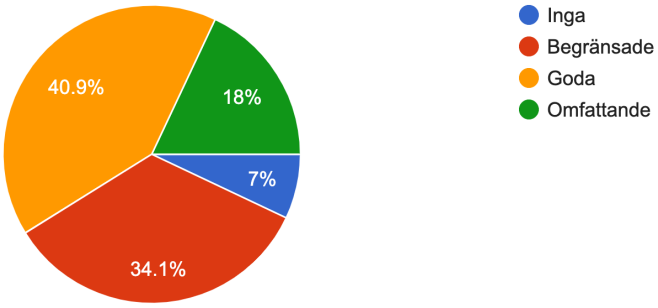
Civilstånd:

328 responses



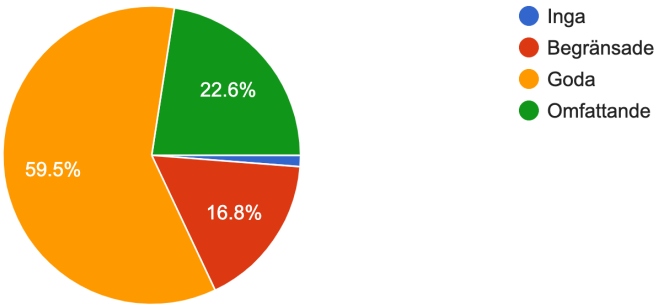
1. Jag betraktar mina kunskaper om investeringar före Covid-19-utbrottet att ha varit:

328 responses



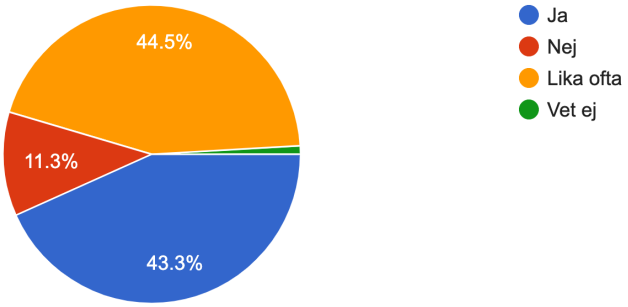
2. Jag betraktar min kunskaper om investeringar efter Covid-19-utbrottet att vara:

328 responses



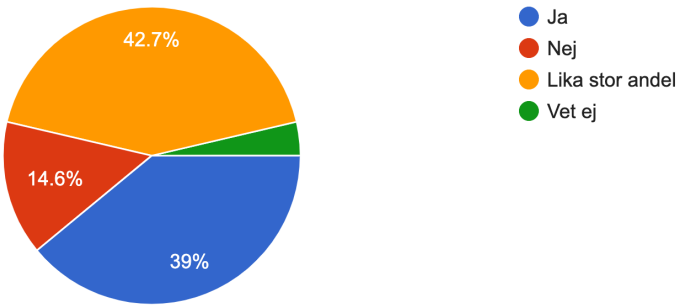
3. Jag investerar oftare efter Covid-19-utbrottet än före:

328 responses



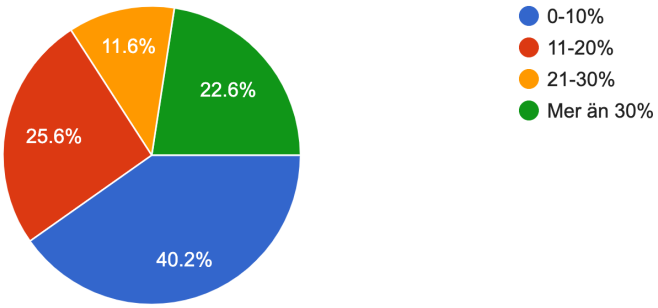
4. Jag investerar en större andel av min inkomst efter Covid-19-utbrottet än före.

328 responses



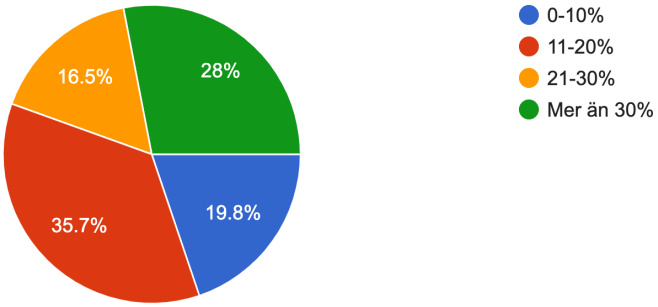
5. Hur stor andel av din inkomst investerade du i finansiella tillgångar före Covid-19-utbrottet:

328 responses



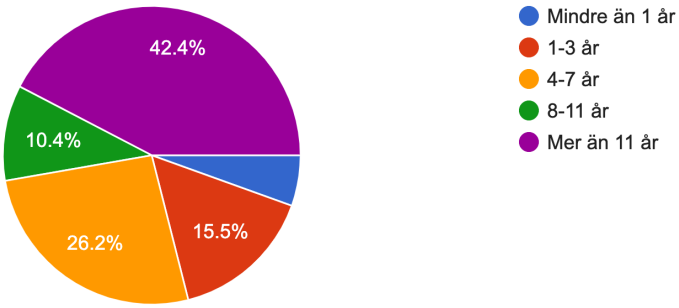
6. Hur stor andel av din inkomst investerar du i finansiella tillgångar efter Covid-19-utbrottet:

328 responses



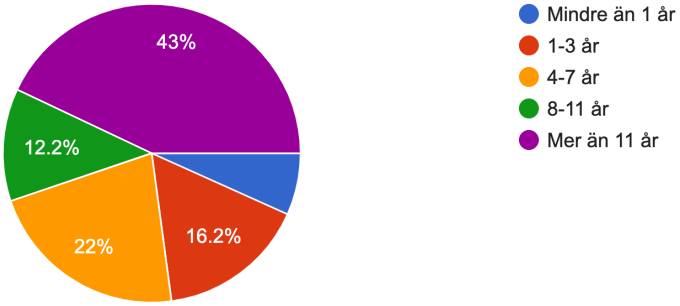
7. Före Covid-19-utbrottet planerade jag att frigöra en större andel av min totala investering inom:

328 responses

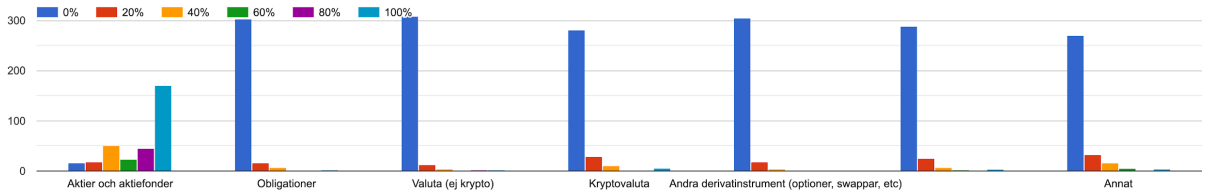


8. Efter Covid-19-utbrottet planerar jag att frigöra en större andel av min totala investering inom:

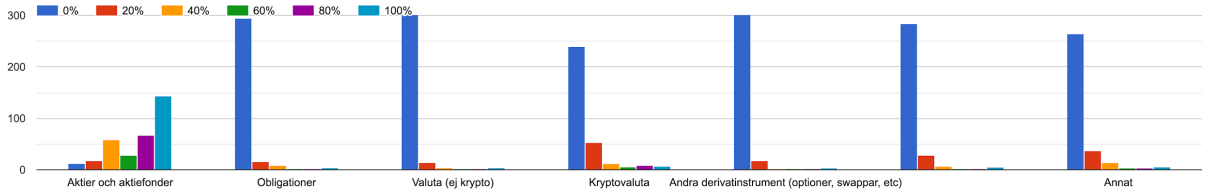
328 responses



9. Före Covid-19-utbrottet utgjorde min investeringsandel (av mina totala investeringar) i följande tillgångar:

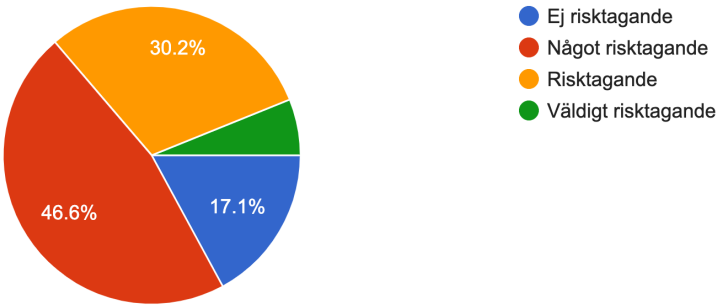


10. Efter Covid-19-utbrottet utgjorde min investeringsandel (av mina totala investeringar) i följande tillgångar:



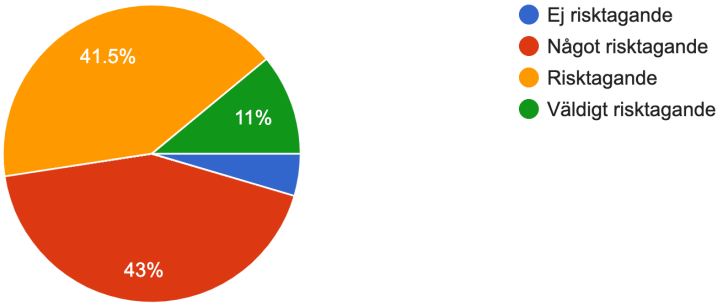
11. Före Covid-19-utbrottet betraktade jag mitt investeringsbeteende som:

328 responses



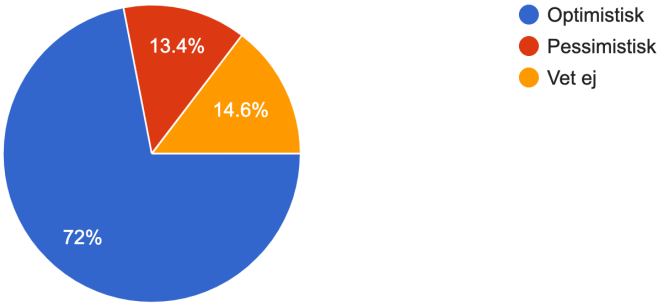
12. Efter Covid-19-utbrottet betraktar jag mitt investeringsbeteende som:

328 responses



13. Hur bedömer du din inställning till investering efter Covid-19-utbrottet jämfört med före:

328 responses



14. Finns det något annat du vill tillägga om hur ditt finansiella investeringsbeteende har ändrats till följd av Covid-19-utbrottet?

88 responses

Because of many answers, the answers to Question 14 are not included in the appendix. The summary of the answers to this qualitative question are summarized in the results section.

The answers to Question 14 can be provided upon request.