



LAUREA
AMMATTIKORKEAKOULU
Yhdessä enemmän

The Effects of Social Behaviour on the Stock Market

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2017 Laurea

Laurea-ammattikorkeakoulu

The Effects of Social Behaviour on the Stock Market

Saavedra Jari
HLE214SN
Bachelor's Thesis
November, 2017

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Vuosi	2017	Sivumäärä	37
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Opinnäytetyön tarkoituksena oli osoittaa kuinka osakemarkkinat eivät ole aina tehokkaat ja että sijoittajat tekevät usein irrationaalisia transaktioita joilla on suuri vaikutus niihin. Tähtöytenä oli huomioda ja tutkia kuinka markkinapsykologian ja laumakäyttäytymisen efektit näkyvät osakemarkkinoissa ja niiden toiminnassa. Opinnäytetyön tähtöytenä ei ollut antaa yksiselitteisiä vastauksia tiettyihin romahduksiin tai irrationaaliin liikkeisiin joita usein olemme nähneet osakemarkkinoilla, vaan yrittää osoittaa kuinka sijoittajien käyttäytymisellä voi olla suuri vaikutus niihin. Opinnäytteestä voivat saada hyötyä kaikki sijoitusmaailmaan ja käyttäytymistaloustieteeseen kiinnostuneet niin kuin esimerkiksi yksityissijoittajat, finanssialalla työskentelevät eri henkilöt tai Osakesäästäjien Keskusliitto, joka on ollut erittäin kiinnostunut julkaisemaan tämän tutkimuksen tulokset.

Opinnäytetyön teoreettinen viitekehys perustuu käyttäytymistaloustieteen pohjalle. Teoria perustui taloustieteilijän Richard Thalerin sekä psykologien Daniel Kahnemanin ja Amos Tverskyn tutkimuksiin ja teorioihin ja se käsitteli tämän tutkimuksen kannalta tärkeimpiä osia-alueita.

Opinnäytetyön tutkimus toteutettiin kvalitatiivisella menetelmällä. Tutkimuksen keskeinen päämäärä oli tutkia markkinapsykologian ja laumakäyttäytymisen efektejä osakemarkkinoissa ja aineistona käytettiin, äsken mainittujen tieteilijöiden kirjallisuuskatsausten lisäksi, kyselyä joka lähetettiin Suomen suurimmille ja tärkeimmille salkunhoitajille ja sijoittajille.

Tutkimuksen tulokset kuvasivat kuinka ihmiset ja sijoittajat eivät ole aina rationaalisia ja tähtöyten toimivat useasti irrationaalisesti. Tuloksissa esiintyi että tämä sijoittajien irrationaalinen käyttäytyminen osakemarkkinoilla aiheuttaa myös irrationaalisia kursseja tai osakkeiden hintoja joita ammattilaiset pyrkivät käyttämään hyväkseen tehdäksään parempaa tuottoa.

Asiasanat: Osakemarkkinat, Käyttäytymistaloustiede, Sijoittajan Käyttäytyminen, Markkina-psykologia, Laumakäyttäytyminen

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The purpose of this Bachelor's thesis was to show how the stock markets are not always efficient and that investors often make irrational transactions with great impact on them. The goal was to take into account and examine how the effects of market psychology and herd behaviour are reflected in the stock markets and its functioning. The aim of this thesis was not to give unambiguous answers to certain market crashes or irrational movements that we have often seen in the stock markets, but to try to show how the behaviour of investors can have a major impact on them. This thesis can benefit all those interested in investing and behavioural economics, such as private investors, people working in the financial sector or The Finnish Shareholders Association (Osakesäästäjien Keskusliitto) who has been very interested in publishing the results of this study.

The theoretical framework of this thesis is based on the theory of behavioural economics. The theory was based on the researches and theories of economist Richard Thaler and psychologists Daniel Kahneman and Amos Tversky and it discussed the most important aspects of this research.

The research method used for the accomplishment of this thesis was a qualitative method. The main purpose of this study was to investigate the effects of market psychology and herd behaviour on the stock markets and, in addition to the literary reviews of the aforementioned scholars, it was also used for this thesis an enquiry sent to the largest and most important portfolio managers and investors in Finland.

The results of this study describe how people and investors are not always rational and they often operate and act irrationally. The results indicate that this irrational behaviour of investors on the stock markets also causes irrational courses or stock prices that professionals in the field try to take advantage of in order to make a better return.

Keywords: Stock markets, Behavioral finance, Investor Behaviour, Market Psychology, Herd Behavior

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1 Introduction

Stock exchanges play a vital role in the functioning of the economic machine, providing the backbone of the economic infrastructure of a modern nation. The stock market does not only provide the companies another way of raising money for their investments or a way for the investors to allocate risk and time their consumption, they also provide order and impose regulations for trading stocks. Finally, stock exchanges and all the companies that are associated with them provide hundreds of thousands of jobs.

The stock market has a huge impact in the macroeconomics of a country. They provide companies with the ability to raise capital to expand their business and investors to be part of that aimed growth. When a company needs to raise money, it can sell company shares to the public. This is achieved by listing their shares on a stock exchange. Investors can buy public offered shares and the money raised between investors is used by the company to expand its operations, buy another company or hire additional workers. All this leads to an increase in economic activity that helps boost the economy.

Stock exchanges being such a core part of every economy, it is crucial to fully understand how it works and, like this thesis tries to achieve, understand how the human behavior affects it. During history the global economy has seen various ups and downs and so has done the stock market. However even that most of the market crashes have been a direct effect of bad political or economical decisions made by governments and citizens, there are also various cases in which the stock exchanges have acted in an abnormal way, caused in a majority of the cases by a public panic when prices of stocks start to fall.

These anomalies and many others such like the creation of bubbles in the financial markets, the different decision-making processes that human beings go through on a daily basis or the different levels of risk they are ready to assume in similar situations are some of the issues this thesis tries to understand and explain. The research area of this thesis tries to show, contrary to what the classical economical theory has assumed during hundreds of years, that the human beings are not always rational and therefore always act in a rational way.

In order to better understand and predict the future of stock markets and economies, it is core to analyze human beings as what they are and not as some sort of robots and understand that things like emotions, stress, regret, ego, etc, make a huge impact on how they behave. It is core to understand that the base of every social science is psychology and that is why this thesis can benefit all those interested in investing and behavioral economics and that The Finnish Shareholders Association (Osakesäästäjien Keskusliitto) has been interested in publishing the results of this study.

2 Research Methods and Implementation

As we have seen, the research area and the main question this thesis tries to respond is how the human behavior can affect the stock markets. The core issues and questions this thesis tries to give an explanation are:

- Why do people sometimes act in an irrational way?
- How the effects of this irrational behavior can be seen on the stock markets?
- Why old economical theories that treated humans like "econs" need to be updated?
- Why the future study and research of behavioral economics can help to better understand the functioning of stock markets?

This thesis being an exploratory research, is based on qualitative research methods. The main data collection methods used were the reading of various books and articles about behavioral finance, viewing and analyzing different focus group discussions held by the most important economist and psychologists in the world such as Richard H. Thaler, Daniel Kahneman or Amos Tversky, making and sending an inquiry to the largest and most important portfolio managers and investors in Finland and finally analyzing own observations of the stock market as an amateur investor.

All these methods were used to gain a more deep understanding of how the human behavior can affect the stock markets. Qualitative research helped to get an insight into the problem and develop own ideas and hypotheses.

2.1 Qualitative Research

In a qualitative research the most common methods to collect data material is by interviews, questionings, observing and creating new information on various already existing documents. Depending on the research problem and the amount of resources available, all these different methods can be used combining them. (Tuomi ja Sarajärvi 2013, 71.)

For the qualitative research it's essential to have a good diversity of material and interviewed people as well as the objective consideration of different opinions when collecting and analyzing data. This type of research is well suited to research questions that can't be measured on a large scale and it's at its best a kind of continuum of which it's more challenging to completely separate the different phases. (Flick 2006, 14.)

At the beginning of a qualitative research it's core to first define the research questions, being those the main questions and themes on which the project or research will focus. The layout of the questions is of great importance due to the fact that in almost every phase of

the research we will find the need to go back to them, and in the case that this framing isn't done properly, there's the danger that the research will spread to a considerable extent diffi- culting the material analysis. (Flick 2006, 105-106.)

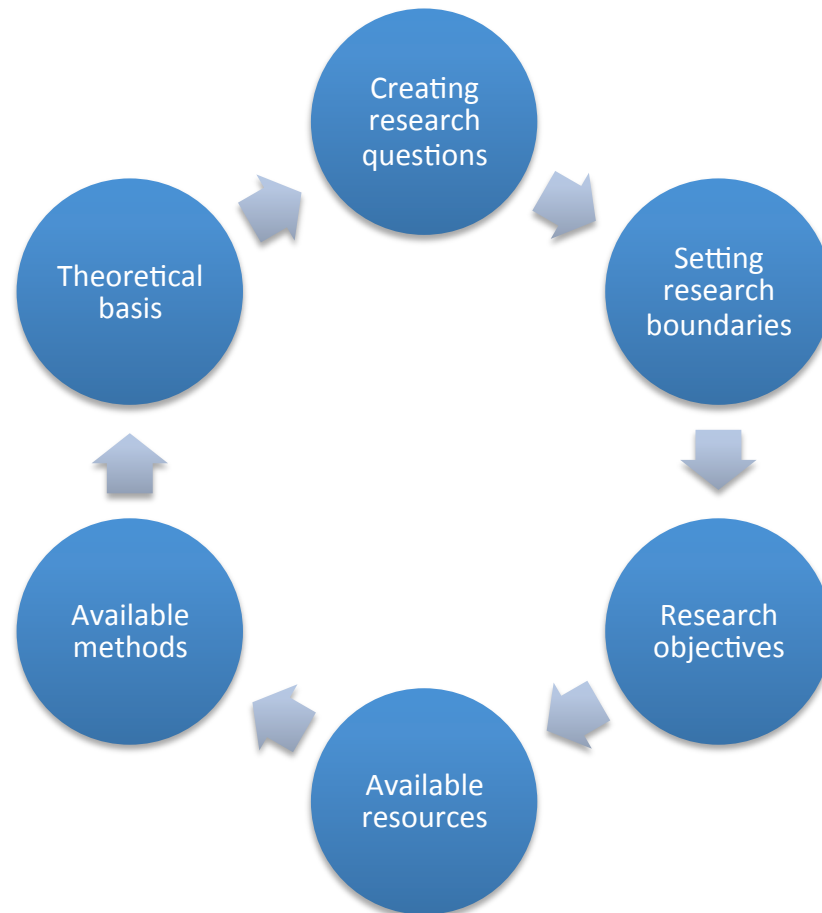


Figure 1: Designing a qualitative research (Flick)

Figure 1 shows the diversity of the design process illustrating it as a kind of continuum. In the planning process of a qualitative research the goal is to answer beforehand the most ques- tions possible and to plan the whole project as wide as possible. Before we start collecting information and material, each of these points should have a broad and comprehensive ans- wer. (Flick 2006, 141.)

2.2 Material Analysis

In qualitative research the aim is to treat all the available material as one whole. The quali- tative analysis can not be built on the statistical connections of separate variables, that's why it is important that the facts raised in the dossier are not contradictory with the interpretation given in the study. (Alasuutari 2007, 38.)

Therefore, it's essential in the qualitative research to find similarities and regularities that can be applied to the whole project and the entire material. In addition it's also very important to ask in the right place and time the question "why" in order to build a comprehensive analysis. (Alasuutari 2007, 191.)

When comparing qualitative and quantitative researches together, it is usually commonly mentioned that while in the qualitative one the material is profound but can weakly be generalized, in the quantitative research the material is said to be superficial but reliable and applicable to the masses. (Alasuutari 2007, 231-232.) Due to the fact that there is a lot of reliable data available about studies and inquiries made to a large public within professional environments such as universities about the human behavior in different economical situations and that all the works from different economists analyzed for this thesis are based primarily on quantitative researches for them to be able to build this huge database about how the public mass acts in different situations where there is an economical decision making present, for that reason this thesis is based on a qualitative research and analysis of all the data that has been collected during decades and the observation of how these behaviors affect the stock markets.

2.3 Study Validity and Reliability

In qualitative research, besides trustworthiness, the validity of the study is also very important. In his book, Flick (2006, 371) introduces the three most common problems of validity, being these finding relationships and generalizations from there where there are not, the layout of wrong questions and the denial of relations or generalizability even if there are.

Since qualitative research is based on subjective and interpretative knowledge, the validity of qualitative research aims to describe the accuracy and correct interpretation of the collected data. Simplified qualitative research validity can be described as the need of the collected material to support everything that the researcher claims. (Thomson 2011.)

Thomson (2011) presents Maxwell's way of sorting qualitative research into five categories: descriptive validity, interpretative validity, theoretical validity, generalizations and evaluating validity. With the first one he meant the need of the materials to support what is said in the project, with the second one he meant that the final results can not illustrate the researchers' own opinions. (Thomson 2011.)

The goal of the theoretical validity is to evaluate the theoretical basis of the researcher and the goal of the generalizations is, as the name says, investigate whether the results of the

study can be generalized. Finally, with evaluating validity he meant how the researcher has drawn conclusions from the material he has collected. (Thomson 2011.)

In this thesis the validity can be reviewed as a whole of all the categories mentioned above. However, the most important category being the descriptive validity due to the fact that this thesis is heavily based on materials, articles and books collected many years ago by important behavioral economists and psychologists and that the inquiry was made to renowned experts in the financial field of Finland. Also, another important category is the generalization category because the same results can be achieved by anyone who researches the subject.

In this thesis all the above mentioned categories and specially the two most important ones' and their characteristics are met. All the collected materials were a huge basis for the author of the research to understand and have a deep knowledge of the subject and therefore support the project and its' main goal of understanding better the effects of social behavior on stock markets.

3 Stock Market

Simply explained, the stock or equity market is a place where persons with savings are reunited with companies that need money to execute their activities. These companies (or governments) can use the stock market to issue equities, bonds or any type of securities through normal exchanges or OTC (over the counter) markets. (Caixabank.)

The stock market play a very important role in the economy via enabling the companies to access to capital in exchange of giving the investors a part ownership. This separation of ownership is one of the three major roles of the financial markets, being the other two the timing of consumption (possibility to reduce current consumption for planned later consumption) and the allocation of risk. (Investopedia K.)

We can find two types of assets in the stock markets, real assets and financial assets. The first ones are, like the name indicates, assets used to produce goods and services, therefore they are tangible like a piece of agricultural land, precious metals like gold, real estate, oil... The second ones are claims on real assets -they are an asset for one economic agent and a liability for another economic agent. (Investopedia K.)

The equity market is divided primarily into two, the primary market and the secondary market. The actors who take part in the primary market are usually always investment banks who sell the new issues via IPOs (initial public offerings) to institutional investors. All the following trading operations happen in the secondary market, where in addition from the institutional investors we can also find individual investors. This is one of the main differences between

both markets, besides from how the issuer receives the proceeds from the sale in the primary market but not anymore in the secondary. Moreover if we take a look on the market structure, there are four different market types: direct search markets where buyers and sellers seek each other out directly, brokered market where buyers and sellers are matched, dealer market where dealers purchase the asset for their own inventory and sell them later and finally auction market where all agents meet at one place to bid on or offer a good. (Investopedia K.)

Every country has their own stock market and own laws that regulates it. Usually it is an agency that is completely independent from the government and its main functions are securing the capital formation maintaining an efficient market and protecting the investors. Some of these agencies are the SEC (Securities and Exchange Commission) in the U.S., the CNMV (Comisión Nacional del Mercado de Valores) in Spain or the AMF (Autorité des marchés financiers) in France. (Investopedia K.)

3.1 Market Crashes

A stock market crash is a rapid and abrupt fall in the prices of equities (there is no exact percentage but they are usually identified as a drop of +10% during a day or two) that is usually unanticipated. Although there has been many crashes along history, the four biggest and best known are the Great Depression of 1929 where the Dow Jones sunk more than 25% wiping out 30 billion dollars in just four days, the 1987 Black Monday where the Dow Jones again fell over 22% in just one day and 500 billion dollars were lost, the 2000 Tech Bubble when the Nasdaq (which is a stock exchange heavily represented by tech companies) lost 78% of its market value and finally the 2007/2008 Great Recession originated mostly by a bubble in the housing market and started after Lehman Brothers went bankrupt on September 15th 2008. (The telegraph 2017.)



Figure 2: The Dow Jones Industrial Average (DJIA) index crash in 1929 (Sniper.)

Although a stock market crash can be attributed to various reasons like political decisions, natural catastrophes, economic crisis etc, the most usual reason is the break of a speculative bubble and its subsequent public panic. A bubble in the stock market can occur when investors have too optimistic expectations about a stock or group of stocks elevating its price above what the rational rate dictates or the stock's real worth. Therefore the price of the equity is not determined by the real performance of the company but rather about the idealistic opinions of the investors. (Investopedia J.)

When these bubbles break the companies and stock prices fall back to their "real value" causing the start of a market crash. When this happens, the stock prices are usually rational to their worth, but in consequence of the abrupt drop in the valuation, starts the public panic, which makes the prices to fall even more rapidly and abruptly. When investors see that prices are going down and they are losing money fast, their first intuition is to sell every stock they own of the company to stop the loss. This social panic originates the massive selling of stocks and therefore the market crash. (Investopedia J.)

Classical economic theories and the efficient market theory suggest that all humans are rational and accordingly act in a rational way, therefore the prices in the stock market should be always correct and no bubbles or public panic would ever occur. Like we have seen many times along history, this is not the case and we should start to take into consideration the effects of social behavior in the economy and stock markets. (The telegraph 2017.)

3.2 Econs

Econ or "homo economicus" is a term created by behavioural-economics pioneer Richard Thaler to define the type of person the classical economical theories use to explain their theories. People often make irrational decisions yet economic models persistently assume that everyone is perfectly rational. (Thaler 2015, 18.)

The classic economic models assume that the human being is always rational and their theories are based on that they always make the right decision because they have all the available data. Therefore things like emotions or distractions at some certain point don't affect the long-term goal in any way. These econs of classical economics are characterized by unlimited rationality, self-interest, and self-control. (Deloitte 2016.)

During decades Thaler collected data to a list he named "Dumb stuff people do" only to realize later the systematic and predictable features of human psychology it expressed. This list was full of contradictions with the classical economical theories and the idea that all humans act in a rational way. For instance, Thaler expressed the odd situation where students were happier with a 96/137 (70%) grade on an exam than 72/100 (70%) or if these econs of classical economy are always rational and make their decisions based on rational expectancy, why the percentage of new businesses that succeed is much lower than the average of optimism they have for their start-up to succeed (75%)?. (Thaler 2015, 18.)

During decades economists have assumed in their theories that all human beings would act as persons with a great knowledge in economics when making daily decisions. As we have seen along history, this is not the case and crashes like the Great Recession of 2008 occurred partly because of poor debt decision-making of households across the world.

We can't expect that all the people are masters in everything and therefore make always the right decisions. Not all of us play tennis like Rafael Nadal, cook like Ferr Adrià or invest like Warren Buffett... It's a lot more probable that we play tennis like Adrià, invest like Nadal and cook like Buffett. That has been one of the main problems of classical economical theories and the huge victory of behavioral-economics. (Thaler 2015, 61.)

4 Market Efficiency

The efficient markets hypothesis (EMH) is a theory created by the Nobel prize winner Eugene Fama and it argues that all the stocks and stock markets trade at their real or face value. This hypothesis is based on the same principles than all the rest fields in economy, that the human beings are rational and always make the right decisions with the information they have. (Thaler 2015, 222-223.)

The efficient markets hypothesis is based on two core ideas. The "no free lunch" principle that dictates the markets can not be beaten, and the price is always rational and right. The principle that the price is always rational is based on the theory that if the rational price of a company is 100 million dollars, then its stocks will sell for a price that makes the company market capitalization to be 100 million on the stock market. The first principle of "no free lunch" bases its idea on the theory that all the prices on the stock markets are exactly right due to the fact that those prices express all the available information the investors have about a certain company and stock, and therefore it is not possible to beat the markets. (Thaler 2015, 222-223.)

As we can see, both of these principles are connected with each other. If there is "no free lunch" and all the prices of stocks are right due to the fact that those prices already reflect all the available information in the markets, then it is very safe to say that the companies and markets intrinsic values are the same than their asset prices. It can be discussed whether these principles of the efficient markets hypothesis are true or not and even if most of active managers working on the financial field can't beat their passive benchmarks, there are many cases of wrong valuations made to stocks and markets that have caused bubbles like for instance the year 2000 technological bubble. (Thaler 2015, 222-223.)

The efficient markets hypothesis has been a very important and controversial theory about the stock markets during decades. To recap, in the core it says that markets don't behave in an unusual or irrational way and that investors should put their money into index based passively controlled portfolios. However, along history there has been many cases of market anomalies and investors like Warren Buffet who has been able to beat the market every year during 50 years.

4.1 Market Anomalies

Human beings not always act in a rational way, investors not always act in a rational way and therefore stock markets not always act in a rational way and present anomalies from time to time. Contrary to the 1970 beliefs about the stock markets because of the efficient market hypothesis, John Maynard Keynes believed in 1930, like many other economists from the time, that the markets are full of anomalies caused by the human emotions and the fact that when the stocks of companies are sold to a larger amount of investors, the true knowledge of the company by its shareholders decreases. That's why he said that in the early 1900s when the companies were owned only by a few people, the markets were more efficient. (Thaler 2015, 225-226.)

Keynes discovered in the early 1930s little variations in the stock markets due to the seasonal effect. He noticed that ice selling companies stock prices were higher during summer when a lot of ice was sold than during winter. This seasonal oscillation is against the principles of efficient market hypothesis because the prices in stocks should reflect the long-term value of a company. Keynes believed that most of professional and amateur investors were following the crowd because as he said, "from the point of view of reputations, it is better to fail in the conventional way than to succeed unconventionally". (Thaler 2015, 225-226.)

It's here when Keynes introduced his "beauty contest" example to explain how investors behave in the stock markets. In this contest, the readers of a magazine were asked to choose the 6 most beautiful woman from the pictures of 100 different ones and the winner would be the one whose answers were the most close to the average answer of all the participants. So, in this case, the readers of the magazine would choose the pictures of the women they think are most likely to be chosen by the other participants, and not the women they actually think are the most beautiful. Like in this contest, many times in the stock exchanges people don't choose the stock they really prefer or are enthusiastic with, but rather think about what the other people would do in the same situation and they will go with the crowd. It is not anymore about personal preferences but rather about going with the trend thinking what are most of the people going to do, which are thinking in the same way. (Thaler 2015, 226.)

Another example of market anomaly would be the case of 3Com and Palm. 3Com was a company that operated during the tech bubble and in an acquisition got the ownership of Palm that at that time made really fine handheld computers. In 1999 when all tech companies were rising to unseen levels in the stock market, 3Com's valuation stayed almost the same without changes. The company in order to raise its valuation on the market, sold 4% of Palm in the stock markets. Rationally this shouldn't affect the price of 3Com because whether Palm shares are sold separately or not, they are owned by 3Com. However, in a market anomaly the valuation of the company got from 40\$/share to 100\$ in just months. The second anomaly happened months later. The initial idea of 3Com was to only sell to the market 5% in Palm ownership and keep the rest of the shares themselves. In a couple of months every owner of one 3Com share would receive 1,5 shares of Palm. Rationally this would mean that one 3Com share value would be the residual value of the rest of the company plus 1,5 times the price of a share of Palm. (Thaler 2015, 263-265.)



Figure 3: Rational 3Com share value (Thaler)

However what happened against any rationality was that in the first days of the initial public offering of Palm, their shares jumped to over 95\$ while the stock price of 3Com went down to 82\$. This led to a situation where the residual value of 3Com was -61\$. (Thaler 2015, 263-265.)



Figure 4: Anomaly in 3Com share value (Thaler)

As it can be seen, the markets are full of anomalies that in many cases challenge the credibility of many theories such as the CAPM (Capital Asset Pricing Model) or the efficient market hypothesis (EMH). In general, these anomalies can be divided into being cross-sectional or time series in nature. (Keim, 1.)

The most common anomalies in the cross-sectional would be the size effect and the value effect. The size effect phenomenon describes how in the stock markets companies with a small capitalization outperform companies with much larger market capitalizations. This can be argued to be an anomaly or just an explanation of the much larger growth path small com-

panies have. The value effect phenomenon describes how companies with below average accounting metrics like P/E or P/B values, tend to outperform the markets. This strategy to focus on this kind of business is called value investing and the fathers are Benjamin Graham and Warren Buffett. (Keim, 2-3.)

The most common anomaly in the time series in nature would be the patterns in returns around the turn of the year or "calendar anomaly". This anomaly describes the phenomenon of how during certain periods of the year the returns of stocks can be higher or lower. For instance how most of the premium for holding small cap or high book-to-market portfolios comes in January, how during Mondays the returns are lower than at the rest of the week or how during the first days of a month the returns are usually higher than the rest of the month. (Keim, 8-9.)

4.2 Market Overreaction

Market overreaction is a theory that suggests that investors don't react in a rational way to the news and new information about companies like the efficient market hypothesis dictates but rather they overreact and react disproportionately to this information. This behaviour would make the security's price to not reflect the real value of the company and even change dramatically. This overreaction to news can also originate bubbles in the prices of equities like seen on the prices of tech company stocks during the late 1990s. (Financial Times.)

To investigate about this market overreaction, Richard Thaler made a long research during 3-5 years. The core idea started from the suppose that the P/E values of stocks were under the overreaction phenomenon. If this was true, it meant that people had put too much optimism in companies with a high P/E value and they were too pessimistic about companies with a low P/E value. In the long run and if the overreaction was true, the companies that had high P/E values would come down to their average and the low P/E owning companies would rise to their average based on their future returns. In the investigation, Thaler made two different portfolios, one with the top 35 "winners" of the New York stock exchange (those with the highest P/E ratios) and another portfolio with the top 35 "losers" (those with the lowest P/E ratios). As imagined, the "losers" outperformed the "winners" making over a 40% better return. (Thaler 2015, 238-239.)

Another example of market overreaction is the behavior of the British pound sterling (GBP £) in 2016 after the Brexit. One week after the Brexit was announced on the 23rd of June, the pound fell 4,7% like a normal reaction to the news about abandoning the European Union, however, months later in October of the same year, the pound fell 4,9% in one week due to the news of the possibility of a "hard Brexit" and a speech of the president of France at the time, Francois Hollande, where he demanded hardness in the negotiations for the Brexit. This

is a typical example of how markets many times react stronger to rumors than to the real news. (El Economista B.)

4.3 High-frequency Trading

High frequency trading is a new way of trading that uses automated platforms based on the use of complex algorithms to analyze simultaneously many markets and execute orders in a faster and more efficient way. These "super computers" are mainly owned and used by large investment banks and they are usually situated very near the actual stock exchanges so the transactions can be executed even faster. (Business Insider 2017.)

These super computers used for high frequency trading have changed the stock markets in the last decade in a sustancial way. Due to the fact that they can execute millions of orders in a matter of seconds has given the large investment banks an huge advantage in favor of normal investors. These large banks can operate and generate profit because they are the first ones to know the selling and buying prices of stocks generating in many cases unnecessary trading that takes advantage of slower investors. (Business Insider 2017.)

Because of these high frequency trading computers and the new Basel 3 regulations for banks that makes less attractive for them to keep assets in their balance sheets, in the last decade we have seen the most volatile markets in history due to the fact of very high trading volumes. All this has induced the markets to overreact in an even more tragical way to certain news. This can be seen for example in the case of the abrupt drop without any logical explanation in the value of the British pound sterling on the 7th of October of 2016. The theory that most of the market operators point as the cause for this unusual event is that algorithms launched automatic selling orders when losing certain levels, amplifying the downward movements, which caused the investors to panic even more. This type of event has already be seen before when in 2015 the New Zealand dollar sank 9% in just fifteen minutes to return later to more normal levels. (El Economista A.)

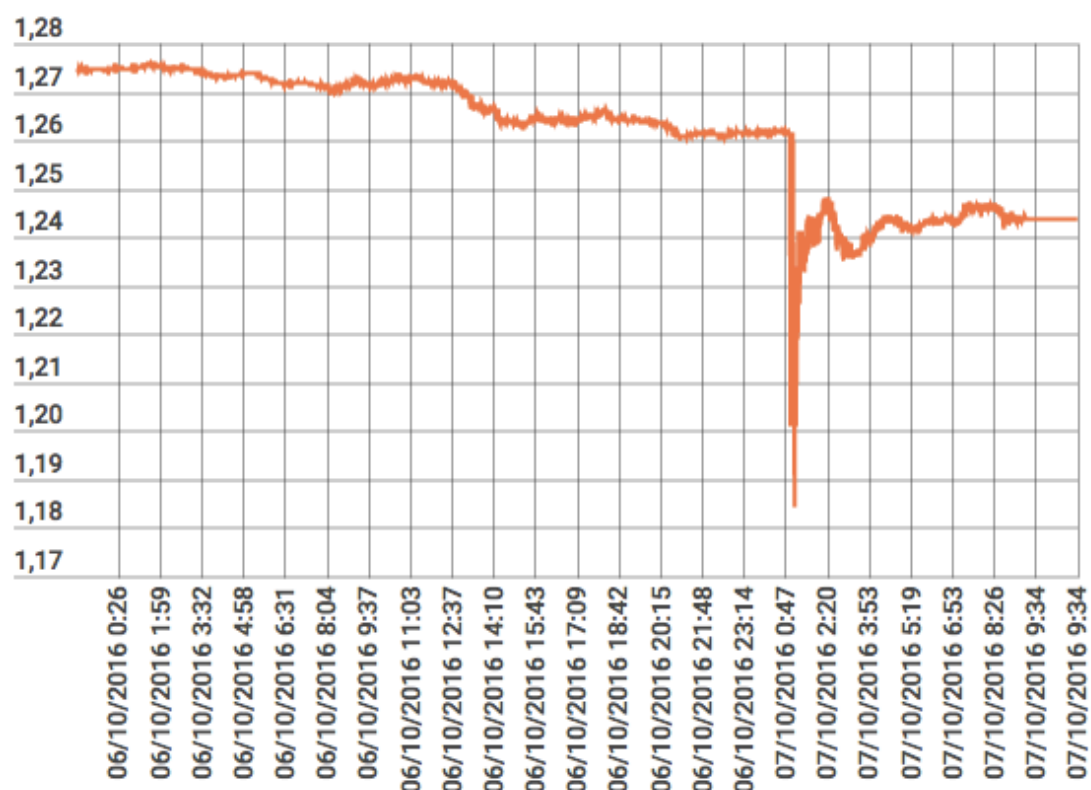


Figure 5: Flash crash of the Pound Sterling on the 7th of October of 2016 (El Economista A.)

5 Social Behaviour on Stock Markets

According to EMH theory, both amateurs and experts should have no chance of beating the market as it is effective and doesn't provide a "free lunch". In a rational world, there should be no trading at all or very low amounts of trades made every day on the stock markets due to the fact that if everybody knew the right prices of stocks and right value of companies, they wouldn't trust each other when buying and selling equities. This is called by economists as the Groucho Marx theorem. In one of his most famous quotes, Groucho said "I refuse to join any club that would have me as a member". (Thaler 2015, 233.)

Ever since the EHM theory was formally introduced in the 1970s, it was held and proved to be true by professionals of the field. People at that time considered the behavioral research of financial markets to be suspicious because they thought that while it was possible that some people behaved foolishly and made mistakes with their money, "smart" people would adjust the prices when trading with them, so unrational trading would not even make the markets to vibrate a bit. (Thaler 2015, 219-221.)

However, as we have seen many times during history, the market is not always efficient and events like bubbles or crashes in prices of stocks are frequent and mainly caused by human actions such as social panic. The study of behavioral finance and the effects of social behavior on stock markets are crucial. Behavioral anomalies are important in the financial market, where there are both high stakes and a lot of opportunities for professional investors to make use of others mistakes. (Thaler 2015, 219-221.)

5.1 Behavioural Finance

In order to better understand and predict future events in the economy and the stock markets and avoid hugely devastating crashes like the 2008 one, it was and still is of great importance to add the human factor to the economical theories. This is how behavioural economics and finance was born. (Thaler 2015, 23.)

Behavioural finance is the study of psychology and its influence on the financial world and markets. It is a relatively new field that aims to explain why human beings make irrational financial decisions. During decades hugely popular and accepted theories such as the EMH (Efficient Markets Hypothesis) were used widely to explain many of the events that happened in the financial world. All these classical theories assumed that all human beings were rational decision-makers and therefore the markets worked perfectly. (Investopedia A.)

However, with time there started to be events that couldn't be explained with these old theories and therefore economists started to look into new theories and fields such as of psychology to explain these situations. Most of the people don't act in a rational way in every decision they make during a day. They save too little, they buy things they don't really need with money they don't have or they are willing to take more risks to recover the money they are losing on the stock markets. (Deloitte 2016.)

Behavioural finance identifies and introduces eight concepts that can be used to explain some of the irrational behavior seen on people when making financial decisions. These concepts that are mainly developed by psychologists Amos Tversky and Daniel Kahneman and economist Richard Thaler are anchoring, mental accounting, confirmation and hindsight bias, gambler's fallacy, herd behavior, overconfidence, overreaction and availability bias and finally prospect theory. (Investopedia A.)

The anchoring concept means the humans tendency to base their decisions on a reference point that can be logical or not instead of to a true fact, for instance the classical saying that an engagement ring should cost the salary of two months. The mental accounting concept was developed by Richard Thaler and it explains the irrational behavior of humans towards money

when separating it into different portions such as "grocery money" or "vacation money" and their tendency to qualify these portions as non-transferable. The confirmation and hindsight bias concepts are based on the inclination of human beings to not look to all data in an equal way but rather to pick the materials that support their opinion or point of view and even after some event make oneself believe they knew it was going to happen and therefore predicted it. (Investopedia B.) (Investopedia F.) (Investopedia C.)

The fourth concept, gambler's fallacy is based on the idea that people think that past events are a base for future events. If a coin has been flipped ten times in a row the "heads" side up, it doesn't mean it is less likely that the "heads" side comes up again, the percentage will still be the same (50 %). This is also known as the "hot hand fallacy" in basketball where people think that if a player has made a bunch of shots in a row, he will score the next shot too. In investing and the stock markets we can see this concept in a situation where for example an investor will sell a stock because the price has been going up for the last 2 months and he thinks it is less probable that it will continue to raise. (Investopedia D.)

The herd behavior concept means the tendency of human beings to do certain actions in a group and following a groups' actions even that they wouldn't probably do them if they were alone. These mimicing actions are usually due to the social pressure persons feel when being in a group. In the stock exchanges we have seen these actions many times specially when there is a "hot stock" or sector that everyone is entering. In many cases these actions on the stock markets generate bubbles. (Investopedia E.)

The sixth concept is overconfidence and as its name says, it is the over the top optimism and confidence the human beings have in respect of their ability to do certain tasks. This is a very dangerous state of mind specially in the stock markets because they can lead to wrong decisions and huge losses. Overconfidence of an investor usually leads to wrong stock picking and late selling of currently owned stocks. The next concept is overreaction and availability bias which can be explained as the abnormal behavior of human beings towards new news and informations. On contrary about what the efficient market theory says, sometimes the investors tend to overreact to some news about companies, increasing or decreasing the stock price over the appropriate range. (Investopedia G.) (Investopedia H.)

The eighth and final concept is prospect theory which is simply explained as the different value people give to losses and gains. This is such an important concept that it will be discussed more deeply further on this thesis. (Investopedia I.)

5.2 Heuristics

In the simplest way, heuristics means the rules of thumb. This term was first introduced into the economical world by two persons who had little to do with economics at that time, Amos Tversky and Daniel Kahneman. They are psychologists who were interested in the topics of psychology judgement and decision-making and brought this term up in their article "Judgement under Uncertainty: Heuristics and Biases". (Thaler 2015, 36-37.)

The base of the article was very simple, they wanted to prove that human beings have limited amount of time and brain capacity to make decisions during a day. That's why they use simple rules of thumb or heuristics to help their decision-making process. (Tversky, Kahneman 1974.)

To explain this theory we can look at one very simple and common example. If we ask people in Finland how common they think the name Dhruv is, they will probably say not very common because they have never heard it before. However, it is a very common name in India, which has one of the biggest populations in the world and therefore it's a very usual in a global scale. To help to make a decision people used these rules of thumbs thinking about how many persons named Dhruv they know and since the answer was none or very few, they directly thought that it is not a very common name. Even if this can be applied to ones own society or environment, it can't be applied as a general rule or law. (Thaler 2015, 36-37.)

Because of these heuristics people make predictable errors. These errors wouldn't occur if they searched for the answers in advance, but with a limited time and brain capacity during a day, they tend to answer all these questions by rules of thumbs. (Tversky, Kahneman 1974.)

These predictable errors can be also seen on the stock markets. The most common rules of thumb people use on the stock markets are usually based on the history of a stock. They tend to analyze a stock by looking at its historical data rather than its future and making the final decision based on that. "It has done so great in the last five years they will do great in the future too" is a very common quote heard every day in the markets. However, even that history is a good prediction for future events, it's not a general applicable law and if a company has been doing great and increasing for example its dividend every year for a decade, that is not a certainty for the future.

5.3 Prospect Theory

In 1738 Daniel Bernoulli introduced the idea of risk aversion. In his hypothesis the idea of utility was in a central position. Bernoulli expressed that human beings utility (happiness) grows when they get wealthier, but always slower and slower in a decreasing way. This principle is

called diminishing sensitivity. So, every time a person gets wealthier, the next add on their wealth has a weaker effect. For instance the utility of 10.000\$ is much greater to a normal office worker than to Bill Gates. (Thaler 2015, 41-42.)

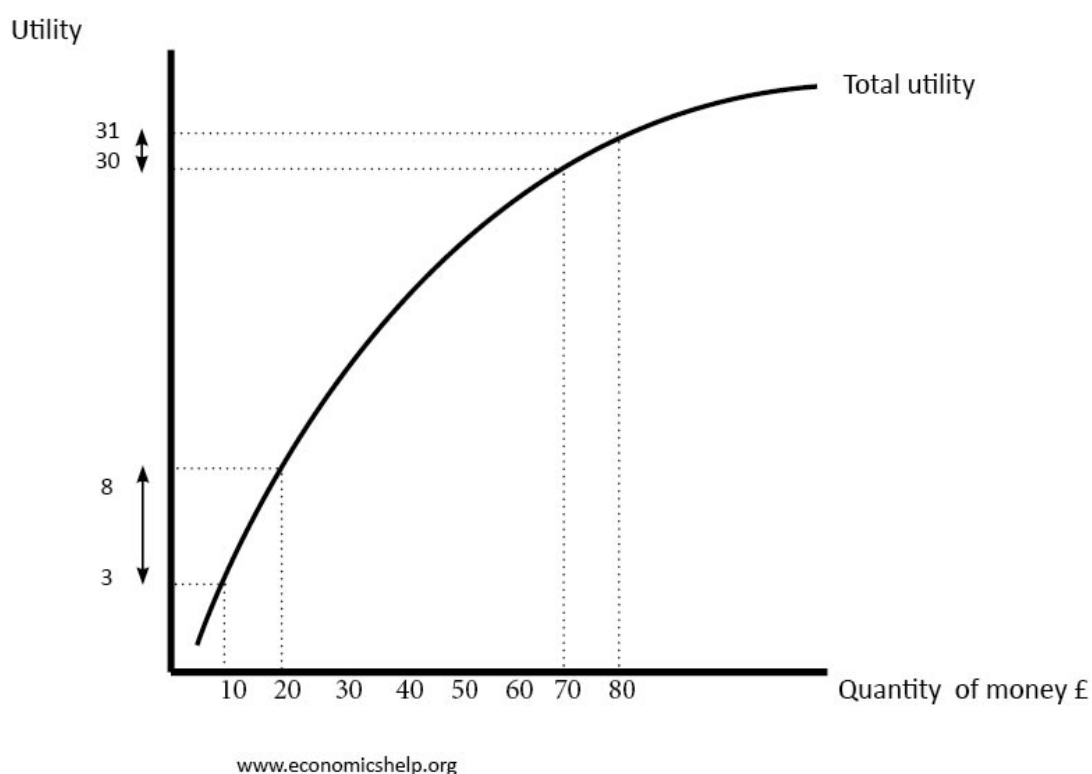


Figure 6: Risk aversion and diminishing marginal utility of wealth (Economicshelp 2017.)

As we can see from the chart, Bernoulli's utility function refers to risk aversion, because every first add of wealth is more important than the next one. This creates a situation where if offered to a person the chance to win 100\$ for sure or a 50% chance to win 200\$, they will choose the first option. (Thaler 2015, 42-43.)

Prospect theory's main goal was to tear apart from this way of thinking where one theory about human behavior could be normative and descriptive at the same time. This theory that was created by two psychologists, Amos Tversky and Daniel Kahneman is, in its simplest way, about how people react differently to losses and winnings. (Kahneman 2012, 278-279.)

In his book *Thinking Fast and Slow*, Daniel Kahneman describes some of the investigations he made with Tversky in order to explain how risk aversion was replaced by risk seeking mentality in human behavior. They made enquiries that reflected how people think differently about winnings and losses. (Kahneman 2012, 278-279.)

On the first enquiry, they asked people two separated problems. The first problem was whether they would prefer to get 900\$ for sure or 90% chance to get 1000\$. The second problem was whether they would prefer to lose 900\$ for sure or 90% chance to lose 1000\$. As imagined, the participants of the enquiry were risk averse in the first problem (because the value of getting 900\$ for sure was higher than 90% probability of getting 1000\$) and risk seeking in the second one (the sure loss is very aversive and that is the reason people are ready to take the risk). (Kahneman 2012, 279-280.)

The second inquiry they made had another two problems for the participants. In the first problem people were asked that in addition of what they own, they were given 1000\$ and then they were asked to choose if they would prefer rather to have a 50% chance of winning 1000\$ or get 500\$ for sure. In the second problem people were asked that in addition of what they own, they were given 2000\$ and then they were asked to choose if they would prefer rather to have a 50% chance of losing 1000\$ or lose 500\$ for sure. In Bernoulli's theory both of the problems are identical due to the fact that they give each person the opportunity to either be richer by 1500\$ or take a gamble that will give them the opportunity to win either 1000\$ or 2000\$. However, the preferences on both of the problems were quite different and the participants were risk averse on the first one and risk seeking on the second one. (Kahneman 2012, 280-281.)

Amos Tversky and Daniel Kahneman showed with these examples how the utility of wealth is not all that matters and that people tend to react differently to losses and winnings. This is a core idea in how the social behavior can affect the stock markets, when for instance people are willing to take more risks to avoid a sure loss. (Kahneman 2012, 280-281.)

5.4 Opportunity Cost, Acquisitional and Transactional Utilities

The opportunity cost term refers to the loss a person takes when choosing one action course over another. Usually when a person is faced with making a decision, there are more than one possibility of which to choose, making the person to give up on one of the possibilities, creating an opportunity cost for him. For instance, if a person buys a pair of sunglasses worth 500\$, the opportunity cost would be all the other things he could have bought or done with that money. (Thaler 2015, 71.)

The goal of all the investors is to look for the option that is likely to yield the greatest return, however when talking about the stock markets, if an investor buys shares of Company X worth 1000\$, it is impossible to know if that was the best way to spend that money or if he had rather bought stocks of another firm, Company Y, the return on investing would have been better. This is called the opportunity cost in investing. (Thaler 2015, 71-72.)

Opportunity costs are a very important matter in the stock markets because they move people to invest in some companies rather than into others, making them to act or behave in an unusual way they wouldn't do if they invested in the companies they most wanted rather than into those that they believe will create the best returns, often taking more risks than usually. For this reason it is core to understand the difference between risk and opportunity cost. Risk means the probability of losing all or part of the invested money, while opportunity cost means the loss generated for giving up on one option over another. However, usually better returns come from riskier investments and that many times lead to investors to prefer for instance stocks than bonds (bonds are often regarded as risk free). (Forbes 2012.)

Like said, it is almost impossible to make the right decision about what will bring the most happiness or worth to someone's money between all the thousands of possibilities available. This made Richard Thaler to think about when the cost is a loss, and he introduced a couple of terms: acquisition utility and transactional utility. (Thaler 2015, 72-74.)

The first utility makes reference to the value the purchased item gives to the buyer. For example the acquisition utility of a bottle of water when a person is very thirsty can be very high, or for instance the acquisition utility of an umbrella during summer can be very low but high during autumn. (Thaler 2015, 73.)

The second utility is derived from the Prospect Theory created by Tversky and Kahneman that stated, as we have already seen, that people tend to react differently to losses and winnings. As Richard Thaler stated in his Transaction Utility Theory, "a simple way of incorporating the terms of the transaction is suggested using the features of Kahneman and Tversky's prospect theory. The new concept transaction utility is modeled as depending the difference between the selling price and a reference price". (Thaler 1983.)

By this meaning, transactional utility makes reference to the value of the trade for the person. This value of the trade is usually expressed as the difference between the price a person paid for an item and the price he would normally pay for it. This explains for example the happiness of people when they buy something in discount or why people are ready to pay more for a beer bought in an hotel near the beach during summer than in a normal grocery store. (Thaler 2015, 72-74.)

To explain transactional utility Thaler gives a simple example. He made an enquiry where he asked the participants to answer two different questions. The first question asked the persons that if they were buying a cheap radio for 35\$ and the seller said to them that in another branch of the same store but in a driving range of 20 minutes the same radio was at 25\$, would they buy the product?. The second question asked was that if they were buying a TV

for 650\$ and the seller said to them the same thing that in another branch of the same store but in a driving range of 20 minutes the same TV was at 640\$, would they do the travel or buy the TV in the first store. For both of the questions, the amount that can be possibly saved is the same, 10\$, but surprisingly a large majority of the participants were ready to make the 20 minutes ride for the radio but not for the TV. The reason for this event is the higher transactional utility people get when buying the cheaper radio (30% discount about the reference price) vs the one they get from the TV (1,5% discount from the reference price), so the transactional utility of saving 10\$ out of 35\$ feels much higher than saving the same amount out of 650\$. (Thaler 1983.)

Transactional utility theory explains many behaviors people do on the stock markets. For instance, when investors see a stock that is priced way below the right price they think it should have, they tend to get really happy for the "discount" they just got. However, this type of happiness can lead to overexcitement which usually leads to the making of wrong decisions like not analyzing the company or sector they are getting involved with. Another example would be the case where a share of a company in a bull market (prices are rising or expected to rise) is valued 10\$, this might look like a good price for an investor, but the same 10\$ share of the same company in a bear market (prices are falling or expected to fall) might look expensive. This is due to the transactional utility investors think they will get from the stock in the future as they expect the price of the share to rise even more in a bull market but to fall even more in a bear market and therefore they can buy the stock cheaper in a future. As we can see, this idea is also connected to the gambler's fallacy that explained how people think that past events are a base for future events. (Fortune 2017.)

5.5 Sunk Cost

In economics, sunk cost refers to the money that has already been spent and can not be reestablished. It explains the tendency of people to continue with an irrational action even though it isn't matching their expectations just because they have already put too much money or effort in it. To explain the sunk cost trap, Thaler gives an example about Vince, who paid 1000\$ to a tennis club so he could play once a week in their installations. After a couple of months, Vince got hurt on his elbow, but continued to play for another three months instead of pausing for recovery because he had already paid for the rent. He stopped playing only when the pain was unbearable. This is a typical example of a sunk cost because Vince continued playing tennis even that it wouldn't bring his money back but only to worsen his elbow pain. For instance if a friend of Vince has asked him to go to play tennis with him to another club, Vince would have refused because of his injury. Another example of human irrationality and sunk costs can be the tendency of people to spend a large sum of money on

carnival games to win an unexpensive prize because they feel that if they don't win the prize, all the money they have already spent would be for nothing. (Thaler 2015, 79-82.)

This sunk cost trap can also be seen in the irrational behaviour of investors on stock markets. The most common example is the tendency of investors to let the buying price dictate when to sell. For instance if an investor buys shares of Company A worth 500\$ and one year later those shares are worth 50\$ even though that the market in general and similar stocks have risen in value over the year, keeping those shares are probably a bad idea. Instead of cutting the loss on time and reinvesting that money in another stocks that might very well rise in value, the investor holds on to the falling stocks because they expect it to rise and they won't consider a poorly performing investment a failure until they sell the stock and realize the loss. This is due to the fact that a loss produces twice as much pain as profit pleasure, and that the pleasure we can enjoy in ten years is of very little importance to us compared to our everyday enjoyment. (Thaler 2015, 45-47.)

6 Research in Practice

For this thesis the author made a research to investigate more Thaler's ideas about human behavior and how it can affect the stock markets. The main goal of this research was to see if humans (investors) can learn to make better financial decisions over time and therefore become closer to an "econ" like Richard Thaler assumed. Historically classic economic theories have assumed that the human being is always rational and their theories are based on that they always make the right decision because they have all the available data. These human beings of classical economics are characterized by unlimited rationality, self-interest, and self-control and they are called "econs" by Thaler. However, as we have seen in this thesis, this is not true and human beings are not always rational and therefore make irrational decisions that can, among many other things, create public panic or anomalies on the stock markets and difficult the efficiency of them. In his book "Väärin käyttäytyminen: Käyttäytymistaloustieteen Synty (Misbehaving: The Making of Behavioral Economics)", Thaler makes very clear his idea that human beings can be educated to make better financial decisions and therefore become closer to an econ or how an econ thinks and acts. He thought that those who were closer to be an actual econ were the economists. (Thaler 2015.)

For that reason, the main goal of this research was to investigate if investors that have been decades on the financial sector have become closer to be an actual econ over time. Because of this, the enquiry used for this research was sent to some of the biggest and most important portfolio managers and investors in Finland. The questionnaire contained six questions about behavioral economics and its importance and the questions were written by the author of this thesis, Jari Saavedra, and the CEO of The Finnish Shareholders Association (Osakesäästäjien Keskusliitto), Antti Lahtinen. This open not restricted questionnaire was sent in Finnish to

more than 20 portfolio managers and investors from some of the biggest banks and asset management companies of Finland. It was sent via email and five of them answered to it writing their answer and sending back an email. All the emails and responses were sent and received during October 2017.

7 Research Results

Due to the fact that most of the people who answered to the enquiry wanted to maintain their anonymity and that of the company they work for, this thesis will describe them as investor A, B, C, D or E. All of them answered to the questions widely and in an explanatory way. The answers, even though they differed as usual in some ways, were almost completely in the same direction so we can treat them as a whole and of general acceptance.

Further this thesis will discuss each subject of the enquiry more deeply, but first let's present and analyze the results. First of all, it was very clear from the answers that all of them thought that the market psychology and behavioral economics in general play a vital role on the stock markets and how they function. Because of this, they take into consideration social behavior when deciding their investment strategies.

The research makes very clear, just like Richard Thaler thought, that through education and experience the people (in this case investors) can become closer to an econ. They all admitted that even if it is difficult to nominate what is rational and irrational behavior or transactions, they have in some way or another made "mistakes" when evaluating different stocks or situations on the market, but most of them were made in the early years of their careers or when they started in the financial world.

As we have seen many times during this thesis, the markets are not always efficient and therefore sometimes they present opportunities caused by many different reasons. One of these reasons why the stock markets are not always efficient is the public panic, and from the answers of these portfolio managers and investors it became clear that they take huge advantage of this. It is specially during these panic situations that they tend to buy very cheap stocks that in a normal situation would be priced much higher. Also, not only the public panic, but investors overreaction is a huge player too in favor of professional investors.

Finally, the answers showed that they all believe that there are some things that happen in the stock markets that can not be explained by theories that already exist or fundamental analysis, and therefore the study and investigation of social behavior and behavioral economics can help to explain some of these anomalies that we see on the markets. Even though that it is almost impossible to predict the development of the markets (especially in

the short term) and the market crashes, behavioral economics can play a vital role in understanding the movements of the market.

The results of this research show, just like Thaler assumed, that with the proper education and experience, human beings can learn how to become less irrational when making financial decisions and therefore more like an actual "econ". That is how these five portfolio managers and investors have become more rational in their actions and transactions and how they can take advantage of the market anomalies caused largely by some investors irrational actions. It is of common sense that experience is a big part of every knowledge and maybe people need to make irrational decisions to become more rational over time and, like Elon Musk (one of the greatest inventors and entrepreneurs of our time) said in an interview, "you are always going to be wrong in some degree, the goal is to be less wrong over time".

7.1 Role of Market Psychology and Behavioural Economics in the Performance of Stock Markets

All the answers of the investors towards this topic agreed with Richard Thaler and what we have seen on this thesis that market psychology and behavioural economics play an important role on the functioning of the stock markets and they were very pleased that especially on the last decades these subjects have been discussed more deeply. However, it is important to notice that, like investor A said, "the problem is that social sciences are not well suited to the quantitative approach of natural sciences and the direct interpretation and possible introduction of results is often very difficult".

7.2 Social Behaviour and Investment Strategies

All of the interviewed persons expressed that they take into account social behavior on their investment strategies and that it is a fundamental part of them. As investor C said, "the judgement of investors behaviour is an important part of the whole evaluation, however due to the fact that it is just one part of the whole, its importance is sometimes bigger than another times".

All the investors agreed that they have tried to take and have taken advantage of the irrational behavior of the markets, especially during crashes because as investor B said, "during the rise euphoria it is harder to benefit by being contrarian. Dullness often continues longer than expected". That is why many of them said they have used in their favor opportunities that herd behavior brings, acting for example as the counterparty of panic transactions. In this same line investor A expressed, "consensus views are good warnings that fundamentals are likely to be secondary and psychology dominates".

The most common answer was that they have taken advantage of other investors' overreaction. For instance, investor E gave an example of how between the years 2013-2015 he bought shares of the American company Strayer Education between the prices 35-55 USD. During that period the whole industry in the United States was under a lot of trouble due to the firm's questionable and even illegal marketing. However, even that Strayer Education was one of the only companies that survived the scandal with clean papers, its stock fell like all the other companies from the industry. Nowadays the price of the share is around 90 USD.

Another example of how experienced investors take into account social behavior in their strategies can be seen in the quote of investor E: "I make purchases in the middle of a macroeconomic or temporary company-specific crisis. I have noticed that in these situations most investors act very faint-hearted and sell shares of good companies in descending markets. In the social media era, social pressure emphasizes the strength of the sales wave. The crowd does not want to stand out and when others sell, they do the same". As we have already read in this thesis and like Thaler expressed in his book "Misbehaving: The Making of Behavioral Economics", John Maynard Keynes also believed that most of professional and amateur investors were following the crowd because as he said, "from the point of view of reputations, it is better to fail in the conventional way than to succeed unconventionally".

In this direction investor E also said "it is very irrational that an investor is concerned about, for example, macroeconomic cycles. The ups and downs of the economy are coming and going, but they have no impact on the competitive position between industry companies. The cycles will affect everyone".

7.3 "Irrational" Transactions, Becoming Closer to an Econ

As Richard Thaler has expressed in his theories, we are not born like *econs* who make always perfect financial decisions, and that it can only be achieved by education and especially by experience and learning from own errors. In this same line, and just as normal, all the interviewed persons agreed that they have made not so good decisions during their career (especially in the early years of it), but they emphasized that it is very difficult to express what is "irrational" because behind every decision there is always some type of idea, and as investor C said, "everything has its reason, and it may not be easy to distinguish what is irrational and what has a cause that is not that clear to everybody". Sometimes even a rational decision can end up being wrong due to bad luck. Or an irrational decision can end up being right due to good luck.

Investor E gave an example of a mistake he has made because of irrational reasons. The biggest reason for his mistake was the fear factor. He expressed that even that he has never sold

anything because of fear, he has left without buying. The example he gave was about the danish windmill company Vestas Wind Systems. During the years 2010 and 2011 and after the prices of the firm's shares had fallen from its peak of 700 DKK, he bought shares of the company at prices between 100-200 DKK. The stock fell even more till more or less 20 DKK at the end of 2012 and even that investor E could have bought more shares at an even cheaper price and that his rational and analytical view of the company and its long term potential were still the same that at the beginning, he started to fear and doubt his own analysis. Nowadays Vestas Wind Systems share trade at almost 600 DKK.

7.4 Trends, Resistance and Support Levels on Stock Markets

This was without doubt the subject that inspired the most different answers and it was because some investors believe and others don't in the technical analysis or its power to generate better than average returns. However, even that some of the interviewed people didn't believe that the stock markets have resistance or support levels, investor B expressed that he believes that there are some trends and that investors can benefit from them going with or against them. In this same direction investor A expressed that he believes that there are trends and resistance or support levels that can't be explained by fundamental analysis, giving an example of how the German banks trade with P/B values of 0,5 being this, in his opinion, due to the investors excessive fear.

7.5 Importance of Future Research and Study of Behavioral Economics

Once again, all the interviewed investors agreed on the answer for this topic. They believed that even that the stock markets are very complex and that there are always many parts involved in its functioning and therefore the prediction of future abnormalities and collapses is almost impossible, researching and studying behavioral economics can help to understand all these matters. Like investor E expressed, "the benefits of researching and studying behavioral economics are related specifically to the understanding of market movements. In other words, when the market is in a bubble I can't know when the next stock market crash will come, but I understand that the overvaluation is due to the irrational behavior of investors".

8 Conclusion and Evaluation

The goal of this thesis was to research how the effects of social behaviour can be seen on the stock markets and, just like Richard Thaler has expressed, if human beings can become closer to an actual econ by education and experience. As we have seen during this thesis, and contrary to what the classic economic theories suggest, the human beings are not always rational and therefore act in a rational way. This causes that the stock markets are not always efficient and opportunities are presented from time to time to investors who are capable of seeing through the clouds of irrationality.

During especially the last decade, it has been discussed many times in different countries if students at secondary school should have more mandatory courses and studies of economics. In my opinion, and as we have seen on this thesis and on the researchs of Richard Thaler, the answer is yes. In the interest of becoming closer to an ideal econ who always makes the right financial decisions, the human beings need to be educated. That education combined with people's own experiences and the future study and research of human behavior and behavioral economics is the key to more rational markets and economies globally.

There is still a lot that can be done in the field of behavioural economics. It is a very young field that has only been studied properly for less than half a century especially by the main studied author for this thesis, Richard Thaler, and it has started been recognized lately by the economic world just like the year 2017 Nobel Prize in Economic Sciences shows, awarded to Thaler. Future studies and researchs about behavioural economics should emphasize in continuing to test and link psychological and behavioural theories with classic economic theories, being even prepared to shed those that don't work anymore nowadays in order to achieve progress.

Finally, I would like to thank Eija Lipasti, the supervisor of this thesis, and Antti Lahtinen, the CEO of The Finnish Shareholders Association (Osakesäästäjien Keskusliitto) for the great help and advice, and Andrew Robertson my professor at ESCE International Business School in Paris for the introduction and motivation towards this topic and the stock markets in general.

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Attachment 1: Enquiry email sent to portfolio managers and investors

Hei!

Nimeni on Jari Saavedra ja teen opinnäytetyötä aiheesta ”Effects of social behaviour on stock markets” jossa tutkin laadullisen tutkimuksen menetelmillä kuinka ihmisten käyttäytyminen näkyy osakemarkkinoilla ja kuinka sijoittajien irrationaalinen toiminta aiheuttaa markkinoissa poikkeavuuksia .

Olen ollut yhteydessä Osakesäästäjien Keskusliittoon ja olen saanut Antti Lahtiselta erittäin hyviä vinkkejä ja kysymyksiä joihin heillä myös olisi mielenkiintoa saada vastauksia ja julkais- ta myöhemmin valmiin tutkimukseni tulokset.

Suurimman osan työstäni olen perustanut kirjallisiin lähteisiin kuten Daniel Kahnemanin ja Richard Thalerin kirjoihin ja tutkimuksiin. Olen työni loppuvaiheissa ja seuraava ja viimeinen vaihe onkin muodostaa pieni kysely Suomen tärkeimmille salkunhoitajille ja sijoittajille.

Kysymykseni ovat seuraavat:

- Onko mielestänne markkinapsykologialla ja käyttäytymistaloustieteellä ylipäätään iso rooli osakemarkkinoiden toimivuuden kannalta?
- Kuinka huomioitte laumakäyttämisen sijoitusstrategioissanne?
- Oletteko sijoitusuranne aikana ikinä päätyneet tekemään irrationaalisia transaktioita? Jos olette niin voitteko antaa esimerkin?
- Oletteko sijoitusuranne aikana ikinä pystyneet hyödyntämään markkinoiden irra- tionaalista käyttäytymistä?
- Uskotteko että osakemarkkinoilla on trendejä tai vastustus- ja tukitasoja, joita ei pysty fundamenttianalyysillä selittämään?
- Uskotteko että käyttäytymistaloustieteen tutkiminen ja opiskelu voi auttaa tulevien markkinoiden poikkeavuuksien ja romahduksien ennakkoinnin ja ymmärtämisen?

Arvostaisin todella paljon mahdollisimman pikaista vastausta jotta saisin vietyä työn loppuun.

Kiitos todella paljon!

Ystävällisin terveisin,

Jari Saavedra