THE IMPACT AND MANAGEMENT OF INVESTMENT LOSSES

A thesis

Presented to

The Faculty of the Bauer College of Business

Of the University of Houston

And the

Faculty of the Honors College

Of the University of Houston

In Partial Fulfillment

Of the Requirements for Senior Honors Thesis

And the Degree of

Bachelor's in business administration

By

Sai P. Gudapati

April 2021

THE MANAGEMENT AND THE IMPACT OF INVESTMENT LOSSES

____

Sai P. Gudapati

APPROVED

____

Dale Rude, Ph.D.
Committee Chair

____

Richard Garner Ph.D.

____

Marina Trninic Ph.D.

____

Paul A. Pavlou Ph.D.
Dean, Bauer College of Business

If individuals are rational, there is no need to protect them against their own choices – Daniel Kahneman

Acknowledgements

I am extremely grateful to my thesis advisor, Dr. Dale Rude. He has been a great mentor to me, and has offered me great advice not only for my thesis but also for life in general. He has been the most patient with me as this was my first time writing something so expansive. It was a pleasure learning from him, and I will carry on the knowledge and lessons he bestowed me for the rest of my life. I truly could not have asked for a better professor or advisor.

To my thesis committee, Dr. Richard Garner and Dr. Marina Trninic, I would like to thank you for your guidance and for offering valuable input as my thesis developed. Individually, I would like to express my gratitude for Dr. Garner, who has been challenging me to think and develop my own ideas. I would also like to thank him for always being there to help me with anything I need. Next, I would like to express my gratitude for Dr.Trninic, in the short time I have known her, she has been extremely supportive of me. Though, I failed to keep her updated on the state of things, she was always understanding, and provided great advice.

And last but not least, I am grateful for my family and friends. My family has been great support throughout the entire process and always encouraged me to keep going. I am thankful for my mom and my brother, they have always bought me food and took care of me when I had to stay up late writing and researching. Next, I would like to thank my friends for always keeping me motivated and for making sure I stayed on top of my work. I would like to especially thank Andrew de Carion who ran our thesis studio, for his guidance and suggestions.

Table of Contents

Introduction 9
Wealth Building 9
Losses Happen 12
S&P 500 13
A Prominent Stock 14
Traditional Finance vs Behavioral Finance 16
Prospect Theory 18
Impact of Covid-19 and Flinching 19
Real Person Exemplar 20
Information Overload & The Pressure of Time 21
Methods 23
Interviews 23
Interview Questions 23
Summary of responses 25
Investors 25
Financial Advisors 32
Conclusion 41
Limitations 44
Real world applicability 44
Sources 46

Abstract

The growing wealth disparity between the top 1% of America and the bottom 70%-80% is partly due to the lack of investment by the bottom half of the country in with the financial markets. The way to get out of poverty is to have income, but the way to achieve financial stability is to build wealth and plan long term. The problem however is that those who experience poverty or who are part of the bottom half of the country, have much more to lose, therefore are averse to investing. For example, the $600 stimulus check for someone who is just above the poverty line means that they will be able to pay the month's rent or that their family does not have to starve. Any additional money generally goes to basic life necessities rather than investments. There is also the case of the lack of knowledge regarding the markets and market strategies, and the tendency to exit the market when loss occurs. Additionally, success in the stock market comes with experience, the good and the bad. However, those that cannot take such chances are not going to be able to run through experience and never get to truly succeed in the market. Furthermore, investors of all socioeconomic classes tend to feel pressured by the lack of time and the abundance of information when making transactions. This just adds another layer to the difficulty of participating in the market.

I hypothesize that: investors react differently based on how they are informed of their losses, loss aversion causes investors to leave the market and forgo gains, and time pressure causes investors to make less than optimal choices. To test my hypotheses, I interviewed three experienced investors as well as three financial advisors to talk about their experiences with the stock market and the strategies they employ to deal with the changes in the stock market.

Regarding hypothesis 1, I found that the way investment losses are phrased does affect individual investors. The investors stated that they try not to look at the absolute dollar amount of their loss at all, and that they look at percentages so they can make rational decisions. The financial advisors

said that they only communicate their clients' losses to them in terms of percentages. They state that it is the best way to keep their clients calm and help them make rational decisions to move forward or to mitigate the losses.

Regarding hypothesis 2, I found that inexperienced investors will leave the market when they face loss. The financial advisors stated that they all had clients that left the market following the market crash in March 2020. Even when staying in the market meant gains in the long run, many investors chose to leave because of short term losses.

Regarding hypothesis 3, I found that both the financial advisors and the investors admit that when they first started out, time pressure was a major reason for their mistakes. But they also said that making transactions under time pressure does get easier as one becomes more experienced.

Introduction

A salary or income coming in every month is sufficient to live for a finite period of time. It will be sufficient for rent, food, and other necessities. But income alone cannot guarantee long term stability. What would happen if an individual's inflow of income gets cut off, or when he retires, he no longer has income coming in? Income alone is not enough for the long run, one needs wealth. And one of the best ways to build wealth is to participate in the stock market. That is easier said than done. Currently, it is the wealthiest 1% of the United States that dominate the stock market and the bottom 50% of the population barely engage with the stock market. I explored why there is a lack of engagement by the bottom half of the country.

Wealth Building

Proportion of wealth in the stock market

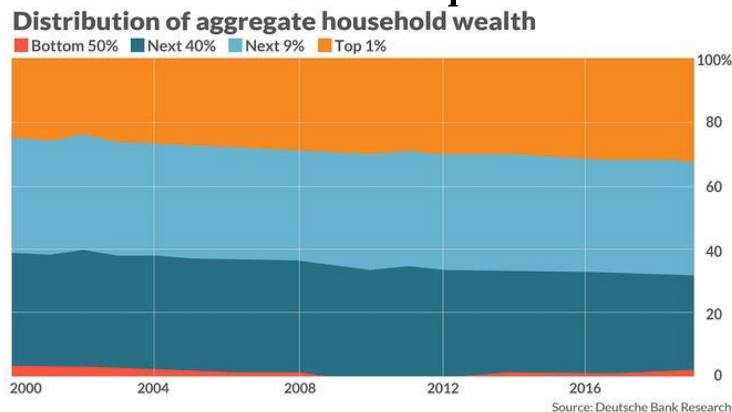
Poverty is persistent in the United States, over 46 million experience poverty and a quarter of those are part of the labor force. An additional 54 million earn just enough to remain above the poverty line. Employment alone is not enough to achieve economic stability or prosperity. Wealth and Income are two very different concepts. Wealth refers to a household's assets such as savings and homes minus what they owe. Whereas income refers to the inflow of economic resources. Although the need to build up wealth might be a secondary concern to those experiencing poverty, the build of wealth is crucial to break out of poverty and to achieve financial stability. The lack of educational opportunities also inhibits those experiencing poverty to gain understanding of how the financial systems work, therefore preventing them to engage in the markets in a meaningful way.

Stagnant wage growth and increasing corporate profits have led to two forms of inequality: in income and in wealth. The proportion of income for the top households increased steadily, and the wealth of the top 5% of households increased 186% from 1983 to 2016. In 2020, it has been estimated that 55% of households own stocks. A Federal Reserve report states that the top 10% of households control around 85% of equities in the country(Cairo, Isabel, Jaesim 2020). And in terms of wealth, many in the bottom 50% have barely gained any wealth since the 1980's and a portion of the bottom 50% went into debt during the time period between 1980 and 2016. Furthermore, whereas, the income of the bottom 25% only increased 33% from 1979 to 2016 before taxes.

The growing wealth gap in the country can be partially attributed to the worrisome state of financial literacy in the United States. Studies show that fifty three percent of adults are financially anxious. In particular those between the ages of 18 to 34 have been shown to display the highest levels of anxiety and stress related to finances. Two in three families do not have an emergency fund to get them through unexpected events such as injuries or unemployment. This statistic was more clearly seen during the current pandemic as people lost their jobs almost overnight and struggled as they did not have the funds to pay rent, make car payments, or buy groceries. Twenty-seven states scored below a C average in high school financial literacy. Many states do not even require a course in financial literacy leaving many youths lacking in financial literacy. This is quite troublesome as most do not go onto higher education, and high school is their only way of gaining knowledge. This further exacerbates the wealth disparity in the United States.

Additionally, those who are in the lower income range generally have a strong aversion to risk due in part to the state of their financial instability. We can see that over time, the aggregate wealth of the bottom 50% went down, this is in due part can be contributed to people pulling their money out when the Global Financial Crisis occurred. While those in the 1% increased their wealth over the years, even in times of instability. People in the lower income range barely have enough to meet their basic needs, so naturally they do not have the confidence to invest the rest of their money if there is any risk of losing the minimal amount of money they do have. This is yet another factor contributing to the wealth gap.

The bottom 50% of households own around 0.25% of total household equities.



Losses Happen

When an individual makes the decision to invest in the stock market, they are bound to lose money at one point or another. Losing money is an inevitability that comes with engaging with the market. Each stock or option comes with a risk associated with it, which means that there will always be the risk of losing your investment. That is the inherent nature of the stock market, even the most experienced of traders lose money in the market. So, it can be said that individual investors, even those who have researched thoroughly about the market will end up losing money at some point. And making a profit in the stock market not only relies on luck but also skill. One needs to know what stock to invest in and when to invest in it. For a lay person, this kind of knowledge is hard to obtain and difficult to fully comprehend. And if the person does have the skill to know what stock to put their money in and when to do it, there is still the element of luck associated with the market that can make or break the investment.

There are also several reasons why people end up losing money in their investments. The first being that people do not understand market cycles. Business and economic cycles rise and decline, if an individual invests in a stock at the height of the business cycle, their stock is bound to decline in value when the business cycle is on a downturn. This type of mistake mainly has to do with the timing of their investment. And the key here is that there is a silver lining that will be making several appearances throughout this paper, those who do not panic and sell their stock when the prices fall will prevail and recoup their losses in the long term. The second common mistake that people make is making investment decisions guided by their emotions. Herd Mentality is one of the worst possible choices an individual can make. The fear of missing out when everyone is putting their money in a certain stock will lead one to invest in a bubble that is just waiting to pop.

When everyone follows a trend of investing in a certain stock, the prices will be sky high and it will be just a matter of time before the stock is no longer trendy and people start to lose money. And there is also the case when people get attached to a certain stock. When investors forget that just because a stock has made profits before does not mean that it will continue to promise returns, they will develop tunnel vision and ignore reason and may lose money. And one of the most common reasons that investors lose money is that they enter the market to get rich quickly and fall into easily avoidable traps. Earning money through the stock market is a long-term game, anyone who believes that they can enter the market and quickly make profits are simply setting themselves up for failure.

Considering all the above points, anyone interested in entering and engaging with the stock market need to internalize that losses are bound to occur. Once people accept that fact, then they will be much more prepared to deal with the ups and downs of the market.

S&P 500

The risk of losses does not only exist at an individual level, but also exist at a broader market level. The Standard and Poor's Index is one example of how the risk of losses exist at a market level, and how the index itself is subject to systematic cycles. The Standard and Poor's index was founded in 1957 to track the value of five hundred large corporations. The S&P 500 represents an overall composition of the U.S economy. The index had a number of rises and falls throughout its course. For the first decade, the index rose in the reflection of the post-war economic boom, then following the boom, the index fell in value until the 1980's reflecting the stagnant American economy coupled with high inflation. Another major event in the history of the S&P index was

the great recession between 2007 and 2009. And by 2013, the index gained back the momentum and value lost over the past decade. And as of recently, due to Covid19, the index has experienced another setback.

An interesting point to consider is that most of the market gains come through very brief intervals of time. It is estimated that 90-95% of all market profits come from the best 1-2% trading days within a time period. For example, 95% of market gains from 1963 to 1993 came from 1.2% of the best trading days. According to a study conducted by Towneley Capital Management, the market does not fall or rise steadily, instead, there are days or months where it plunges or soars. Therefore, market timing is a key factor to obtaining success in the market. It is all about waiting for the best performing months and avoiding the worst performing months of the market. Yet, predicting which are the best and worst months is near impossible for individual investors, it all comes down to patience and being in the market for the long run.

A Prominent Stock

As mentioned previously, the risk of losses does not only exist at an individual level, stocks of corporations are also subject to this risk. Stocks can lose and gain money for a variety of things. It is inevitable for even corporations to lose money, there always exists idiosyncratic risk. The company's price can be affected by changes in management, the death of a chief officer, and etc. Tesla was founded by Martin Eberhard and Marc Tarpenning in 2003 and did not go public with the company until 2010. Until 2013, Tesla's price hovered around the $20 - $40 price range. The company's stock had its first surge in 2013, as the price rose to around $250. Tesla's price also rose under the guidance of Elon Musk and the various publicity stunts such as launching a roadster

into space. Tesla became the most valuable American carmaker in January 2020 before the coronavirus pandemic hit. During the early months of the pandemic the company hit bottom and closed at $361.22. But throughout the summer of 2020, the company's price climbed back up and allowed Tesla to become the most valuable carmaker in the world. One of the reasons for this surge in price includes Tesla's statement of their five to one stock split.

Traditional Finance vs Behavioral Finance

Another important factor to discuss when addressing losses is to talk about the disparities that exist between traditional and behavioral finance. Misbehaving by Richard Thaler addresses these disparities as well as a crucial and what seems to be obvious point that most people in economics and finance tend to forget. Human are imperfect and will misbehave, and yet most scholars do not take this point into account and base their theories around the assumption that are humans are perfect and are able to think rationally at all times. Thaler mentions the concept of homo economics or Econs, a species of beings that are able to make decisions on the basis of rational expectations, can find answers to optimization problems that ordinary people cannot solve. In contrast, there are homo sapiens that do not always make decisions rationally and make mistakes. For example, Thaler's students liked being graded on a 137-point scale rather on a 100-point scale. Even if the students got a 96/137 which was the same as 70/100, they derived satisfaction from the fact that their score was a 96. Thaler's students behaved as humans do. In the eyes of an economist, they were misbehaving because they viewed the students as econs rather than humans.

Modern finance and economics have ignored human passions and the tendency of humans to misbehave. The consequences of ignoring such factors have been proven to be grave and will continue to have serious consequences in the future if not addressed. Virtually no economist saw the financial crisis of 2007-2008 coming, many thought that the crash and its aftermath were possibilities that could not happen. These things were not seen or addressed because economists live in a world of econs, and not in the world of human beings.

The basic economic theory of the consumer is based on acquisition utility rather than transactional utility. Humans care about the perceived quality of the product or service that they are purchasing. Transactional utility can be defined as the difference between the price paid for the product/service and the price one would expect to pay or the reference price. Many businesses' failures and successes can be attributed to their ability to help their customers to achieve positive transactional utility.

Traditional finance differs in many points from behavioral finance. Traditional finance operates under the assumption that all investors participating in the market are rational actors who are able to process all the available information without bias. Another aspect of traditional finance is that all of the available information about financial markets is said to be perfect. Traditional finance also states that the market is efficient and is a true representation of the financial markets. And therefore, traditional finance believes that investors have self-control when it comes to making decisions regarding their investments. In contrast, behavioral finance operates under the assumption that investors have biases and emotions also play a role in the decisions undertaken, therefore are irrational. Additionally, investors are not completely rational, so they are unable to process all the available information. The market is not perfect and is subject to anomalies, limiting investors' ability to make sound decisions.

Prospect Theory

When talking about losses, there has to be a discussion of Kahneman and Tversky's work. "Prospect Theory: An analysis of decision under risk" is a paper written by psychologists Daniel Kahneman and Amos Tversky in 1979 that is essential in understanding the way we look at losses. Prospect Theory states that people base their decisions off of the potential losses and gains involved rather than the final outcome (even if the final outcome is identical) (Kahneman & Tversky, 1979). Another crucial point of the paper is that the weight of losses is felt twice as much as that of any gains. And one of the general consensuses is that market participation decreases when individuals are pained by their losses. In times of financial instability, it's been said that people tend to leave the market in fear of short-term losses. Another factor to consider is people's preference for avoiding losses as opposed to equivalent gains (Koedijk;Pownall;Statman, 2012). Also known as Loss Aversion, this concept plays a vital role in understanding individuals' mindset and behavior when it comes to their reaction to personal financial losses and how they manage them. An important part of the study concerns people's differing attitudes towards risks concerning gains and risks concerning losses. Kahneman and Tversky found that the same individuals can be perceived as risk averse as well as risk seeking based on the given situation. They cite that this is due to the irrationality of the human mind, but rather realize that it is crucial to factor in the asymmetry of the choice's humans make.

Hypothesis 1: Investors react differently to way losses in their investments are phrased: losses can be phrased in terms of absolute dollar amount, in terms of percentage, or in terms of dollar amount relative to total.

Hypothesis 2: Loss aversion impacts investors , causing many to leave the market and in turn forgo gains.

Impact of Covid-19 and Flinching

The Covid-19 induced crash is a perfect example to see how individuals react to loss, and the outcomes behind their actions. The stock market crash of 2020 also referred to as the Coronavirus Crash was a sudden global market crash that began on February 20th and lasted until April 7. The S&P 500 dropped as much as 34 percentage points during the Coronavirus Crash. The crash was the most sudden and fastest fall in history and the most devastating since the Wall Street crash of 1929. The crash only caused a short-lived bear market, and by April, the global market reentered bull markets.

Fearful investors tend to sell their stocks and exit the market in times of market instability. This phenomena can be described as flinching. Flinching is defined as panicked selling in the face of a significant stock market downturn. They buy high and sell low, inevitably losing much of their investment. And following the stock market crash, that is what many inexperienced investors did. However, what they did not realize is that markets rebound and return to their former glory over time. So those who did not flinch and exit the market in times of instability will recoup their losses and even possibly gain even more coming out of the crash. And investors who are saving for their retirement have the time to stay put and wait for the market rebound. Furthermore, there are those who buy many stocks at discount prices and wait for the stocks to rise in value and cash in on the capital gains.

Real Person Exemplar

The following story is a real-life example of someone who flinched and made bad decisions in challenging times. A woman named Carrie from Athens, Georgia came on the Dave Ramsey show and shared her story. Following the market crash in the March of 2020, her and her husband overwhelmed by the state of the world had decided to take out a large portion of their 401k and cashed it out. Carrie's husband moved around 900 thousand dollars into cash and still has around 350 thousand dollars invested in their 401k. Carrie now is looking into investing in property, however there is a 30% tax rate and 10% penalty, meaning they would lose close to half of their 900k to the government. Dave Ramsey strongly suggests that they move their money back into mutual funds, as in the next 20 years, the US economy is once again going to soar. Carrie also questions about investing in bonds instead, but when interest rates go up, bond prices go down, so it would not be the most viable option. A valuable lesson learned here is that flinching during times of instability as Carrie and her husband did is one of the worst decisions to be made financially.

Information Overload & The Pressure of Time

Let's move on from losses and shift the attention to the pressure's investors face on a day to day basis. Even if investors internalize that losses are inevitable and that effective loss management is vital, making trades under time pressure can also lead to mistakes. We live in a highly digitized world where we receive an excess amount of information that we simply do not know what to do nor do we have the time to process all the information. This phenomenon called information overload is a very serious issue with grave consequences in the investment sector. People with low levels of financial literacy are hit hardest by information overload and often pick the default option when it comes to things like retirement plans simply because they cannot cope and process all of the available information.

Some investors when exposed to an abundance of information tend to panic and make the wrong decisions. On the other hand, when posed with a lot of information, people can also tend to withdraw from the process and put in less effort. There are generally three main causes of information overload. One is pure quantity, two being having too many options, and the third being option similarity.

There has been an experiment done to prove that information overload is detrimental when trying to make sound decisions. The Agnew and Szykman experiment tests how the number of investment choices offered, the similarity of the choices, and the display of the choices, led to different degrees of information overload, and revealed the tendency of individuals without much knowledge on investing to pick the default option.

In addition to the abundance of choices available, time is also a huge factor that adds immense pressure when it comes to making decisions. Every day, the market closes at 4PM E.T. and with that comes the possibilities of having to make decisions last minute. Investors who are in the market to make a short-term profit tend to feel more pressured by time, and investors who have a greater motivation to make good trades also tend to feel more pressured by time. In addition to the pressure of time, the more an investor wants to perform well on a trade, the more difficult they will perceive the task to be. Furthermore, under high levels of time pressure, investors also tend to place more weight on the negative information in order to lessen their losses if the trade were to perform poorly.

Hypothesis 3: Investors who are operating under a time limit and are presented with an abundance of information tend to feel overwhelmed and make less than optimal choices.

Methods

I conducted a series of interviews to test my hypotheses.

Interviews

I interviewed six people about their investment history and their strategies to understand the effects of loss and how-to best deal with loss. These interviews gave perspective on the qualities an investor needs to possess and how they should best conduct themselves in the stock market. The answers provide information on what people looking to invest should do and what to avoid in order to have a successful stint with the stock market.

Method: Convenient Sample

I sought out people that have prior investment experience and financial advisors for the interviews. For the investors, I interviewed three investors among three different age groups to see how age plays in a role in investment decisions. I interviewed three financial advisors to see how they would advise clients and their take on investment strategies.

Interview Questions

(*were used only for financial advisors)

General

1. Personal Questions
    1. Age
    2. Education
    3. Investing experience
    4. Did your parents/family invest when you were growing up?
    5. What is your occupation?*
2. What factors do you consider prior to investing?
    1. Factors such as price to earnings ratios, beta, and dividends
3. How did the Covid-19 pandemic affect your investments?
4. What was your first investment strategy?
5. What is your most recent strategy?
6. Which platforms or software do you use to perform transactions?

Hypothesis 1

1. Here are three ways to think of a $100,000 loss on a $1,000,000 investment: a) a loss of $100,000, b) a 10% loss, and c) initially the investor had $1,000,000. Now they have $900,000. Which would you use in communicating to a client about this loss and why?*
2. If a stock price goes down, what strategies do you employ to deal with the drop-in price
3. When stock prices do go down, do you look at how much it goes down by or how much you've lose?
4. What are some examples of the times your clients have mismanaged losses? Effectively managed losses?*

Hypothesis 2

1. When and what was your first loss?
2. When and what was your most recent loss?
3. What was your most successful investment?
4. What is your risk tolerance?
5. Were you investing experience prior to the 2009?
6. What was your experience like during the Great Recession?
7. How important is effective loss management to successful investing?*

Hypothesis 3

1. Have you been pressured to make decisions due to the lack of time?
2. Did you ever feel that you made a less than optimal decision due to being overwhelmed by the abundance of options?
3. How long do you typically spend considering whether to buy or sell a stock or to decide on an investment?

Summary of responses

Investors

Venkat Yerubandi

Venkat Yerubandi is a 48-year old man living in the Dallas, Fort Worth Area. His highest level of education includes receiving a master's degree in Industrial Management. He has been investing for over 20 years and has been actively trading for the past ten years. He is currently working as a trader under Indigo Capital Management. Growing up, his family did not invest in the stock market, but they did have investments in various businesses and real estate.

When it comes to investing, the most important factor he considers is Market Cap. Market Cap or market capitalization refers to the total dollar market value of a company's outstanding shares of stock. He holds 50% of his investments in the S&P 500 Index and in mega caps such as Amazon, Walmart, and etc. 30% in mid cap such as Tesla and Shopify, and the remaining 20% in speculative or growth stocks. He also considers beta to be an important metric and does not particularly care for price to earnings ratio as he feels the metric is outdated. He primarily looks to invest in stocks that show growth over stocks that show stability.

The Covid-19 pandemic was actually a blessing in disguise for Mr. Yerubandi as he made quite a lot of money. At first, his investments were down by 30%-40%, but they quickly rebounded. He pivoted from investing in value stocks to investing in growth stocks such as Zoom and Peloton. But, once the market picked up, he went back to investing in value stocks such as Costco, Walmart, and Home Depot.

His first investment strategy consisted of buying blindly and listening to experts. He primarily invested in the foreign exchange market in the beginning and lost most of his money. Then, he moved into options, where he lost even more money. Now as he has become more knowledge over the past twenty years, he has adopted advanced strategies such as advanced butterfly strategies, and delta neutral strategies. He currently employs TD Ameritrade to perform his transactions, and he uses a wide array of other software systems for testing options.

The following are some of Mr. Yerubandi's strategies to deal with drops in price. He looks at the moving averages, he immediately starts hedging, and he moves to neutralize the delta. He generally does not employ all these strategies until the price goes down by more than 10%. And when prices do go down, he avoids looking at the dollar amount the stock went down by because initially, that's what he used to do, and he said he would have frequent heart attacks. Now for his peace of mind and mental stability, he looks at and deals with everything in percentages.

His first loss occurred during his time investing in the foreign exchange market, and his most recent loss was in the Shopify stock. He bought the stock at $1400, but now the value of the stock is at $1000. To date, his most successful investment has been in the S&P 500 index.

As for his risk tolerance, he says that he can handle risk. But the definition of risk not only comes from the nature of the investment but is also based on his knowledge of the investment. If he is knowledgeable about the investment at hand, he says that he can take on the risk no matter what the actual risk might be. On the other hand, even if the risk of a particular investment is low, he would consider it quite risky if he does not know much about the investment.

Mr. Yerubandi was primarily investing in mutual funds prior to the Global Financial Crisis, and he says that he was quite terrified throughout the entire ordeal. But looking back at it now, he says that he is glad that he stayed in the market, and that it prepared him for future crises, such as the Covid19 financial crisis of 2020.

When talking about being overwhelmed by lack of time and options when it comes to making trades, Mr. Yerubandi admitted that even now he has times when he has to make decisions at the last minute and says it is pretty overwhelming. He also mentions that it is pretty natural to be taken aback and panic a little at the options available when it comes to trading. Especially, when news about either bankruptcy or company expansion comes out, he says that he has to make decisions pretty quickly and with a lot of factors to consider. But generally, he mentioned that he takes quite a bit of time before he buys or sells stocks. He prides himself in rarely succumbing to adrenaline or peer pressures when making trades.

Vijay Ramisetti

Vijay Ramisetti is a 43-year-old man residing in New Jersey. He has a bachelor's degree in Technology and has been investing for about 15 years. He is currently working as an IT Cloud Solution Architect. He grows up in a low-income family, and they barely had enough money left over each month to put in their savings.

When he first started, he didn't really look for any particular factors, he didn't really understand how the stock market worked. He heard his co-workers were investing in the stock market, so he decided to follow suit and ended up buying what they were buying.

The Covid-19 pandemic ended up being the biggest opportunity for Mr. Ramisetti since he started investing. He made the most amount of money he has ever made investing in the stock market, just as Mr. Yerubandi, he considers moments of crises like the Covid-19 pandemic to be once in a lifetime opportunity.

His first strategy when he started investing in the stock market was to buy stock that were familiar to him. He saw his wife using a Revlon lipstick, so he bought Revlon stock. He drove a Honda, so he bought Honda stock. He looked up one day and saw an airplane and thought that airplanes are always needed and will probably be a good investment, so he bought airline stocks. Overall, he mainly stuck to buying stocks of big consumer companies. He stated that he didn't do much if at all any research on the stocks prior to buying them. His most recent strategy is pretty simple. He says, "Buy low, sell high." He looks for stocks that have the potential for growth. He is also pretty bullish when it comes to stocks such as Tesla and Zoom. He is also a big fan of Fintech. As for the software he uses for transactions, he swears by TD Ameritrade. He has always been using it and will continue to use it.

The following are some of the strategies Mr. Ramisetti employs to deal with drops in stock prices. He says that one needs to have an exit strategy even before buying the stock. You need to know how much you can lose or how much you have to gain before you decide it is time to sell the stock.

He follows a timeline, within the first week if he does not gain at least 7% of his investment, or if he loses more than 7% of his investment, he exits right away. Then, he will see whether he will gain at least 14% of his investment or lose 14% within two weeks, and then proceed to make a decision whether to keep or sell. And when prices do go down, Mr. Ramisetti looks at how much the stock dropped in value, and how much value his investment lost. He says he looks at both measurements to gauge when he should get out of the particular investment in accordance to his timeline mentioned above.

Mr. Ramisetti's first loss was pretty devastating for him. It was Goldman Sachs stocks, he bought it at around $135, and it dropped down to about $90. Following this loss, he completely left the market. Then around 2011, the European Crisis and the tsunami that hit Japan had big consequences on the market. His portfolio consisted of many airline stocks, so those took a big hit as well. Following these losses, he started to keep an Excel spreadsheet containing all his investments, so he could keep better track of them. His most recent loss is actually Tesla. He was pretty bullish and bought many Tesla stocks even when the company was having many internal operational problems. He bought at 730, and the stock dropped to around 630. Despite this, he still has immense faith in Tesla and continues to buy Tesla stock. To date, his most successful investment has been in AMD, he bought the stock at $5 and now at its peak was around $90. He also considers Tesla a good investment, because he bought some Tesla stocks at $280 before the split.

Mr. Ramisetti considers himself a risky trader. He says that he does not have the patience to sit around and wait. However, he's not the type of person to buy blindly, you are never going to see

him buy penny stocks or anything like that. He likes companies that are always looking to evolve and keep up with the changing environment. He is a big fan of how Roku evolved over the years and stayed relevant. He also looks for companies that have a SAS or Cloud Model.

Vijay Ramisetti was investing prior to the Global Financial Crisis; however, he was not in the market during the crisis. As mentioned before, he left the market following his big loss with Goldman Sachs. To this day, he considers not being in the market in the time of crisis a missed opportunity. He says that there won't many opportunities like that and that many people made their fortunes during the global financial crisis.

When we discussed the pressures of making decisions on a time crunch, he freely admitted that it was and is one of his biggest reasons for failure. He says that no matter how prepared he tries to be, there are just days where he will make big transactions near closing time under the pressure of time. Additionally, when he started out investing, he mentioned that he felt very overwhelmed by the sheer number of options available to him. He says that he got better over time and does not feel as overwhelmed now. As for the time he spends deciding to buy or sell a stock, he says he got better over time. At first, he used to take days, but now he can make trades after looking at the data for 5 to 10 minutes.

Showry Kocherla

Showry Kocherla 49, holds a PHD in Management Information Systems. He currently works in IT Consulting and has been investing for around 20 years. Growing up, his family did not invest in the stock market at all.

When investing Showry looks at price to earnings ratio and the earnings growth ratio primarily. He also periodically looks at the dividend yields. During the pandemic, his portfolio fell about 40% but by the end of 2020, it was up 60%.

For Showry's first investment strategy, he focused on having investments that are stable versus investments that have potential for growth. His first investments were in Exxon, Halliburton, Microsoft, Palm, and in P&G. Now, he looks for investments that have potential for growth rather than stability. To perform his transactions, Showry uses the software provided by Charles Schwab and uses an array of tools for research and simulations.

If a stock's price goes down, Showry first determines what kind of stock it is before moving forward. If it is a speculative growth stock, he does not bother to do dollar cost averages and tries to get out if the drop-in price is too much. But if the stock is a value stock like Apple or Target, then he runs dollar cost average calculations. When prices do drop, Showry mainly looks at the drop-in terms of percentages. He has guidelines that he set which dictate if he should stay put or sell.

Showry's first loss was Palm Systems, he bought thinking that it would be a very stable investment. He thought so because at the time, Palm Systems had more in cash reserves than the stock market did. But unfortunately, the stock price went down to almost 0 and he ended up losing nearly his entire investment. His most recent loss is AirBnB, he bought it thinking that it could be a recovery story but once it fell more than 5%, he sold all the stocks. To date, his most successful investment has been in apple.

When asked about his tolerance, he said one thing, “I can take on another recession.”

Showry was investing during the Global financial crisis and he said he sold some stocks and kept some. After the initial shock of what was happening, he said he tried to diversify his portfolio, so he does not get affected too much.

Showry admitted that to this day, he makes trades under time pressure all the time. As for being overwhelmed by the sheer amount of information and options available, he says that with time it is not as bad. He normally spends a couple days when trading value stocks, but if there are speculative stocks, then he makes the trade right away.

Financial Advisors

Advisor

The first financial advisor I interviewed requested that his name not be included in the paper, so I will refer to him as “Financial Advisor.” The financial advisor is 6o years old and he studied chemical engineering and received his certified financial planner certificate in 2001. His official job title is the Principle or the Owner of his firm. Growing up his parents mostly invested mostly in bank savings and CDs.

When investing for himself or his clients, advisor looks at several factors. He looks at things like return rank, information ration, upside and downside, standard deviation of risk, the financial balance sheet, and long-term debt. He mentions that it all depends on the security at hand.

The Covid-19 pandemic did not really affect his personal investments or his clients' investments too much in the long run. A few of his clients did exit the market against the advice of the advisor, but majority stayed in the market and benefited once the market picked back up again.

Advisor's first investment strategy straight out of college was to put everything in penny stocks, he ended up losing $30,000, which was everything he had. He was so shocked at the loss that he promised himself that he would never do something like that ever again. His most recent strategy consists of having a good diversification principle and diversifying among asset classes. He also says that value stocks are always reliable to have in the portfolio. He currently uses TD Ameritrade and he has created his own tool to run simulations and to do research.

When asked about how he would phrase losses to his clients, he simply says he does not. He mentions that until you sell the stock, there isn't an actualized loss. He says that until the unrealized loss becomes too great of a loss, then only he would alert his clients and would talk to them about next steps. Next, when asked about his strategies to address drops in stock price, he primarily says that he will run simulations on his original tool. He also mentions that he looks at investments from a tax perspective and helps his clients make decisions on what makes the most sense from a tax perspective.

We also talked about effective loss management and how important it is. He says that the biggest task is always to help his clients separate their emotions from the facts. Some of his clients panicked and pulled all their money when the market crashed at the beginning of the pandemic.

And now those clients have a lot more taxes to pay and missed out on all the possible gains once the market picked back up. Effective loss management gave some people the opportunity to have biggest year yet in their investing experience.

As mentioned before, advisor's first loss was in 1984 in penny stocks. He says that he does not really have recent losses, as he never pulls money out of his investments, so they just end up being unrealized losses. He does not really have a particular most successful investment, but he does feel most proud and successful when he gets to perform over 1000 trades for his clients in under ten minutes.

When asked of his risk tolerance, he says he looks at his and his clients' long-term goals and matches the risk tolerance to where they are on their journey to achieve their financial goals. Currently, he says personally that he is more on the conservative side when it comes to risk.

Advisor was investing prior to 2009, his experience during the financial crisis is similar to what he experienced during the pandemic. However, he does mention that the process more drawn out compared to the Covid-19 crash and there were indicators pointing to the crisis and he had more time to prepare and react accordingly.

When asked about how important effective loss management is, advisor says that it is the key to long term wealth. Without effective loss management, one would miss out on big gains and succumb oneself to additional problems, like having to pay taxes on the money one pulls out in fear.

Jenny and Scott Wallace

Jenny Wallace, 48 and Scott Wallace, 58 are a couple who are the founders of their firm Wallace Management. Jenny has an associated degree in marketing and has taken Behavioral finance courses at Duke University. Scott Wallace attended St. Thomas University and is a certified financial planner. Jenny started investing in 1997, and Scott started investing in 1994. Growing up both Jenny and Scott's parents did not invest much.

When asked about the factors they look at prior to investing, they said that they don't really look at any particular factor. They state that it all depends on what their clients need. They say that they do not look at individual stocks, but rather look at mutual funds when it comes to their clients. For their clients, they generally look for investments that are healthy and stable as opposed to growth stocks.

In the long run, the Covid-19 pandemic did not affect Scott and Jenny's or their client's investments too much. They mentioned that it was pretty bad for a few months, but they stayed in and they convinced the majority of their clients to stay in the market as well. So, Scott and Jenny rode out the market's downturn and were able to recoup all of their losses.

Next, we spoke of their first and most recent investment strategies. Scott admitted that he had no strategy, he started by buying Disney Stock, because they were the only ones who issue a colored stock certificate. Jenny's first strategy was to listen to whatever her dad suggested. Now their investment strategy mainly consists of investing in value stocks. Jenny also mentions that you should pick a company that you know a lot about and love and buy their stocks. She elaborates by saying, if you love a company and know a lot, you will be aware of the company's operations and

can gauge how it would affect the stock prices. Jenny and Scott primarily use NetX and Albridge to perform their transactions, they also mentioned using a special texting software for compliance reasons.

When having to communicate to their clients that their investments are down or that they lost some money, Scott and Jenny say that they do not tell their clients until they have to. And when they do tell their clients, they talk about the loss in terms of where they are in the overall journey and in terms of percentages. When stock prices do drop, they mainly look at their client's long-term goals and see if they can absorb the losses or see if they can use the losses as a tax write off. They also have a sit down with their clients and go over the pros and cons and describe the loss in a long-term perspective.

When it came to the conversation about effective loss management, both Jenny and Scott agreed that it is vital in order to be successful investors. They added that their biggest tasks as financial advisors is maintaining expectations and emotions. When it comes to their clients, they say that fear and greed are the two emotions they witness the most and they have to prevent their clients from making decisions based off those emotions. Additionally, they said that loss can be beneficial if their clients look at it from a tax perspective. They also shared some stories of their clients who did not listen to their advice and exited the market and have missed out on monumental gains. They end their response with saying that effective loss management is the key to increasing one's wealth.

Jenny's first loss was from Groupon stocks. She put most of her money in there thinking it would take off but ended up losing most of it. Scott invested in stocks with high dividends and thought that it would be sustainable. They say that they do not have a more recent loss, and they do not pull the money out, so they remain unrealized losses. To date their most successful investment has been in the last two years where they maintained a really aggressive strategy and bought their account 40% up.

Scott and Jenny say that they are very open with their money and that they are very aggressive. Scott mentioned that at their age they can afford to go through another downturn in the market. However, they do clarify that they are not aggressive with their clients' money. Scott and Jenny were investing prior to 2009, and during the Global Financial Crisis, they did not flinch and stayed in the market. They put some more money in and recouped all their unrealized losses as the market picked back up.

Jenny and Scott have been pressured to make decisions with little time. This is mostly from their clients who want to buy or sell an investment right before the market closes. They say that convincing their clients out of last-minute transactions is always one of the biggest challenges. At the beginning, they were overwhelmed by all the information presented to them, but once they realized what was noise and what actually mattered, it got much easier. They also mentioned that clients do not like to be told all of the technical information, they often feel belittled for not knowing and stop listening. They want to be told a story so they can understand exactly where their money is going. As for how long it takes to make decisions on investments, they said that with experience, they do not have to take much time deciding.

Trey Wilkinson

Trey Wilkinson 51 is the President and Chief Executive Officer of Trinity Legacy Partners LLC. Trey has a bachelor's in business administration in Marketing and an MBA in finance from the Bauer College of Business. He has been investing in the stock market since his early 20s in 1996. Growing up he believes his family probably did invest in the stock market to some extent.

When it comes to either his personal or his clients' investments, there a number of factors he looks at. He looks at metrics such as price to earnings ratios, dividends, betas, and etc. But he also looks what the trends are or where the ball is going.

As the other investors and financial advisors said, those who stayed in the market gained a lot in the long run. Trey also shares this sentiment. At the end of the first quarter, the market was really low, and the S&P index dropped to around 2160, but now it is at about 3970. So, for Trey and most of his clients who stayed in the market, they are doing better now than ever.

Trey's first investment strategy was simple, it was "make money." He says that it should always be that. He also invested in stocks that had potential to grow and have stocks with constant dividends. He described having dividend income as having a constant stream of oxygen to a portfolio. His most recent strategy is essentially the same. He keeps an eye out for what is trending, but also makes sure he does not develop a herd mentality. For example, he flew out of town on business and saw that the airports were packed indicating that investing in airlines would be a good move. Trey's firm uses the institutional software provided by Charles Schwab as well as the software tool Orion.

When asked whether he would communicate loss to his clients in terms of absolute dollar amount or percentages, Trey said 100% he would use percentages to convey the message. He says that he would also try to explain what the particular stock or position's standing is within the overall portfolio. For example, the energy stocks are not doing so well right now, but it doesn't mean that they are completely useless. And when asked about how he deals with decreases in stock price, he says he does not pay attention to the drop unless it meets the benchmark that they've set. So, Trey and his team would not dedicate time to a stock's drop-in price until the price is down by 10% or so.

Trey had three clients who did not listen to his advice and cashed out following the Covid-19 crash. And the clients that stayed in benefitted from the gains as the market picked back up just a few months later. A good example for effective loss management is when the clients are willing to absorb some losses so they can write them off to lower the tax payments.

Trey's first loss was when he bought Dell stocks thinking they would go up, but they did not go up as he thought. His most recent loss deals with the stock of a healthcare tech company, the stock price dropped more than 10%. He says the company itself is a good company to invest in, but the drop is more to do with the index, NASDAQ, than it is with the company. To date, apart from investing in his own company, Microsoft, Apple, and Amazon were his best investments yet.

Trey would describe himself to be a risky investor. He says that he is willing to make risky investments if he has enough knowledge about the investment, he states that he would never make

risky investments without prior research. He also states that he is not as risky with his clients' investments as he is with his own.

Trey was investing prior to the Global Financial Crisis. During the financial crisis, he was working at Bank of America whose stocks went down to $2. He says that he didn't know what he didn't know, and that the best way to describe the situation as chaos. He also mentioned that back then that companies did not have disclose information as quickly which also created a lot of confusion among investors. Next, when asked about how important effective loss management is to successful investing, Trey says that without it, you would get nowhere.

At the beginning, Trey did feel pressured by the lack of time when it came to making transactions. Now most the of the pressure comes from the client's side. Clients would always call at the last minute wanting to make a transaction, and Trey says that he has a limited amount of time to either make the transaction or to convince his clients why it is a bad idea. Similarly, Trey was also overwhelmed by the number of options and metrics that he had to consider before making decisions but that also got easier over time. And it does not take much time for Trey to make decisions, because he has software that runs simulations for him and shows him what to and what not to focus on.

Conclusion

In this study, I found results to support my first two hypothesis. Investors are able to make more rational decisions when they look at loss in terms of percentages rather than in absolute dollar amount, and investors are prone to leaving the market in fear of short-term losses. On the other hand, I was able to find partial support for my third hypothesis. The interviewees do feel pressured by time, but their answers did not reveal much beyond that. Investors who are just starting out feel pressured by time, but that pressure lessens as one gains more experience. As is the case with information overload, investors starting out are burdened by this phenomena, but it lessens with experience.

Hypothesis 1: Best Method for Thinking about Losses

Thinking of loss in percentages is the most effective strategy. The investors all said that would not look at the absolute dollar amount of their losses unless they wish to be under considerable stress. They mentioned that they like to assess their losses in percentages. And when do they look at the absolute dollar amount, they see where they are on their overall investing journey and gauge if they can take the loss or not. The advisors said that they do not even necessarily tell their clients if their investments went down until necessary. Part of a financial advisor's job is to help their clients separate their emotions from the facts. So, advisors do not tell their clients right way, but when they do talk to their clients about loss, they do so in terms of percentage and in terms of where they are in their journey. For example, if the client is young and has many years till, they need to reach their goals, then the advisor would suggest that they can handle a couple of losses in the short run.

Hypothesis 2: Impact of Loss Aversion

The investors along with the financial advisors that I interviewed were not deterred by the losses they had experienced. They did not just lose a couple thousand dollars, some lost up to $30,000 when they

first entered the market. But they decided to learn from that experience and stay in the market. Most say that losing that amount of money was the shock they needed in order to learn how to navigate the stock market. And they were rewarded for their decision to stay in the market. Now, 15-20 years since they first joined, they are successful investors who have made millions off the market. The emphasis is on the fact that they were not scared by the loss, and that is the kind of mentality one must have to become successful in the long run. Some of the investors I interviewed did have a steady income from their jobs in order to take the risk and invest thousands in the stock market and had the luxury to bounce back after losses. However, there were also some investors who I interviewed who put all their savings in the market and ended up losing everything. So, when people are afraid that they do not have the luxury to put their money in the market, it is important to remember that the market is cyclical and that the money one loses today can return threefold if they wait for several months.

The experience of losing money is a vital part of the investing journey. This goes back to what was mentioned in the losses happen section, loss is inevitable. Once a person goes through the experience of loss, they are better prepared moving forward and will have more realistic expectations. They will understand that the market is cyclical and that corporations will have internal issues that affect the stocks. They will come to understand that some things are out of their control and there is no use in dwelling over them or taking drastic measures to try to mitigate things out of one's control. For example, Vijay Ramisetti understands that the Tesla stock is being affected by the company's internal issues out of his control, and yet he knows that loss is temporary and that the price of Tesla will pick up again.

Inexperienced investors do leave the market following loss and/or downturns in the market and end up missing out on large opportunities and gains. Vijay Ramisetti left the market prior to the Global

Financial Crisis due to losing money on Goldman Sachs stocks. Looking back, he says that it was one of the most foolish things he could have done. He categorizes times like the Global Financial Crisis and the Covid-19 Pandemic as once in a lifetime opportunity. Although he missed out on the gains during the financial crisis, the other investors were investing during that time and made almost double of what they lost initially. As for the financial advisors, they strongly advised their clients to stay in the market and just wait it out. Most took the advice and reaped the benefits only a few months later, whereas some left the market against the advice of professionals and missed on making double of what they originally lost.

Hypothesis 3: Impact of Time Pressure and Information Overload

Both the investors and the financial advisors stated that making transactions under time pressure is inevitable and something everyone in the market must go through. In addition, they said that it does get easier with more experience and that time pressure does not affect them as they gain more experience. For the investors, they admit that time pressure although manageable does get to them from time to time. As for the financial advisors, they say time pressure comes mostly because of their clients. Their clients often call them 30 minutes prior to closing, and they have to do their best to either talk their clients out of the deal or to go ahead and make the transaction before the market closes.

The investors as well as the financial advisors have stated that at the beginning the overwhelming amount of information did negatively affect their investment decisions. They stated that their eyes generally went to the information that really did not matter in the decision making process. And as time went on, they were more adjusted to only looking at the necessary information and block out everything else.

Limitations

The investors that I interviewed are all of the same gender and all from the Indian Subcontinent. And the financial advisors are all of Caucasian descent. They are all also in a similar age group. All of the interviews have a college education, so the data that I do have might not reflect the experiences of those who do not have a college education. All of the investors and the financial advisors have been investing for more than ten years, their experiences are not reflective of people who have only recently started investing.

Real world applicability

The state of financial literacy is abysmal due to how scare it is, but also because of what it does not teach new investors. Financial Literacy lessons are mostly theoretical and contains very little practical lessons. Adding some harsh truths to these lessons would benefit investors more in the long run. Truths such as saying that, "You are going to lose money and once you understand that, you will be better off." Explaining the cyclical nature of the market and the risks associated with individual corporations will allow them to see that losses are the permanent and that they can bounce back.

For investors, if they start looking at their losses in terms of percentages, they are going to be able to make more rational decisions. They will not be looking at an absolute dollar amount, instilling fear and worry in their minds. They will be better able to manage their investments without selling stocks too quickly due to being daunted by short term losses. There are many cases of stocks going down a bit then soaring up to record highs, looking at losses in terms of percentages will also allow investors to not miss on potential gains. It is also much easier for financial advisors to translate

losses in terms of percentages to their clients. Their clients would not be wary of how much exactly they lost and would be much more open to listening to their advisor's advice and suggestions.

For investors just starting out, knowing that losses due to downturns in the market are temporary would give them a great deal of confidence. Equipped with such knowledge, investors would stay rather than leave the market when the market is down and will eventually reap the benefits of their decision. This decision will leave them in a much more stable position and move them along the investment journey they are on.

Lastly, as discussed before, making transactions under time pressure is something that all investors must go through. It does get easier as time goes on. Several factors such as wanting to do well increase the how pressured by time an investor feels. Some of these factors are unavoidable for investors who are just starting out. So rather than worrying about performing under time pressure, it is best for investors to understand that it is inevitable, and with time it becomes easier to make transactions under the pressures of time. Furthermore, the effects of information overload can be inevitable for inexperienced investors, but it is important to keep in mind that effects of information overload lessen as one gains more experience.

Sources

Levy, Jack S. “An Introduction to Prospect Theory.” *Political Psychology*, vol. 13, no. 2, 1992, pp. 171–186. *JSTOR*, www.jstor.org/stable/3791677. Accessed 12 Jan. 2021.

Möllers, Thomas & Kernchen, Eva. (2010). Information Overload at the Capital Market. Europa e Diritto Private. 4. 1005 - 0135.

Edward N. Wolff, 1998. "Recent Trends in the Size Distribution of Household Wealth," Journal of Economic Perspectives, American Economic Association, vol. 12(3), pages 131-150, Summer.

Pisani, Bob. “Wealth Gap Grows as Rising Corporate Profits Boost Stock Holdings Controlled by Richest Households.” *CNBC*, CNBC, 27 Aug. 2020, www.cnbc.com/2020/08/27/wealth-gap-grows-as-rising-corporate-profits-boost-stock-holdings-controlled-by-richest-households.html.

By Chad Stone, et al. “A Guide to Statistics on Historical Trends in Income Inequality.” *Center on Budget and Policy Priorities*, Center on Budget and Policy Priorities , 13 Jan. 2020, www.cbpp.org/research/poverty-and-inequality/a-guide-to-statistics-on-historical-trends-in-income-inequality.

Cair´o, Isabel, and Jae Sim (2020). “Market Power, Inequality, and Financial Instability,” Finance and Economics Discussion Series 2020-057. Washington: Board of Governors of the Federal Reserve System, https://doi.org/10.17016/FEDS.2020.057.

Pietsch, Christian and Messier Jr, William F. and Raschke, Robyn, The Effects of Time Pressure on the Belief Revisions of Nonprofessional Investors (March 15, 2018). Available at SSRN: https://ssrn.com/abstract=2893870 or http://dx.doi.org/10.2139/ssrn.2893870

Carrns, Ann. “Even in Strong Economy, Most Families Don't Have Enough Emergency Savings.” *The New York Times*, The New York Times, 25 Oct. 2019, www.nytimes.com/2019/10/25/your-money/emergency-savings.html.

DaveRamseyShow, director. *You Made a $300,000 Mistake! YouTube*, YouTube, 16 Nov. 2020, www.youtube.com/watch?v=abZAVJNHKMs.

First Trust Advisors. “History of U.S. Bear & Bull Markets Since 1926.” Raymond Jones and Associates, 31 Mar. 2017.

Friedman, Zack. “78% Of Workers Live Paycheck To Paycheck.” *Forbes*, Forbes Magazine, 7 Jan. 2021, www.forbes.com/sites/zackfriedman/2019/01/11/live-paycheck-to-paycheck-government-shutdown/?sh=636c61074f10.

Glaser, Marcus, et al. “Behavioral Finance.” University Mannheim, Sept. 2003.

Investopedia. “What Is the History of the S&P 500?” *Investopedia*, Investopedia, 5 Apr. 2021, www.investopedia.com/ask/answers/041015/what-history-sp-500.asp.

JeffCox. “US Weekly Jobless Claims Total 3.169 Million, Bringing Seven-Week Tally to 33.5 Million.” *CNBC*, CNBC, 7 May 2020, www.cnbc.com/2020/05/07/us-weekly-jobless-claims.html.

Keshner, Andrew. “Financial Literacy Skills Have Taken a Nose Dive since the Great Recession.” *MarketWatch*, MarketWatch, 27 June 2019, www.marketwatch.com/story/americans-financial-literacy-skills-have-plummeted-since-the-great-recession-2019-06-26.

Lin, Judy, et al. “Https://Www.usfinancialcapability.org/Downloads/NFCS_2018_Report_Natl_Findings.Pdf.” Finra Investor Education Foundation, June 2019.

Marotta, David John. “Before You Get Out Of The Stock Market, Read This.” *Forbes*, Forbes Magazine, 16 Dec. 2020, www.forbes.com/sites/davidmarotta/2020/11/17/before-you-get-out-of-the-stock-market-read-this/?sh=41843fc06951.

NFCC. “2019 Consumer Financial Literacy Survey.” *NFCC*, 2019, www.nfcc.org/resources/client-impact-and-research/2019-consumer-financial-literacy- survey/.

Pelletier, John. “Is Your State Making the Grade?” *National High School Financial Literacy Report: Making the Grade 2017 | Center for Financial Literacy*, 12 Dec. 2017, www.champlain.edu/centers-of-experience/center-for-financial-literacy/report-national-high-school-financial-literacy.

Reed, Eric. “History of Tesla: Timeline and Facts.” *TheStreet*, TheStreet, 4 Feb. 2020, www.thestreet.com/technology/history-of-tesla-15088992.

Sehyun, Nejat. “STOCK MARKET EXTREMES AND PORTFOLIO PERFORMANCE.” Towneley Capital Management, 1994.

Wolff-Mann, Ethan. “Vanguard and Fidelity Investors Didn't Flinch as the Market Tanked.” *Yahoo! Finance*, Yahoo!, 25 Apr. 2020, finance.yahoo.com/news/vanguard-and-fidelity-investors-didnt-flinch-as-the-market-tanked-123748314.html?guccounter=1.