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Financial Advisor Decisions and Behavioral Biases

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Requirements for the degree
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Financial Advisor Decisions and Behavioral Biases

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ABSTRACT

Various studies have examined investor behavioral biases and the perceived value financial advisors provide to their clients. However, the academic literature examining behavioral biases among financial experts is scarce. This qualitative study focused on understanding what behavioral biases affect the portfolio manager and financial advisor decision process. The results of this study indicated that advisors are not immune to many of the same behavioral biases found in individual investors. The dominant biases found in this study supported past empirical findings on expert biases. Participants' responses from this research indicated that advisors' conformity and experiences led to advisor herding and overconfident behaviors. Data-driven results showed that advisor conformity could manifest into a moderate-risk bias. Moderate-risk bias is the advisor's tendency to classify investment allocation and client risk tolerance to a moderate-risk level. Another key finding was that advisor behavioral bias awareness aided the advisor's financial decision making process. The more advisors were aware of biases the more they could clearly articulate that bias to clients. Advisors' responses during interviews indicated that if they could effectively communicate and discuss that behavior with clients, they could adopt practical strategies to suppress behavioral biases and avoid predictable cognitive errors. Early adoption of bias suppression could have practical implications in understanding and explaining advisor value to clients.

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Lastly, I would like to thank all the financial advisors that supported and participated in this research. This study would not have been possible without your curiosity, time, and support. Your participation is a testament to our commitment in serving our clients and advancing the financial advisor profession.

DEDICATION

This dissertation is dedicated to my wife, Jessica. A few short years ago you inspired me to pursue my doctorate when you graduated from law school and passed the California bar exam on the first time. Your amazing dedication, discipline, and perseverance served as a beacon of hope and reminded me that it is possible to balance a full-time career, be a full-time parent, accept the adversities of your environment, and serve God with unwavering faith. To my amazing children, Julius, Jocelyn, and Kayla, for understanding that mom and dad's academic and professional pursuits required certain sacrifices of you that did not go unnoticed.

Finally, to my mother and father, Jayne and Sam Garduno, thank you for accepting my faults; instilling discipline when needed; and having the love, dedication, and faith that I now share with my family. Mom, thank you for enrolling me in my initial community college courses when I was coming off active duty in the Marines; I know I failed and dropped out of those courses initially, but your inexorable faith illuminated my future success.

But it shall not be so among you. But whosoever will be great among you, shall be your servant, and whosoever would be chiefest among you, shall be servant of all. For even the Son of Man came not to be served but to serve, and to give his life as a ransom for many."

Mark 10:35-45

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CHAPTER 1: INTRODUCTION

One of the central understandings of economic theory is that people are rational and rational people seek the greatest utility for their efforts. Bounded by this economic rationality, people naturally engage in financial decisions by optimizing selections based on perceived value (Thaler, 2015). This optimization process is at the core of behavioral economics and serves as the focus of this study as some behavioral economists explain nothing is more important for the well-being of society than work performed efficiently, and these efficiencies are generally the product of optimization and efficient decision making (Simon et al., 1987). As many researchers and practitioners continue to debate about the limitations of expected utility theory, the field of behavioral economics has produced theoretical and empirical evidence of predictable errors in judgement and its relevance to the social sciences and financial markets (Thaler, 2018).

As more academic researchers and practitioners investigate the behavioral tendencies of the investment community, more attention has drawn institutional and practitioner focus on advancing and applying behavioral finance to everyday investing and overall advancement in understanding the financial decision making process (Baker et al., 2017). As researchers in the field of behavioral economics continue to theoretically and empirically validate these cognitive errors in human judgements, one critical focus is on understanding where these behavioral tendencies originate from and the consequences, they have on the process of making financial decisions (MacGregor & Slovic, 1999).

Understanding the origins of these errors can assist researchers and financial experts in determining how to welcome or suppress them. Not all errors are bad, and not

all errors have negative consequences many errors are necessary for human development. In addition, quick errors fine-tune the human evolution of making rapid decisions under stress. Over time humans have had the ability to develop and depend on their automatic system of thinking. This automatic system, or System 1 as Kahneman (2011) described, is responsible for many fight or flight decisions; this quick intuitive judgment system is an essential process for human existence and survival.

The human dependence on the automatic system forms over many years. The formation of the automatic system is generally a result of performing numerous quick calculations and rapidly assessing the results for accuracy. The assessment of positive and negative results builds a working memory that can be used for similar decision problems (Kahneman, 2011). As human experiences shape the automatic system of thinking, certain errors in judgements can be caused by inadequate knowledge and quickly relating similar decision problems to current judgments. When people do not have enough experience or knowledge for a rational decision making process, they commonly associate a similar experience or decision problem to form their response. This type of decision process is usually a quick process and can result in creating cognitive errors.

Engaging in rapid thinking is essential for humans assessing and forming quick judgments in decision making. However, this quick automatic system can create certain errors in judgment and create a false perception of reality. When making financial decisions, investors often do not have adequate knowledge of products and services used in investment transactions. This lack of understanding could result in investors relying on similar related financial decision problems. However, when making long-term

investment selections, these similar problems are often wrong. This familiarity or associative bias can lead to critical errors in investment decisions. Without understanding or investigation, these biases could go unnoticed, and future errors will likely result. Determining the origin of these errors can help investors understand how to gauge the degree at which the error can affect future financial decisions.

Researchers categorizing cognitive errors empirically demonstrate how these errors affect certain decision makers under stress and find what errors are more critical in certain expert fields. Certain experts in the medical or investment fields are tested daily with not only the empirical information and science needed for courses of action and recommendations, but they are also tasked with understanding how the information is being received. The communication and the interpretation of the information in a stressful environment create emotional reactions, and these emotions can also lead to cognitive errors.

Slovic (2018) argued that people judge risk not only by what they think and perceive about it but also by how they feel about it. In the context of financial decisions, these feelings and cognitive errors in judgement can cost borrowers, savers, and investors large amounts of time and money. When a financial decision must be made, understanding that errors can occur and what those errors are can help decision makers avoid negative financial outcomes. As the financial landscape for investment and wealth management becomes more complex, consumers must educate themselves on how to navigate this changing landscape. Developing financial education has been a slow process and has been more of an unfulfilled hope rather than reality. A study by de Bruin and Slovic (2021) investigated how low numeracy and low levels of financial education

are correlated with negative financial outcomes, and these deficiencies can lead to difficulties in establishing livable wages. Numeracy refers to the ability to recognize numerical expressions and understand their relationship in the context of mathematical application, for example, understanding that 1 in 10 can be equal to 10%. The study by de Bruin and Slovic revealed that low numeracy was very common among lower income countries. Low numeracy levels were 76% higher in countries with low income and 32% higher in more affluent countries. They also found that research participants who had less education also had lower numeracy rates; however, lower income countries with high school educated participants had even lower numeracy scores than high income country participants with only elementary school educations. This disparity indicates that general education does not necessary translate into higher numeracy, and financial education could take a considerable amount of time to develop among a given lower income population. As de Bruin and Slovic explained, the financial decisions made without financial education is often made with more emotion than rational thinking. This lack of savings combined with low levels of financial knowledge is estimated to costs consumers millions of dollars a year in lost opportunity costs and financial mistakes. Even when university students are measured for financial literacy, it is difficult to determine whether certain educational strategies aid in long-term practical financial understanding (Gerrans et al., 2019). In the United States, the savings rate prior to the COVID-19 pandemic was at a historical low level, and only 17 states required high school students to take a course in personal finance (S. M. Edwards, 2019).

The nation's low financial literacy has prompted the government to act and create new regulations aimed at protecting financial consumers and the investing public from

unethical advice and their own emotional biases. Low financial literacy continues to affect the nation's health and has put an immense amount of pressure on government to ensure the viability of government programs such as Social Security and other government financial support systems and subsidies (Goyal & Kumar, 2021). In the United States, Social Security eligibility starts at age 62, and one third of eligible Americans make the financial decision to claim their benefits at this reduced payment date (Fitzpatrick & Moore, 2018). In addition to the government subsidies, many Americans continually struggle to save and are living pay check to paycheck. In the United States, Lusardi et al. (2011) found that half of their survey respondents reported that they would not be able to come up with \$2,000 within the next 30 days. This is problematic because the inability to have a savings could result in higher debt and credit utilization. This inability to meet emergency financial situations can cause strain on the general population and end up costing taxpayers millions of dollars in public assistance and other subsidies.

The tendency for many investors to make irrational emotional decisions is common and is the result of not spending enough time learning about their financial options before making financial or investment decisions. Investors have been found to heavily rely on individual heuristics or rules of thumb to make important financial decisions (Thaler & Sunstein, 2009). Relying on these individual heuristics and reactional thought processes can lead to cognitive errors in judgment and create behavioral biases in the financial decision making process. These errors can cost investors valuable time and even a considerable portion of their retirement savings, if not careful. These behavioral biases can form strong roots in the mind that are formed from

connections on past associative events. Associating past events that can be connected to current risk or decision problems can create bias tendencies leading to irrational investor actions (Kahneman & Tversky, 1979).

These associative roots can influence the decision making process and can often go unnoticed because investors rarely check to see where these cognitive thoughts originated from and how they interact and influence financial judgments. As the investment community becomes more aware of these behavioral biases, investors have two basic choices: become familiar with their investment choices and invest the time to learn about their finances or rely on professional guidance to help them understand their financial options. Both options do require some degree of investor education, and studies have indicated that most investors will fail to spend the required time learning about their investments and monitoring them for effectiveness (Thaler & Sunstein, 2009). Even when retirement plans offer investment tutorials and classes to help investors understand their retirement investment options, most investors will not benefit from this undertaking. Moreover, even when investors do engage in the investment training, their investment allocation and financial literacy fails to improve long term retirement decision results.

When investors lack the educational background to understand the language of investing, they often become more susceptible to a variety of common behavioral biases. Some behavioral biases, such as overconfidence, herding, anchoring, availability, and loss aversion, can cost investors huge sums of money and can have a negative long-term effect on future financial outcomes (Barber & Odean, 2001; Economou et al., 2018). As the landscape of investment products becomes more diverse and the language of investing becomes more complex and sophisticated, more investors seek investment

expert advice and professional investment guidance to help with their financial decisions (Monti et al., 2014). As investors seek guidance from professional financial advisors, consumers of investment advice can often become even more perplexed when it comes to selecting an advisor (Luther et al., 2018).

Understanding the different types of advisors who exist in the market place and how they are compensated can be an unrelenting task. Areas such as retirement planning, diversification, estate planning, and tax efficient investing can have different advisor compensation models for the various components of the advisor financial engagement and can often leave investors on information overload (Macfarlan & Zick, 2020). This is because investors are faced with two different decision problems. First, they must determine their investment objectives and then see whether their objectives require the assistance of a professional. This includes understanding various products and services that might be used to accomplish their objectives. Second, they must decide whether to trust and act on the advice given to them. The acceptance of advice can become a highly involved process and a decisive part of the advisor–client relationship (Burke & Hung, 2021). The acceptance of advice is often a function of trust, and to establish that trust requires a degree of vulnerability that clients must encounter in order to move forward with accepting the advice (Ragatz, 2021). For investors to place themselves in a vulnerable state, they must take a leap of faith and be able to rationalize their need for financial advice. Slovic (2018) indicated that the rationalization process usually involves past experiences and cognitive associations. This process can help investors form risk questions and relate how they feel about that risk and perceived benefit. To adequately exchange ideas, clients must trust the professional, and advisors must have the emotional

intelligence and be able to assess verbal and nonverbal cues from the client so acceptance of advice by the client is more probable.

Even when engaging in meaningful financial dialogue, clients accepting advice may be problematic because many conflicting opinions on what good financial advice is can confuse the investing public. Even the word *financial advisor* can have a variety of meanings and no uniform acceptance of the word has been formally established (Macfarlan & Zick, 2020). Separating advising and sales in the advisory role can be difficult to differentiate from a client perspective. In Söderberg's (2013) study, clients were unclear on whether the advisor was rendering advice or just giving a sales pitch. Part of the reason for this confusion was that the term financial advisor can mean many things, and there is no uniform definition.

While there have been various attempts to regulate the definition over the years, including the recent Regulation Best Interest (Reg BI) contract, the current investment landscape will make it extremely difficult for clients to distinguish between all the different types of advisors. These advisors' names include financial planner, wealth advisor, investment consultant, investment adviser, investment specialist, and stockbroker. Under Section 202 (a)(11) Investment Advisors Act of 1940, the U.S. Securities and Exchange Commission (SEC, 2013) uses the term *investment advisor* in covering any person acting as a money manager, investment consultant, or financial planner. Investment advisor is defined under the act as any person or firm that for a compensation engaged in the business of or providing advice to others or issuing reports or analyses regarding securities (SEC, 2013). However, within the investment industry, the word financial advisor is often more loosely used. In a general context, a person

could be considered a financial advisor if he or she has some type of professional license, but licenses do not build trust if investors do not know what the differences in all the licenses represent. Among investors surveyed in a 2013 CFA Institute study on trust, the financial services industry ranked below technology, food, pharmaceutical, automotive telecommunications, and the banking industries. The CFA Institute (2013) also found that 75% of investors believed trust was the most important attribute in choosing an investment manager.

Research has shown that the more financial knowledge and income clients have the higher their tendency to use a financial advisor (Burke & Hung, 2021). The use of a financial advisor is also linked to financial behavior, which can help identify and suppress harmful behavioral biases. Utilizing an advisor has also been associated with higher equity, diversification, and emotional confidence (Usrey & Scott, 2019). When financial consumers utilize a financial advisor, they tend to have higher net worth and exhibit more effective financial behaviors (Kim et al., 2018; West, 2012). According to the Certified Financial Planner Board of Standards' (CFP, 2015) board survey, consumers use of financial advisors increased from 28% in 2010 to 40% in 2015. This is consistent with other U.S. surveys, which put the financial advisors service utilization rate at 48% (Hung et al., 2008). Hung et al. (2008) also found 81% of investors who do consult a financial advisor do so in a personal engagement setting as opposed to any other method. Although many investors utilize a financial advisor, the effectiveness of that relationship can depend upon the trust, emotional, and behavioral components of the client engagement. This relationship can be helped or hindered by the financial advisors' emotional intelligence and understanding of the client's emotions, goals, and objectives

(McCarthy, 2020). This connection is critical for the acceptance of advice and increasing the client's financial well-being. In many instances, the financial advisors' understanding and awareness of the emotional and behavioral biases can help or slow down the obtainment of the client's long-term financial success. The past decade has brought many new market participants to the U.S. equity markets. In addition, the speed of information through social media and the adoption of easy-to-use online investor portals have encouraged significant investment swings toward crypto currencies and U.S. stock markets, fueling irrational behaviors and increased market volatility (Bouri et al., 2019).

When market participants become confused about investment options, they often rely on heuristics, friends, and family and associative decision problems to make their choices. These heuristics form behavioral biases and stem from associative patterns developed from past human experiences and the cognitive ability to quickly calculate essential and fundamental judgments (Thaler, 2018). The cognitive ability to calculate quickly is essential for human existence and is what humans rely on in daily living. The more humans can associate with context, color, and graphics the more they can remember (Yin et al., 2021). When decisions must be made quickly, many investors rely on an irrational and automatic thought process shaped by their psychological and emotional perceptions. These perceptions are generally derived from a combination of individual memories, environments, and interpretations. If investors struggle to find simple investment principles to follow, they will often rely on their heuristics and individual associative memory to help make and rationalize financial decisions. When investors rely on this reactional and emotional process for financial decision making, they tend to

illustrate common heuristics and identifiable behavior biases in their choice selections (Thaler & Sunstein, 2009).

Even when investors hire or rely upon financial advisors for help with investment decisions, their financial advisors can often reveal some of the same psychological and behavioral biases that lead to impaired behavioral judgments in making financial decisions (Baker et al., 2017). Behavioral judgements can affect rational choice selection in determining risk and investment objectives and can also affect the perception of the advisor selection. When determining investment objectives, the investment decisions and risk tolerance can be self-directed or determined with the help of the advisor; however, Thompson et al.'s (2021) study of more than 23,000 clients recorded that risk tolerance scores tended to have the same middle risk scores among different ages, sex, and incomes. This signals that investors' perception or their behavioral tendencies results in more risk determination than age-based funds or target-based funds would suggest. Over the last 50 years, these identifiable behavioral bias tendencies mixed with individual emotional and psychological reactions have emerged as behavioral economics, or in the finance arena, more commonly referred to as behavioral finance (Colajuta, 2021).

As new investment and advancements in online discount brokerage services and robo-advisors gain further attention and bring new money to the investment landscape, these behavioral tendencies can become powerful influences on choice selection. Armed with a decade of positive gains and one of the most significant bull markets in U.S. stock market history, investor overconfidence and risk-seeking tendencies have gained momentum and help push valuations to record levels. On July 14, 2021, the Cyclical Adjusted Price-to-Earnings (CAPE) ratio or Shiller PE ratio reached 38.40, one of the

highest levels in the past decade. This ratio developed by Campbell and Shiller (1988) is based on the inflation-adjusted earnings of selected companies from the previous 10 years. This ratio smooths out a short-term price and earnings volatility to help forecast future dividends for valuation (Campbell & Shiller, 1988). Although this is just one market valuation indicator, and it could be overoptimistic in its practical application according to critics, it has been validated and shown to be a good indicator of overall equity valuation (Siegel, 2016). As newer and seasoned investors choose their method of market participation, the integrated services of full-service broker-dealers and Registered Investment Advisors (RIAs) remain a steady and driving force behind U.S. financial markets.

Definition of Terms

This research study includes certain terms that are specific to the investment management field. These terms are provided in this section for clarification and a consistent understanding for readers of this research.

Certified Financial Planner. The designation is regarded as the standard of excellence for financial advisors (Hicks, 2021). These financial advisors must complete CFP coursework, pass a rigorous exam, hold a bachelor's degree, and must have 6,000 hours of professional work experience. These advisors must also adhere to ethical guidelines of CFP board standards and act as fiduciary's when serving clients (CFP, 2022).

Chartered Financial Analyst. A Chartered Financial Analyst is one of the most highly recognized and developed designation in the investment management field. First introduced in 1963, this designation requires a bachelor's degree, 4,000 hours of

professional work experience, and successful completion of three exams over 3 years (CFA, 2013).

Cyclical Adjusted Price-to-Earnings ratio. Also known as the CAPE P/E ratio, which was introduced by Professor Robert Shiller (Campbell & Shiller, 2015). The ratio is calculated by dividing the current price of a stock or security by its inflation-adjusted earnings average over the last 10 years (Jivraj & Shiller, 2017).

Defined benefit plan. Is a retirement plan generally thought of as a pension plan; these plans are set up and administered by an employer for the benefit of the employees. Contributions in these plans are made by the employer, and investments are selected by the employers. These plans generally have a fixed payout for employees at retirement and are calculated by factors such as the employee's length of service and compensation levels. The employer can have vesting schedules for employees, and the employer also assumes the risk of underfunded benefits (IRS, 2021).

Defined contribution plan. Is a retirement plan such as a 401(k) or 403(B) plan that is set up and administered by employers for the benefit of their employees. Employees can contribute a fixed amount or percentage of their pay into the plan, and their contributions and earnings grow tax deferred until they withdraw generally after age 59.5. These plans are elective and could have employer matching contributions. Plan participant contributions can be invested into investments, such as the S&P 500 stock index and other selections that can be chosen by the participant. These investments usually have no guarantees and may fluctuate with the equity and bond markets (U.S. Department of Labor, n.d.)

Efficient Frontier. Based on Harry Markowitz's modern portfolio theory, the efficient frontier is an investment portfolio concept that identifies the most optimal portfolio that can exist for a given level of standard deviation or variance and expected average return. By estimating the means, variances, and covariances of securities, investors are able to select their desired level of risk-return combinations for their investment portfolios (Markowitz, 1999).

Exchange traded fund (ETF). Pooled investment funds that offer professional management, diversification, and a specified strategies for investors to utilize. Registered under the Securities Act of 1933, many ETFs are designed to track specific markets and indexes and are traded like stocks on public exchanges (Financial Industry Regulatory Authority ETF [FINRA], n.d.-a).

Hedge fund. A pooled investment vehicle that can have multiple strategies and invest in a wide variety of investment products, including derivatives, foreign exchange, and publicly traded securities. These funds are restricted under Regulation D under the Securities Act of 1933 in raising nonpublic offerings and only from accredited investors or investors having more than \$1million net worth or a qualified purchaser such as a corporate entity having more than \$5 million in total assets (CFA, 2013).

Heuristic. This is an approach to human problem solving that utilizes mental shortcuts in forming decisions. When cognitive tasks demand rationalization and probability estimations, these mental shortcuts aid in forming quick judgments for practical utilization, and the reduction of complex tasks into simpler judgment operations (Tversky & Kahneman, 1974).

Registered investment advisor. All money managers, investment consultants, and financial planners are regulated in the United States as investment advisers under the U.S. Investment Advisers Act of 1940. According to Section 202(a)(11), one is considered an investment advisor if they receive compensation, engaged in the business of, or provides advice to others or issues reports regarding securities (SEC, 2013).

Target date fund. A type of fund structured as a mutual fund that is designed with a specific retirement date as the objective to help manage risk. The funds use a glide path strategy, which reduces the risk of the portfolio as the specified fund date approaches the stated target date. The funds use an optimal allocation blend strategy to mitigate risk for their investors (FINRA, 2022b).

Problem Background

This study aimed to analyze and synthesize financial advisors' understanding of behavioral biases and common errors in judgment used in investment and client decision making process. The specific area of concern is to understand what perceived behavioral biases financial advisors may use in determining client-risk tolerance, investment objectives, and investment selections. One area of discussion among the investment community has been whether the advisor debias or reinforce behavioral bias tendencies within the client engagements (Mullainathan et al., 2012). When investors seek formal qualified advice from a financial advisor, they often focus on historical returns or products and features; however, research has shown that the underlying metric for investors actually making an investment decision is more related to communication style and the perception the client has of the advisor rather than any other measurement (Monti et al., 2014). Other studies assess whether experts actually provide value in the absence

of instantaneous feedback, and because advisor recommendations are rarely assessed in the long term, providing any instantaneous client or advisor feedback would be difficult to assess (Ericsson & Pool, 2016)

This study investigated whether financial advisors are aware of any recurring cognitive errors in judgment and to understand how some common behavioral biases and heuristics affect their clients and their own judgments and recommendations. With many institutions and governments making a move from defined benefit (DB) plans to defined contribution (DC) plans, more of the investment decisions fall upon the investor to care for his or her retirement (Baldwin & Moore, 2015; Benartzi & Thaler, 2007). Some studies have shown a high probability that DC investors will fall short of adequate retirement income when decisions of investment selection and deferral elections are left up to them to select (Forsyth & Vetzal, 2019). One example of how investor behavior dominates investor judgments is illustrated in the implementation of Florida's worker retirement plan. In this example, Florida DB plan participants were given the option to convert their DB into a DC plan; however, many failed to even participate in the election, despite an option that allowed a second election feature to allow participants to move back into a DB plan if they later changed their mind (Milevsky & Promislow, 2004). These Florida worker decisions, or lack of decisions, were in line with empirical research of inertia and status quo. The plan participants inertia demonstrated a powerful challenge in financial understanding and decision making process (Kahneman et al., 1991).

Additional concerns by regulators and academics in the utilization of a financial advisor have included what is actually considered appropriate financial advice and the effect on client economic outcomes (Robb et al., 2012). Client interpretation of the value

of financial advice is often associated with investor performance and fees, but the actual value of hiring a financial advisor has been shown to be a function of optimal portfolio construction, attainment of financial goals, and the emotional value of client relationship, rather than isolating investment performance relative to a specific benchmark (Madamba et al., 2020). Some researchers have indicated that the value of hiring a financial advisor may lie in overall heightened savings rates, aggregate net worth accumulation, and emotional and behavioral support that can aid in bias suppression (Montmarquette & Viennot-Briot, 2015). Excluding deliberate unethical practices by financial advisors, how does the investment community know whether financial advisors are using calculated models of determining risk and allocation or relying on their own individual heuristics embedded in their own emotional and behavioral biases? To determine an appropriate risk tolerance for a particular client, advisors must assess clients by their responses to various risk dialog discussed throughout a client–advisor meeting, in addition to any risk assessment forms used in intaking a client. Investors and advisors should pay particular attention in determining risk tolerance levels and asset allocation because risk tolerance will ultimately determine the investor experience over time (Finke, 2012). Markowitz (1968) pointed out that asset classes have different levels of risk, as measured by historical variability of returns, and risk in this context is defined as variance or standard deviation. Diversification among different asset classes has been associated with higher returns and lower standard deviations. Today many large brokerage firms adhere to selecting the appropriate time frames and positioning along the Efficient Frontier, and this is generally accepted as the standard in determining rational client-risk levels.

A common assumption regarding investor risk tolerance selection is that, as investors get older the average investor will become more risk adverse (Gilliam et al., 2010; Hallahan et al., 2003). This assumption does not come without contrasting practitioner and academic opinions, and in the context of financial advice, understanding and ascertaining investors' risk preferences in practice can often be difficult to determine. Many practitioners believe a combination of experience, income, age, and investor assets will determine most of the risk tolerance. However, Gilliam et al.'s (2010) study surveying 26,759 baby boomers indicated that age alone is not a clear indicator of risk. The baby boomer study found that older boomers were more risk adverse and underestimate their risk tolerance as opposed to younger boomers. The researchers found that income, education, and being married could yield more revealing information than age when understanding risk tolerance. This indicates individual characteristics and past events can have a larger role in determining risks tolerance among different groups as opposed to determining risk from age alone (Gilliam et al., 2010).

For professional financial advisors, assessing and determining risk tolerance is important in developing an appropriate plan, selecting appropriate products, and choosing the asset allocation for their clients. Appropriate selections or products and asset allocations could result in a positive or negative client experience when investing their client assets. If the correct asset allocation is discussed, understood, and selected with the client, the client should have a good understanding of the average historical volatility or risk of the investment and how a diversified portfolio can mitigate certain risks. This client understanding has been found to reduce conflicts and establish trust in the client–advisor relationship (Deetlefs et al., 2019). Research has been consistent in showing that

when investors have more trust, education, and net worth, they tend to be riskier in financial decision making (Gilliam et al., 2010; Hallahan et al., 2003). Assuming more risk in certain investor situations can yield more return over time and also have a tremendous effect on overall client well-being.

Understanding how behavioral finance can complement traditional finance models can help investor outcomes in the aggregate and increase awareness of determining what income and savings are needed at any point during life or in the behavioral life cycle model (Razek, 2011). The behavioral life cycle model indicates how investors' income fluctuates over their lifetimes and can help in understanding consumption and savings behaviors (L. Levin, 1998). Many retirement DC plans are now utilizing glide paths and target-date funds to help investors determine their allocation. Glide paths are used by mutual fund (MF) companies that build age-based or target-based model portfolios for clients to select as a single allocation option. Glide paths generally focus on more equities when clients are younger and progress to more fixed income when they get older. Target-date funds generally reduce equity exposure as the investor approaches the target date of the fund. Although these might seem like viable options for novice investors, research on target-date funds indicates that while many investors might benefit from these funds, some glide path funds might not be as efficient as once believed (D. C. Brown & Davies, 2020).

The appropriate selection of an individual's most optimal investment asset allocation is a question that is an ongoing debate, and the various methods on developing these allocations often depend on how investors or clients interpret risk tolerance questions (Gilliam et al., 2010). Understanding the projection bias can also show how

investor risks tolerance changes over time (Grable, 2013). Advisors' assessment of clients risk characteristics and client-risk tolerances can be ascertained in a variety of methods, some of which include risk questionnaires that can give advisors a baseline for determining risk. However, studies show that the reliability of such risk determinates comes with inconsistent results. While different risk tolerances scores have been correlated to income, education, and overall well-being, not all risk assessments can capture all relevant factors. Individual characteristics and emotional components of investor risk types should be included to understand client-risk perceptions (Grable, 2020).

Research has shown that many investors identify with moderate-risk tolerance preferences, and moderate-risk classification appeared in over 50% of all investors. This moderate-investor classification is two times more likely to be selected than any other risk classification. Ansari and Phatak (2016) indicated that even when investors had five categories of risk to choose from, moderate-risk tolerance was selected most frequently. This moderate, investor risk tolerance tendency has been exhibited in the academic literature and the risk tolerance findings challenging assumptions on current risk tolerance determination (Thompson et al., 2021). When investigating whether advisors have a possible client moderate-risk tolerance bias, it is essential to understand whether this bias is influenced by advisor experience, actual client discovery, or if the advisor's own risks characteristics are passed on to the client. One of the traditional determining factors of risk is the client's age, but if glide paths and target-date funds are good for investors' retirement accounts then older investors should not have moderate-risk tolerance selection over a certain age. When investors utilize age-based funds in their

retirement accounts, they ultimately conform to a moderate-risk allocation. When financial advisors' risk selections for clients are found to be predominately moderate, retirement accounts offering age-based funds that place retired investors in conservative allocation could limit investor returns. This could be an area in which availability bias becomes problematic, and age-based selection might not be a good indicator of a client's actual risk tolerance. An advisor's understanding of moderate-risk bias and proper client discovery could help with more accurate risk tolerance selection for their clients.

The aim of this study was to investigate what behavioral biases exist among financial advisors and to understand whether advisors exhibit the same known behavioral biases individual investors omit. More specifically, are advisors suppressing or exacerbating known biases in client decision making. As more investors depend on advisors to help make investment decisions, advisors' decisions should be closer to rationality in judgment and decision making than the typical investor. Advisor rationality means that advisors will on average reduce the common behavioral and allocation errors commonly exhibited by a typical investor. Advisors who can suppress and provide behavioral coaching can theoretically create value outside of traditional measurable arithmetic returns (Pagliaro & Utkus, 2020; Salter et al., 2011). This value exists only if advisors are aware of such cognitive errors in investment decisions and can add value to the aggregate client well-being over time.

In the United States, half of the households owning MFs do so through an investment professional, and in Canada, 80% of retail investors' assets are advisor directed. This utilization and dependence on investment professionals should warrant advisor and regulator understanding of known biases. Research has shown that advisors'

own asset allocation and risk preferences strongly predict the client investment allocations (Bollen & Posavac, 2018). Advisors demonstrate a higher degree of professional interpretation of risk assessment than individual investors but can often be influenced by their own investment preferences (Bollen & Posavac, 2018; Foerster et al., 2017; Roth & Voskort, 2014). If advisors' preferences shape client allocations and allocation is responsible for investor returns, advisors themselves should understand how individual behavioral biases work and put processes in place to reduce behavioral errors. Advisors engaged in using traditional methods of finance should be bounded by rationality and omit less cognitive errors in rendering client advice. However, most advisors are investors themselves, and they are subject to the same behavioral biases that can trouble any investor. Research by the CFA Institute (Kunte, 2015) on their professional readership showed that many investment practitioners believe behavioral biases affect investors' investment decisions. The CFA poll showed that respondents viewed herding, confirmation bias, overconfidence, and availability bias as the predominant behavioral biases affecting investor decisions. If this survey is any measure of behavioral biases that exist in the client–advisor relationships, practitioners should consider developing an understanding of destructive biases and help educate clients to better understand the behavioral tendencies affecting investment decisions.

Wealth Management Industry and Financial Advisors

In 2021, research from the Boston Consulting Group (Heredia et al., 2021) indicates that the wealth management industry in the United States is estimated at \$49 trillion in assets under management (AUM). The financial industry currently has over 670,000 registered representatives active in FINRA databases, and SEC has 13,494 RIAs

as of 2020 (Investment Adviser Association, & National Regulatory Services, 2021). However, the number of practicing advisors can be controversial. The U.S. Bureau of Labor Statistics (BLS, 2022) estimated the field to have 218,050 personal financial advisors. This includes persons directly engaging in advising clients on financial plans, including tax and investment strategies. This number does exclude securities commodities and financial service agents. Other researchers have estimated that there are 316,000 active financial advisors in the United States (Gough, 2014). As the business growth continues, large firms, such as Morgan Stanley, Bank of America/Merrill Lynch, Citigroup and others, continue to invest in integrating their wealth management segments and focusing on the affluent client market. Two examples of this integration, growth, and dominance in the wealth management business is Bank of America's 17,331 financial advisors and Morgan Stanley's 15,950 financial advisors reported in their 2020 10-K filings.

As previously stated, there is no common definition of a financial advisor, and only a minority of practicing financial advisors choose to acquire and maintain a top financial services designation. Some research has indicated that the higher the designation standard to acquire, such as the CFP or the CFA, the higher the quality of the advisor as measured by public registered complaints (Gough, 2014). This could be due to the nature of certification pursuers already having the ambition to be the best in the industry or the wide body of knowledge making their job more satisfying. According to CFP (2015), to achieve and use the CFP designation, the requirements include completing 6,000 professional hours of experience, completed a comprehensive exam, and completed a 4-year degree. Although designations are optional, most active CFPs

also must hold the appropriate securities licenses in the states they conduct business. In general, the advisors' decision on what licenses to acquire and maintain directly indicates the way they choose to be compensated.

Most advisors in the industry choose from three basic ways to receive compensation. The first is commission based, which is when advisors get paid from products and services they sell. The second is fee based or fee only, which is when the client pays a fee based on the assets managed by the advisor. The third is flat fee or hourly billing for service. Although there has been a shift in client preference from traditional stockbrokers, who traditionally work for commissions, toward fee-based compensation, some argue that commission-based advisors do not hold the clients' best interests in mind, and this method of compensation is not aligned with client long-term best interest. In addition, other critics indicate that fee-based advisors are charging clients for doing nothing because most advisors' performance is below the historical market averages. Although no method of compensation is accepted as the gold standard, most advisors believe that compensation methods should align with client's objectives, and the client's interest should be held above the advisor's own self-interest (Tharp, 2021). However, the debate continues on what should be the regulated standard for all advisors assisting investors in financial decisions.

In practice some practitioners believe that increased regulation comes with unintended consequences. One of those consequences is the fact that many advisors only serve certain business segments. When it comes to RIAs, some argue they only service the affluent, and with commission-based advisors' average return on assets (ROA) of .75, they tend to serve a larger population of the investing public (Robinson, 2007).

Meanwhile, independent fee-based advisors tend to have a ROA of over 1%, which means that fee-based advisors tend to have lower costs up front but may have higher costs to the client over time. This may also suggest that commission-based advisors have a place in the advisor servicing model and more clients on their books means they tend to serve and help more clients overall. In a commissionable advisor service model, their ROA tends to be less because advisors have more nonbillable assets in their books of business (client assets), and this could indicate that they may have more interest in serving more than just the affluent or ultra-affluent markets. In the United States, the aggregate average billable AUM fee from two large investment firms is just over .80 basis points according to their 2020 annual 10-K filings (Stanley, 2020). This is the fee most clients pay for professional advisors to manage their money although industry wide, the average fee has been in decline. Research has shown fee compression from an average management fee of 1.16% in 2013 to 1.07 % in 2016; this fee may also be dependent on how many assets a client may have with the advisor. Often, the more billable assets a particular client has with an advisor the lower the overall asset management fee will be (Kennedy, 2016). One advisor practitioner survey showed that median advisor fees up to \$1 million in client AUM were billed at 1%. The study found that clients with less than \$250,000 paid 1.5%, and clients with \$5 million paid 0.8% (Tharp, 2021).

When it comes to U.S. income and worker retirement, many investors fall short of saving enough funds to maintain their current standard of living. Gomes et al.'s (2020) study of 350,000 U.S. workers showed that three in four workers were not saving enough for their retirement. The issues most workers face is generally twofold: how much to

save or lack of savings ability and what investments to select. These questions are generally not easily answered by investors, and often the decision to act is not made or are dependent upon investor guesses, heuristics, and herdlike mentality. In the United States, many working investors face these issues of ability to save and what to save in inside their retirement plans, and when they finally do make their decisions, research has shown that their on-average investment decisions are irrational and unsophisticated.

Holden et al.'s (2018) survey of U.S. investors showed that 44.8% owned MFs and ETFs, closed-end funds, and unit investment trusts (UIT). These investors represented 57.2 million households (Holden et al., 2018). This household statistic dismisses the fact that more than 50% do not invest at all. Selection in these investments should generate questions, such as “What is the track record of the investment manager?,” “What is the current allocation they should have?,” or “What are the fees or internal expense ratios of the investments?,” but often investors fail to ask any of these questions. Research has shown that when many investors engage in an investment decision, they often rely on intuitive thinking to complete these tasks; when judgments must be clear and rapidly made, intuitive thinking often results in errors in judgment (Kahneman, 2011). These errors in judgment create identifiable behavioral biases and generally work to the investors' disadvantage. This can be attributed to the general lack of financial education, attention, and failure to seek professional guidance. When investors rely on specific retirement tools or financial advice, they must put a certain level of confidence in the service or advisor before they can evaluate and comprehend their options. This means that investors must engage in two judgment problems: the investment selection and trusting the advisor.

In addition to this investor dilemma, if investors do choose to work with an advisor, most of the investors will utilize MFs, ETFs and UITs, which can also have hidden consequences for them. These consequences are in fees embedded in the products and services, such as expense ratios and advisory fees.. While professional diversification and advisory accounts are a very acceptable practice among regulators and practitioners, some critics believe fee-based accounts are not for everyone (Hawkins, 2010). If investors are careful, these expenses can aid them in achieving a good diversification and asset mix according to their risk tolerance but if not, then advisory fees may subject investors to more fees than are necessary. Even when advisors utilize these products when managing client's assets, clients can potentially be exposed to paying both the fee to the advisor and the fee to the underlying asset manager who the advisor selects (O'Malley & Neikirk, 2002). The issue is many retirement plans limit investors to certain preselected funds and exclude investors from picking individual securities, and most of these funds are usually a combination of MFs and ETFs, which have internal expenses and specific objectives that may or not relate to the investor objective (Davis, 2010). While research has shown that it is prudent to safeguard investors from themselves, it deprives those with the education to choose their own investment and allocation. In many retirement plans, the limitation of investments also comes with the inability to hire a face-to-face investment advisor. Although many plans now are incorporating some third-party allocation software or service for a small overlay fee, most investors must opt in to this service. In any event, research has shown that when investors are given to many choices, they often just rely on the default investment allocation, and until recently, this default election was usually common stocks or a low-

yielding money market. Today, behavioral scientists weigh in on correct choice architecture and default elections in large retirement plan programs such as Save More Tomorrow (Thaler & Sunstein, 2009). These plans have shown improvements in investor participation, allocation, and savings. In bull markets (up markets) investors continually pour money into new assets classes and naively believe that their investment luck is due to their personal ability. According to Barber and Odean (2001), investors are often overconfident, and as a result, many investors and clients have suboptimal investment experiences.

Advancements in technology and investment products have complicated the financial landscape for consumers and advisors. In investment management, advisors and clients have begun to shift more asset to ETFs in the past 20 years. According to Staer (2017), ETFs had assets of \$991 billion in AUM in 2010, and a decade later, in 2021, that number rose to \$9 trillion (Wursthorn, 2021). According to Broadridge (2020), ETFs are attractive for a variety of reasons, including trading ease, low costs, and greater access to diversification across different market sectors. Over one third of advisor AUM goes into ETF products (Broadridge, 2020). As low costs and higher diversification can provide unequivocal upside compared with traditional MFs, ETFs can create new challenges from a behavioral perspective because investors can now trade ETFs as any other single-stock position. This could provide a higher level of volatility in the aggregate stock markets and could provide investors more opportunities to make irrational trading decisions.

The active versus passive debate rages on in the investment arenas in which investors and advisors using MFs to help with achieving professional asset allocations

and risk management argue that they can keep up with the market and do it safer than the broad indexes. While some MF managers have displayed superior returns during certain periods, most of these MFs often fall short of their related benchmarks over longer periods of time. Studies confirming fund manager underperformance can be attributed to behavioral biases in decision making and can show these managers have the same biases that are found in most investors (Mark, 1997).

Problem Statement

This study aimed to understand the degree of immunity financial advisors perceive to have against common behavioral biases. More specifically, are financial advisors using behavioral biases within client interactions? The general problem is understanding and assessing the process and the magnitude of how these biases affect client financial outcomes. Studies have shown that when financial advisors are aware of investor behavioral biases, they can help debias irrational investment decisions with clients (Baker et al., 2017). However, this study focused on practicing advisors engaged in client-facing decisions. These advisors' behavioral tendencies can have sizable effects on client returns, fees, and investment selections and can have long-term impacts on clients' financial well-being. When financial advisors are engaged in financial planning and investment recommendations, they do not do so in a vacuum; they ultimately must deal with clients' emotional and behavioral responses that include different economic circumstances and environments. The advisor's intellectual and emotional ability must be able to balance and identify the client's behavioral tendencies as well as their own. This ability to identify behavioral tendencies is a challenge that many experts in a variety of fields must overcome to become experts. As Ericson & Pool (2016) explain, in order

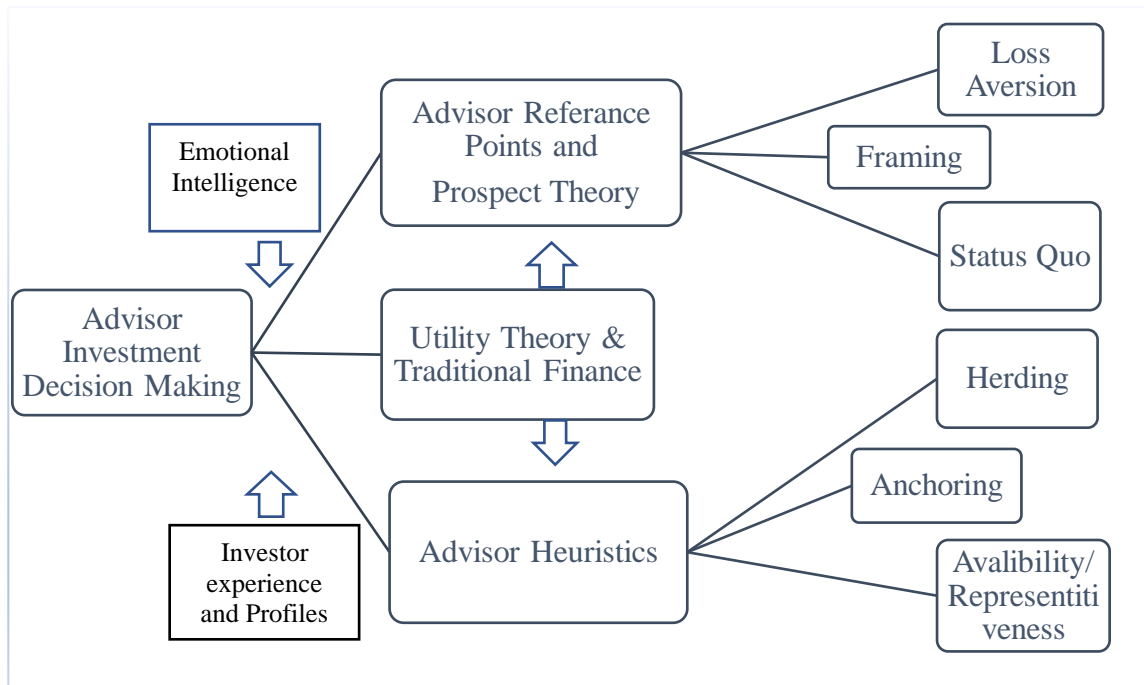
to develop expertise two condition must be met, there must be a stable environment, and participants must have immediate feedback of their actions or recommendations. This feedback must be given so that the participants can develop their skill and concentrate their efforts in deliberate practice.. Certain fields such as financial advising rarely have the immediate feedback necessary to develop these skills when selecting stocks or forecasting markets, but can refine their skills in certain areas of allocation, tax and estate planning and the ability to effectively communicate and educate clients on complex financial topics.

Theoretical Framework

This research is centered on behavioral finance and the existing frameworks from the field of cognitive and behavioral sciences. Central to behavioral finance is prospect theory and the idea of heuristics used in financial decision making (see Figure 1). Prospect theory is rooted in the understanding that expected utility theory ignores the reference point in decision making. This reference point serves as a baseline for the decision process and can usually be a determining factor in probability problems. Kahneman and Tversky (1974) pointed out three main heuristics commonly expressed in different decision problems; these were representativeness, availability and anchoring. These heuristics create predictable systematic errors that validate different biases in the decision process. This research applied these fundamental understandings of behavior biases to this conceptual model depicting the relationship between the financial advisor and behavioral bias understanding.

Figure 1

Financial Advisor Decision Attributes



Purpose of the Study

The purpose of this qualitative phenomenological study was to investigate whether financial advisors and portfolio managers suppress or intensify behavioral bias when advising clients. The focus was on understanding the financial process managers use when engaging clients and determining client risk and advisor recommendations. Findings will contribute to the current understanding of financial advisor behavioral bias within the financial literature. The current literature on financial advisor behavioral bias in decision making has been focused primarily on the quantitative survey methods, and the data focused on aspects of the client engagement process, including emotional intelligence, framing, and other specific behavioral tendencies. However, quantitative data research often asks students, nonpracticing advisors, or non-investors on

hypothetical scenarios of how investors and advisors make financial decisions and determine risk. This type of research can be of limited scope for practicing advisors because data may or may not have validity as a professional advisor's tendency is to be reserved or more conservative in answering survey questions. When financial professionals are asked questions in a survey format, many have a general understanding of what a conservative answer should be, and many can often rely on this peer status quo (Söderberg, 2013). The aim of this study was to identify certain heuristics and biases that cannot be easily ascertained in survey format. The qualitative research can generate new ideas that surface, only in open discussion that can be linked to and explored by current gaps in the existing literature. These findings can later be explored and validated in future quantitative research. Qualitative discussions and questions given to practicing financial advisors and portfolio managers could point to more heuristics being used in determining perceptions on client-risk tolerance, investment choice and product selections, and emotional types within client engagements. When these professionals engage with their clients, the question is, do they have certain biases that can interfere with their client perceptions? As advisors engage in guiding client decisions, they can often be influenced by various factors and can omit the same behavioral tendencies as any other investor. As the financial industry becomes heavily scrutinized and regulated, many advisors could overcompensate conservative behaviors in guiding investors' decisions. This behavior could be a conservative bias and could affect various components on profiling and assessing a client.

Advisors engaging in giving advice could find themselves confronted with a conservative or moderate bias that could be the result of firm or regulatory pressure in

non-risky alternatives although the client may rate a different risk score. Because many advisors understand the common ethical responses to general inquiries on risk and best interest questions, surveys may not be the best way to understand these different phenomena. In addition, there have been studies showing that investor tendencies to rely on heuristics and behavioral bias play a huge role in financial risk decisions (Kahneman, 2011). These tendencies can also be exhibited in financial advisors' decisions on risk and recommendations. Although not all heuristics tendencies are bad, the use of associative and reactional memory can often mimic and amplify certain behavioral biases observed by most investors. Previous studies have explored framing effects on financial advisors and found that financial advisors are not immune to the framing effects of behavioral bias (Roszkowski & Snelbecker, 1990).

Mullainathan et al. (2012) conducted third-party audits to investigate whether financial advisors added to known investor biases or helped eliminate them; their findings showed financial advisors omitted the same investor biases observed in any investor. The researchers found that advisors encouraged and added to the irrational behaviors when recommending or engaging clients. While the Mullainathan et al. audit provided third-party auditor information on the financial advisors' behaviors, the research and auditors methodology might only be isolating and questioning one segment of the advisor population. In their study, the auditors indicated to the financial advisor that they had wealth below \$105,000. As explained by the authors, this range may represent the typical savings rate of the average American; however, it is not representative of clients who experienced or experienced certificated advisors engage in day-to-day relationships. This \$105,000 amount would mean that the study could have only been representative of

younger or junior advisors because more established and experienced advisors usually have an asset threshold or minimum of \$250,000 to \$500,000 in client investable assets to work with them.

In addition, more experienced advisors usually have years of client-facing experience, even the popular CFP has a 6,000 hr requirement before obtaining the designation, and many firms have advisor production requirements that is a basic experience threshold for many advisors. This experience moat is a function of financial advisors being able to produce enough for their firms to be financially feasible to support them in a large firm or in an independent advisors situation to sustain a decent personal income. For many financial advisors employed at a large wirehouse and broker dealers in the United States, production requirements tend to start at \$250,000 to \$300,000 in revenue annually, and usually advisors must seek clients who have investable assets over \$200,000 to \$250,000 to get full-firm payout on clients' fees or commissions from large firms (West, 2012). This does not include junior advisors, back office advisors, or customer service advisors in part-time financial advisory roles; many of these advisors are younger to the business tend to have different compensation arrangements and different grid structures. According to AdvisorHub (Horowitz, 2020), a leading financial advisor-based magazine following the advisor industry, advisors would need clients to have at least \$250,000 to not get a reduction or "haircut" on their payout and bonuses. This client threshold is partially put in place by firms and as a way to align and promote efficient client segmentation. This is a way for financial advisors to match their knowledge with the right client segmentation and focus on the right number of clients that they can adequately service.

Today larger firms in the United States often rely on more automated solutions for clients with less than \$250,000 of investible assets. This segmentation of client assets can often lead to more deeper relationships with client financial situations, and generally, large wirehouses and broker dealers build their compensation plans on this type of client/advisor model. These larger firms compensation models are usually based on certain revenue or production requirements, and generally, when advisors' revenue increases so does the payout and bonuses to the advisors. For advisors to achieve their firm's total grid compensation payout, many large broker dealers would have minimal grid payouts in which the advisor would receive less than 20% of gross sales or even 0% for any household account that was less than \$250,000 minimum asset requirement. In addition, if the financial advisors did not meet minimum production standards, their compensation grid payout could fall to a minimum payout of 20% of their gross sales generated. That would put a \$249,000 financial advisor producer at \$49,800, which would be less than the exempt California minimum wage, which in 2021 was \$58,240. The majority of financial advisors employed by large firms are exempt W2 employees. To be classified as exempt in California, employees must make two times the state minimum wage, which as of 2021 is \$14 per hour multiplied by 2,080 hr/years * 2 = \$58,240 (Miller-O'Brien, 2021). Excluding outside and inside sales exemptions in California, the minimum wage increase affects the current large-firm wealth management compensation models. These wage increases by the government now inadvertently move up the minimum production and client asset level threshold. This could mean that more clients could be under served or not served at all. Suppose financial advisors are non-W2 employees and work as independent RIAs or for an independent

advisory firm as they grow larger and hire employees they could be faced with the same increase in wage problem. In that case, they become directly and indirectly affected by wage increases and regulatory implications through employees or external service and custodian provider costs.

At larger RIA firms where most compensation is in AUM, many have fixed costs that require advisors to have certain asset thresholds, usually above \$100,000 investable assets. The rationale for this is if the competitive industry average of billable AUM client fees are 1%, that advisor would need at least \$10 million in billable assets under management just to generate \$100,000 in revenue (Tharp, 2021). If the advisor had 100 clients, the business model might not justify the cost. If the advisor had 30% in costs of sales, this would equate to \$70,000 in actual income before tax, which could be very low on comparable job classification and education standards. As the wealth management industry continues to grow and advisor compensation continues to have higher growth rates and higher production requirements, expenses for leading labor, technology, and compliance continue to rise in proportion to revenue. According to the TD Ameritrade Institutional's (2019) FA Insight Study, \$228,000 of additional revenue growth is needed to sustain an additional full-time employee. This knowledge-working industry demands employees who have technical skills that can sustain the volatile nature of the securities industry. According to Kitces (2017), a leading industry advisor research website, advisors with 8 years of experience are earning \$94,000 a year, top quartile advisors are earning \$250,000 a year, and lead or partner advisors could earn \$500,000 or more a year not considering equity stakes.

The concern over direct financial incentives and compensation continues to be an exhaustive discussion that has far-reaching concerns from consumers, firms, and governments, but often client segmentation can align clients to correct advisors. Research has indicated that aggressive compensation incentives influence advisor decisions. However, various compensation models are not academically discussed in the literature because many investment firms keep complete compensation plans confidential. It is also noted that while financial advisors and their firms target certain asset segmentations of clients, studies have suggested that only 8% of clients working with an advisor actually understand how their financial advisor is being compensated (Anderson et al., 2018). For this study, the researcher focused on behavioral bias within advisors' decisions and not on the firm and advisor financial incentives or compensation. The researcher acknowledged that decisions are not made in a vacuum and that certain incentives do influence certain judgments; however, the degree of influence of incentives is beyond the scope of this qualitative research study.

Significance of the Study

Understanding the financial decision process not only involves the outcome of the decision but also involves what factors form that decision. This study investigated what behaviors lead to a positive or negative financial decision. The significance of the study was to understand what behavioral biases affect the client–advisor relationship. Although some quantitative surveys have asked financial advisors what factors they perceive influence their client's investment decisions, they do not address the qualitative aspects of how these same investor biases can affect the financial advisor decision process. This

investigation was critical to identify what behaviors lead to a positive or negative financial decision.

Suppose advisors exhibit behavioral biases when determining risk tolerance and delivering financial advice to clients. In that case, understanding and being aware of these biases could help financial advisors deliver better client experience, establish trust, and achieve higher client well-being. The client experience and trust play a unique role in the client–advisor relationship. If clients trust and believe in the advisor, they typically utilize the advice that is rendered. This type of trust is developed over time. Usually, it involves both the client and advisor putting themselves in a situation in which they create a degree of vulnerability to deepen that trust. If unsolicited advice is rendered, it will have a limited impact on investor behavior (Burke & Hung, 2021). When advisors give unsolicited advice, the client’s trust or confidence level can fall, and the influence of the advisor on the client is weakened. Often the tendency for clients to become reactive and emotional activates their reactive system, and from then, most of their decisions will rely on individual heuristics and will lead to irrational financial decisions.

Research Questions

The following research questions guided and directed this qualitative study:

1. What behavioral bias has the most significant effect on financial advisor recommendations and investment decision making?
2. Do financial advisors use framing techniques when interacting with clients?
3. Do financial advisors’ behavioral bias affect client-risk tolerance selections?
4. Do financial advisors exhibit a moderate-risk tolerance selection bias?

5. Do financial advisors comprehend the perceived value of understanding behavioral biases?

Research Method and Design

This qualitative phenomenological research study used in-person, semi structured interviews. Questions were open-ended and directed to practicing financial advisors, hedge fund managers, and investment managers who managed at least \$50 million in client assets. These asset managers and advisors had at least 8 years of experience in their current advisory role and were directly responsible for client recommendations. All participant advisors were from the U.S. pacific southwest region, eight advisors were independent operators, and three advisors were fee-only advisors. All advisors directly engaged in client recommendations and were currently practicing. Many of the participants from this study were employed or were affiliated with 9 large U.S.-based broker dealers or advisory firms. These advisors were dually licensed (Series 7 and Series 66 and 65) or fee-only advisors. This study did not include any supportive roles: junior advisor or intermediary advisor or investment managers. It also did not include any asset managers who were nonclient facing. This study included advisors acting as portfolio managers (Rep as PM) and advisors who also served as hedge fund managers. All advisors interviewed were client facing and directly responsible for managing, providing recommendations, and maintaining the client relationships.

Scope and Limitation

The researcher did acknowledge various limitations that were involved in assessing financial advisor behavioral bias. One larger limitation was the compliance aspect and liability of larger firms in the industry because many advisors and firms tend

to stay away from associating with academic research poking holes in current advisor practices. Another limitation was the limited number of financial advisors interviewed. Because this study's sample size was small, the focus and attention of this study was understanding the decision process and identifying any new behavioral themes that may develop by concentrating on the research questions. This involved data gathering that focused on similar responses emerging from question validation and identifying certain gaps in the current literature. These gaps may be assessed on their own merit through this qualitative lens, and future studies could include quantitative survey data focused on synthesizing themes that may emerge out of advisor responses.

Summary

As the current demand and the complexity of financial services continue to grow in the United States, the moral, ethical, and educational foundation must keep pace with current advancements in the field of psychology, finance, and behavioral economics. The critical aim of this research was to identify possible behavioral biases in the decision process of financial advisors. Understanding the process and identifying whether advisors are aware of their own possible cognitive errors could benefit them in their investment selections and decision process. This awareness is critical for optimal client recommendations and implementation of investment strategies. By understanding what biases may currently exist within the financial advisor decision process, participant responses can give additional validity to past and current literature on expert investment decision making.

CHAPTER 2. LITERATURE REVIEW

This literature review provides an overview of the seminal and modern behavioral economic theories, discussions, and findings from the field of financial decision making and behavioral economics. This review investigates the relevant literature on common individual behavioral biases and heuristics used in judgment and financial decision making. Behavioral finance is a branch of behavioral economics that recognizes that individuals often use a combination of psychology and economics to form their financial decisions. Many of these decisions rely on the assumptions that people act in their own self-interest and make rational decisions in their efforts. When acted on under risk, these decisions can often create irrational judgments and create occurrences that cannot be explained by traditional economic models (Mullainathan & Thaler, 2000). When people rely on specific heuristics, experiences, and emotions, they often create certain cognitive biases within their decision-making actions. As market participants endure vulnerability and risks, the risks associated with their financial decisions and their emotional state can create a high degree of stress and emotional reactions in judgment. Psychological reactions and emotion to market stimuli can also create systematic errors in judgments and decision making. Behavioral economists find that many of these errors in judgments are predictable errors. Studying these errors can give choice architects and decision makers a conceptual framework to help society (Thaler, 2018). Investigating these behaviors is the basis for psychologists and decision researchers to develop new theories and alternatives to the classical economic and utility models (Baker & Ricciardi, 2015). This study first addresses the classical finance theories, expected utility theory, and dual

process theory, followed by an assessment of the behavioral biases and the cognitive errors in investment decision making.

The economic theories within behavioral finance have been rooted in classical finance and psychology (Roberts, 2020). Traditional finance and economics theories provide the assuming and primary veins of accepted literature that is a requisite of behavioral finance and practitioner guides for investment management. Today's investors have predominately utilized classical theories of finance to build personal investment portfolios and design effective retirement plan allocation. Classical finance assumes that investors are rational, and rational investors are risk averse, and their optimal financial judgments and decisions should be choices that should provide their expected maximum utility (Kahneman & Tversky, 1979). In seeking risk, rational investors (diversified investors) should attempt to find their place along the capital market line and minimize risk while maximizing returns (Sharpe, 1964).

Classical Finance Theories

Traditional finance is deeply rooted in the belief that investors are rational and seek optimal choices aimed at seeking higher well-being. The role of human self-interest has been thought of as a guiding principle of people making financial decisions. Adam Smith (1776) captured this traditional political economic view in his original book *An Inquiry Into the Nature and Causes of the Wealth of Nations*. Smith argued that the natural desire, propensity for individual prosperity, and advantage are self-seeking. This self-interest is derived from the individual's toil and the mutual benefits of exchange and natural desire to cooperate with others for gain (Werhane, 2019):

It is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner, but from their regard to their interest. We address ourselves, not to their humanity but their self-love, and never talk to them of our necessities but their advantages. (p. 259)

The self-seeking tendencies of people not only can create advantages in cooperation but also can create inequality because necessity can be objectively defined. When people engage in a rational thought process as the market participants, various assumptions and economic models can help investment decision making lead to more favorable results. However, people are not rational agents, and their emotions and behavioral tendencies often displace rational, reflective thoughts. The rational thought process associated with optimal decision making stems from the idea that the economic man is motivated by self-interest. As Adam Smith (1776) noted in the late 18th century, man's self-interest shall be the motivating principle that produces sustained opulence, and the *invisible hand* that spurs economic prosperity shall be the factor that guides cooperation. For many years after Smith's writings, the concept of self-interest would be the driving force for many financial discussions, and a basic standard of rationality would serve as the foundation for capitalism. However, as basic economic models developed over the 20th century, the idea that individuals were always rational and always acted in their own self-interest excluded ideas of the psychological and behavioral influences on decisions (Roberts, 2020). However, in Smith's (1759) book *The Theory on Moral Sediment*, his psychological insight illustrated that self-interest was indeed influenced by human emotion; his text gave a deeper psychological understanding of self-interest and how people develop self-interest. This is not self-interest in the material sense but an

immediate need for a feeling of importance and praise; Smith pointed out that this is more than just praise of public opinion or any random group, and it is more of certain confidence or recognition among peers of the same rank and discipline (Archie Brown, 2018). Smith (1759) explained this justified praise:

It is only the weakest and most superficial of humanity, which can be much delighted with that praise which they know to be altogether unmerited. A weak man may sometimes be pleased with it. Still, a wise man rejects it on all occasions. (p. 138)

Influential writer John Maynard Keynes wrote: “Economics is essentially a moral science and not a natural science. That is to say, it employs introspection and judgments of value” (Mitchell, 2017, p.33). The judgment of value is a function of humans’ perception of value on abundance or overabundance (Mitchell, 2017). This means human values and emotions shape the decisions humans make and are the perception of values relative to a starting point of that value. Early economists would also include discussions on the idea that certain behaviors would affect the rational thought processes on capital decisions and lead to class inequalities (Marx & Engels, 1848/2018). These behaviors and human tendencies to find the absolute utility of profit maximization would create unequal distributions of wealth that would lead to mass conflict and continued economic arguments on maximum utility, exploitation of labor, and capital control (Swidler, 2018).

In finance, this displacement of rational thought and understanding of a self-interest motive can provoke specific investor defense mechanisms to go on high alert if the investor believes that the advisor’s interest is not aligned with the investor’s goals or investment objective. This can build self-interest bias when interacting with one another,

and now the participants must put their guard down and open themselves up to a certain level of vulnerability to allow trust to be built (Ragatz, 2021).

Another issue is understanding what assumptions classical models are built on and how they define utility and value. These assumptions and definitions are briefly discussed but are beyond the scope of this study. Classical financial theories from Harry Markowitz (1968) in modern portfolio theory (MPT), Eugene Fama (1970) in efficient market hypothesis (EMH), and Jack Treynor and William Sharpe (1964) in their explanation of the capital asset pricing model (CAPM) are built on these basic assumptions that investors are rational and risk averse understanding the risk–reward tradeoff in determining value (Jensen, 2003). Fama’s (1970) work states that if markets are considered efficient, all information is acceptable, and everyone has equal access. In Smith’s (1759) book *The Theory of Moral Sentiments*, he described,

The word value, it is to be observed, has two different meanings. It sometimes expresses the utility of some particular object, and sometimes the power of purchasing other goods that the possession of that object conveys. The one may be called value in use, the other, value in exchange. (p. 462)

In seeking value or return from a classical approach, there should be an associative and equivalent unit of risk for each unit of return. Higher expected returns should carry higher degrees of risk, and the classical theorist generally accepts this principle. In seminal writings from William Sharpe (1964), capital asset prices in equilibrium should follow the rational thought processes of diversification to achieve a desired spot on the capital market line. Sharpe’s work was based on two assumptions in achieving market equilibrium. The first is a standard interest rate, or risk-free rate,

meaning all investors can borrow and lend at the same rate, and the second is that all investors have uniform expectations or expected values calculated in the same way (Sharpe, 1964). In his later work on the CAPM, Sharpe replaced the entire systematic risk or standard deviation with the beta to arrive at an equation for determining a particular security value along the dependent variable axes. This has been a topic of discussion in evaluating security values for many decades but has not come without harsh criticism from those who believe that irrational tendencies and investor behavior cannot be captured in such evaluation models (Apergis & Rehman, 2018).

In EMH, Fama (1970) asserted that capital markets are efficient, and to be efficient, market prices must fully reflect all available information about the market prices. Efficient market thoughts and ideas can be traced back to early mathematicians, scientists, and businessmen of the 16th and 17th centuries. They discussed and laid the foundation of efficient market principles (Sewell, 2011). Although empirical research has validated EMH, recent literature has shown that an efficient market does not characterize stock prices. Strong evidence shows that developed and developing markets can exhibit profitable arbitrage opportunities and strategies to exploit market inefficiencies (Lee et al., 2010). Research from Verma and Soydemir (2009) examined the effect of individual and institutional investor sentiments on the market price of risk. Using sentiment data from the American Association of Individual Investors and Investors Intelligence, Verma and Soydemir found that rational investors can take advantage of specific arbitrage opportunities when irrational optimism is high.

Kahneman and Tversky (1979) challenged the expected utility theory by demonstrating that several decision problems violate traditional beliefs on utility

maximization. Recent meta studies validate violations of the utility theory confirming and adding validity to the Kahneman and Tversky's findings (Ruggeri et al., 2020). Although violations of expected utility theory have recently been validated, some studies have found weak evidence of prospect theory in practice; the discussion continues how many emotional actions and behavioral biases affect complex and more significant financial decisions (Levy & Levy, 2021). Today, most financial advisors commonly use classical approaches to determine investor risk tolerance and define client investment objectives (Grable, 2020). Research on investors' dependence within the expected utility function involving chance and decision problems still validates and conforms to many traditional finance theories (Livanas, 2011).

The expected utility is a statistical expectation for a specific outcome and is traditionally considered a basis for investment risk rationale. However, when investors engage in investment choice problems, they are seeking profitable strategies to minimize risk and create scenarios that balance risk and reward; this process creates systematic errors in judgments and frequently occur within many decision outcomes (König-Kersting et al., 2020). Some of these errors in judgment stem from anomalies and have been associated with emotional and behavioral tendencies that seem to have a frequent overpowering effect on investment decisions (Kahneman et al., 1991). Seminal research from von Neumann and Morgenstern (1944) gave many examples from physics to help illustrate using mathematics to explain psychological factors in human judgments. By breaking down economic problems into statistical probabilities and assigning random economic variables into their mathematical equivalents, von Neumann and Morgenstern helped shape game theory and aided a discussion on the assignment of certain human

behavior concepts to economics. While the theoretical utility maxim can have various anomalies that can ultimately be problematic for investment decision makers, it still has specific statistical methods applicable to measuring risks (Kazem, 2021).

When investors are under emotional distress, the psychology of choice and decision making can lead to unintended financial outcomes and create irrational financial behaviors (Tversky & Kahneman, 1974). Understanding these psychological components in decision making gives financial advisors a framework for understanding the investors' rationale of different emotional choices and behavioral biases.

Behavioral Finance and Investor Behavior

Behavioral finance is the study of economic decision making that includes psychology, sociology, and classical economics. Human decisions are often affected by emotional circumstances when humans are under emotional distress, and stressful stimuli can impair rational judgments. The predictable errors in judgements and the deviations from rationality in the decision process is the basis for behavioral economics. Nobel recipient Herbert Simon (1972) explained this rationality as “a style of behavior that is appropriate in achieving given goals, within the limits imposed by giving conditions and constraints” (p. 161). Although behavioral finance has been thought of as a more recent discipline, the psychological role in decision making has been debated in the economic literature for centuries dating back to Adam Smith's (1759) explanations on human behavior and the economy. Smith described, “In all countries men seem at last to have been determined by irresistible reasons to give preferences” (Location 386). These irresistible tendencies are the behavior of men's desire, and when under risk can shape irrational judgments. The behavior of man is influenced by the connection of knowledge,

morality, and economics in shaping human values and is embedded in decision making of all humans (Hühn, 2019).

For many people, making significant financial decisions often involve a certain level of stress and uncertainty. Balancing risk and reward creates internal conflicts that heightens awareness accelerating levels of stress and making people have difficulty suppressing emotions. In financial decision making, these internal conflicts center on abstract concepts of risk and not knowing the results of a particular decision for many years in the future. When people do not know the outcome of their decision for many years in the future, they often forget about how the initial decision was made. When decision makers forget about the process of forming their decision, they often are not getting better at making future similar long-term decisions. The idea of not knowing fosters an irrational thought process, and when facing risk problems, people will rely on their own heuristics.

To not have associative patterns or symbols to remember and develop, individual heuristics decisions become based on the irrationality behavioral biases. The physical symbol systems hypothesis states “that a system will be capable of intelligent behavior if and only if it is a physical symbol system” (Simon, 1990, p. 3). In financial decisions, if investors can suppress some of the behavioral tendencies, better outcomes can usually be achieved, and if they cannot, researchers have found that using experts can help suppress bias. If investors do rely on financial experts, they allow traditional finance methods to guide them through their decision process as well as experts who can help identify and achieve a better financial well-being. Simon et al. (1987) noted, “Human experts will generally have a richer set of heuristics to guide search and a larger vocabulary of

recognizable patterns” (p. 13). Developing these heuristics and increasing this vocabulary for financial advisors could require a certain understanding of specific aspects of behavioral finance. Advisors’ experience itself might not be enough, and advisors must be deliberate in understanding these biases. This point is illustrated by Ericsson and Pool (2016) in their book *Peak: Secrets from the New Science of Expertise*, which they explained that superior performance does not come from hours and hours of practice; instead, superior performance is a direct derivative of *deliberate practice* of a specific skill or endeavor. Deliberate practice involves ascertaining a certain degree of mastery of a particular field of study and then refining and deliberately directing conscious thought, coaching, and igniting the unconscious thought process. This unconscious thought process has been described as the ability to drive, talk, and drink coffee simultaneously, or in athletics, it is often called muscle memory, which means mastery of certain judgments or actions from the reflective thought process into the automatic thought process. Ericsson (2020) also suggested that devoted time to solitary practice and specific key direction and input from skilled teachers can help refine and achieve performance excellence.

In Ericsson (2020) discussion on teachers, the need for individualized advanced instruction for students should be tailored to their particular skill set, and feedback from solitary practice is needed for mastery-level performance. This is particularly true for financial managers and financial decision makers at all levels in the same way that Ericsson described the deliberate solitary practice; financial managers should also evaluate their performance and their actions by solitary practice and constant evaluation. Not in forecasting or stock picking but in specific actions with clients. The ability to see

targets that are unseen suggests that images in the mind have been formed and now have embedded themselves into specific long-term memories. As Ericsson (2020) and other psychologists pointed out, these images are essential to developing or not forming memories. When people or financial advisors do not know the outcome of their decisions for many months or years, they must refine their images by self-evaluation and critical feedback from teams, coaches, and other professional managers and evaluators. This is a critical component for financial decision makers because many of their decision outcomes will not have good feedback for many years. Hence, developing a postdecision evaluation team is critical for learning and refinement of improving performance.

Behavioral finance seeks to understand certain commonalities that systematically influence decision making (Baker & Ricciardi, 2015). Understanding human psychology can help identify certain behavioral tendencies, as they apply to specific rationale, of emotional behavior that can help investors and financial professionals avoid certain negative decision biases (Baker et al., 2017). Biological evidence of financial advice rendered by economic experts in times of uncertainty has been associated with an “offloading” effect when measuring participant financial decisions under MRI brain scanning (Englemann et al., 2009). These biological findings show both humans and monkeys demonstrating certain behavioral tendencies by measuring the posterior parietal cortex’s lateral intraparietal (LIP) area. Different neurophysiological studies have used various methods, including measuring LIP or the eye patterns and tracking another body movement for behavioral sensitivity in decision making. The LIP is thought to contribute and be responsible for eye movement and quick-response activity to ascertain information needed to understand and interpret patterns in decision making under risk

scenarios (Leo et al., 2004). This simulation and saccades are responsible features of activity within the brain when decisions are made under risk is also found in monkeys that must make rapid judgment decisions (McCoy & Platt, 2005). The behavioral sensitivity to risk has commonalities that signify two basic brain activity levels: the reactive brain, or System 1, and the reflective brain, or System 2.

System 1 and System 2

When thinking about how people make decisions, psychologists have often explained the process of thinking in two different modes. These two modes of thinking are responsible for processing information and forming and retrieving memories. Originally introduced by Stanovich and West (2000), these operating systems, or modes of thinking, have been characterized and accepted in the literature as a primary explanation of two systems of developing and forming information used in decision making. Later, adopted by Kahneman (2011), these two systems are referred to as System 1 and System 2. By identifying and characterizing the two types of systems, readers can rationalize and segment different thought patterns and place them within the two systems.

To understand the decision process, it is important to segment the process of that decision, and segmenting the thought process into two modes of thinking, even though they may be fictitious, is easier than articulating unconstructed abstract ideas about a process. The general idea of using the terms System 1 and System 2 is that by forming a vivid picture in people's minds of a type of system of thinking, like the cardiovascular system or the nervous system, they can have a mental picture in their minds that makes it easier to recall when explaining the two systems. Kahneman (2011) explained that a

vivid, memorable depiction of the explanation of a simplified system can make understanding the process of decision making easier to remember rather than a function of a process or an abstract part of a process as many would call them the reactive or automatic system and the rational or reflective systems (Kahneman, 2011). The naming of a particular system describes and depicts certain functions of a particular action done within the process. An illustration of the process can unify abstract concepts to mental memories. System 1, or the automatic system, can process information quickly and can identify, calculate, and determine almost anything within split seconds without much mental effort (Early et al., 2020). System 1 relies on past experiences, associative processing that can shape and retrieve memories in seconds. While System 1 acts as the fast reactionary mode of thinking, the quickness can create false perceptions and cognitive biases leading to unintended consequences.

When examining and investigating these systems, researchers have noticed certain associative patterns and tendencies that System 1 seeks to develop quick judgments and calculations that make everyday decisions possible (Toplak et al., 2011). The ability of System 1 to calculate quickly and understand and assess situations in a split second has been developed over time. It has instinctively been pattern seeking and is a learning system that has allowed humans to evolve. This system has been the essential tool for human adaptability and survival for a 2,000 or more years and has changed as the human thought process has changed in adapting to the environment. The two brain systems are both intuitive and analytical, covering large information pools and breaking them into chunks so that memories can easily be created.

As people worldwide engage in social media and digital news, they become more prone to misinformation. Research has shown that the more people engage System 2 types of thinking the more they can detect misinformation (Early et al., 2020). The deliberate effort in assigning certain judgment tasks to System 2 can ultimately lead to better decision-making outcomes. This mode of thinking can come at a cost in the form of time because engaging System 2 will often lead to rational thinking that takes more time and has been thought out and planned for. When people slow down their thought process and focus on messages and memories that have been stored in their long-term memories, they can often mitigate receiving misinformation and build a decision process that is the rationale. System 2 engages in mental operations requiring focus and attention that engages the brain in deep concentration and learns and adapts to abstract concepts. In Kahneman's (2011) book *Thinking, Fast and Slow*, he referred to the way the brain engages in decision making in these two different mental operating systems, which is a simple explanation of how the human brain operates and is a way to think about the two types of cognitive operation of the brain. Although these systems are not developed from the anatomy or physical nature of the human extension, they can be a practical and easy interpretation of decision pathways of the brain (Frederick, 2005).

Psychologists tend to cite pattern recognition as the chosen form of activating superior learning. Developing patterns has been the preferred method in starting the learning process instead of open memorization or recalling lists (Kahneman, 2011). These patterns are the basis for System 1 development and can over time shape the reactionary system of thinking. The more experience individuals have the more pattern recognition is developed, and specific thoughts and reactions are committed to reactive

memory. Once committed to memory, no further investigation is needed in making a rapid decision. However, by allowing the human brain to form such automatic decision abilities, when behavior is introduced into the process, the introduction of emotion can create conflicts and often leads to errors in the decision process. One example of pattern recognition is the muscle memory that professional athletes develop in the early stages of their careers. Other examples include teenage driving; when the teen first gets behind the wheel, the teen is more prone to accidents and distractions. These distractions directly affect the teen's ability to drive. Insurance companies have exploited this known occurrence, and teen drivers, or their parents, must carry the monetary burden of their underdeveloped driving skills. However, after many years behind the wheel, breaking and assessing driving risk becomes second nature, and these actions become committed to muscle memory. Even some experienced adult drivers become somewhat overconfident in their driving ability. They can text, eat, and drive simultaneously and still assess the environment for dangers. When committed to the instinctive memory or System 1, people's minds become lazy with repetitive information, and they believe that these patterns will be the same every time with no changes in the future. They tend to start developing certain biases that can become permanent over time, and the information committed to those memories can often be hard to reverse (Thaler & Sunstein, 2009). These two systems were the focus of the decision's process discussion and have been extensively used within the literature to date.

When trying to understand the cognitive thought process, a psychologist can differentiate the thought process into the two types of systems or modes of thinking. The abstract processes can be harder to explain, and using or separating the mode of thinking

gives a better conceptual understanding for readers. In assessing the effects of the two systems, tests are often used to measure the effects of individual heuristics and behavioral biases that humans develop within their thought processes. One such test is the cognitive reflection test developed by Frederick (2005), which helps isolate and illustrate cognitive biases. The following set of questions helps to understand how this thought process works:

- A bat and ball cost \$1.10 in total. If the bat costs \$1 more than the ball, how much does the ball cost?
- If it takes five machines 5 min to make five widgets, how long will it take 100 machines to make 100 widgets?
- In a lake, there is a patch of lily pads. Every day, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long will it take to cover half the lake?

These questions have been given in multiple studies to identify behavioral tendencies in System 1. Findings have shown that most participants choose the answers 10, 100, and 24 and illustrated the common intuitive answers of System 1 engaged in the decision process (Frederick, 2005). The questions highlight the importance of understanding System 1 because this automatic system does not require reflective or intensive thinking. When the brain gets accustomed to a particular pattern, symbol, shape, smell, color, or just about anything humans experience daily or repetitively, it often trains and ties that occurrence to a specific associative memory in the brain. These processes can often lead to developing decisions prematurely and form emotional and

behavioral biases that can lead to unintended financial consequences (Toplak et al., 2011).

When investors must choose between learning about a financial concept, such as diversification or relying on their heuristics to answer specific financial or retirement questions, most will not engage System 2. They will tend to rely solely on System 1 to solve decision problems. Studies have shown that when people are faced with complexity, they tend to be susceptible to framing and rely on the most available or most effortless answer (Shin et al., 2019). When financial advisors engage clients, they often use examples of declining and volatile markets to get a sense of understanding client-risk level. If financial advisors understand the systems of processing information, they can assess client understanding by checking cognitive awareness. Certain questions may reveal that engaging both systems of thinking seems to be problematic for people making financial decisions, while in theory, people should utilize both systems to seek more sustainable well-being. Moreover, advantageous financial outcomes have been proven to be the exception rather than the rule (Thaler & Sunstein, 2009).

If clients are asked, “If the market were to go down 50% from a \$100,000 then proceeded to go up by 50%, how much would you have?” The System 1 quick intuitive answer is \$100,000, and most clients will answer the question with \$100,000, but this would be wrong. However, if they were to think about the question and engage System 2, they would probably realize that \$100,000 was not the answer, and most would change their answer to correct it to \$75,000. This is a simple but effective explanation to explain to clients the dual process theory and the biases that can form affecting financial decisions and judgments.

Unfortunately, people's minds are not set up to responsively suppress their automatic System 1, and their thoughts can be grouped together and processed as data chunks. Many psychological elements of human judgments are interconnected and cannot be divided (Griffith & Maybell, 2020). When people are faced with risk decisions, their thoughts become interconnected and are heavily influenced by certain emotional and behavioral tendencies, and the ability to suppress emotions is to be able to separate these connections. When choice or judgment problems arise, instead of isolating problems for inconsistencies and errors, most people tend to rely on personal experiences and specific relation patterns for their decision process. Ansbacher and Ansbacher (1956) pointed out, "Every individual represents both a unity of personality and the individual fashioning of unity the individual does both the picture and the artist" (p. 177). When investors or advisor must choose different investments or risks, they do not do so in a vacuum. They should consider their experiences with previous risk problems and consider risk as the traditional statistical mathematical equivalent of standard deviation. These choices in seeking the maximum return for risk should be the unification of classic statistical analysis and include some degree of emotional intelligence when selecting portfolio allocations (Sashikala & Chitramani, 2017).

Research has shown that news can affect retail investment decisions and that by gaging unexpected distractions by daily news pressure indicators, overall trading volume on certain reporting stocks can be affected. As investors become indicated by news distractions, they can lose focus on fundamental news such as earnings reports, which is contrary to the reactions of professional managers who do not exhibit this emotional distractive behavior (Israeli et al., 2021). As investors become consumed by emotional

responses to unexpected news interruptions, they become more susceptible to their emotional tendencies, and irrational behavior can influence investment decisions.

Experts and Dual Process Theory

The dual process theory describes how psychologists often explain two modes of human reasoning and decision formation. By describing two imaginary systems, psychologists and researchers can give a vivid illustration on how the mind operates in the decision-making processes. One of the reasons for the two-system illustration is to help explain the abstract and categorize information to aid in clinical setting. One particular concern is that experts, such as doctors, attorneys, public officials, or advisors might operate from System 1 all too regularly. The consequences of not engaging System 1 can create inaccurate or manipulative consequences. Studies comparing experts with nonexperts in the use of heuristics has yielded mixed results (Fleming et al., 2012). As previously stated, heuristics are essential for human existence, and System 1 is necessary for quick rationale and quick decision making. Depending on the field, the dependence on certain heuristics is necessary for human survival. These heuristics aid in more complex decisions by categorizing of information into identifiable chunks, so decision makers can recall and utilize information on demand. As experts, such as surgeons and advisors, acquire a degree of academic and working knowledge, does their application of individual heuristics in judgements translate into superior patient or client outcomes? This question is hard to understand without proper context; certain practitioner engagements require quick decisions and others may not. For example, an emergency room doctor accessing a critical bloodshot wound, might need to rely on quick judgments and heuristics more than a family medicine practitioner. Empirical

studies have shown that the use of individual heuristics in various medical decision-making tasks show positive persuasive results (Blumenthal-Barby & Krieger, 2015).

When advisors are assessing clients for the first time, they often must categorize clients' perceptions of risk, and they must adequately determine the risks that a client will accept relative to their objectives. This process isolates risks relative to other asset classes and other critical elements involved in wealth accumulation and preservation process. When investor objectives have clearly been identified, advisors can usually proceed with the appropriate financial solutions; however, these recommendations will rarely provide the advisor with any immediate feedback. When advisors render advice, their recommendation results could take years to understand and interpret, so determining how effective an advisor is for a client situation is hard to determine and may be isolated to certain portfolio performance measurements. When evaluating experts and advisors on recommendations that do not have immediate feedback, the method could be challenging and not inclusive of critical relative data. Evaluating these recommendations for superior aggregate results is unlike an evaluation of a life-or-death situation. Whereas experts, such as peace officers, anesthesiologists, or brain surgeons, who do have immediate feedback on the decisions they make could develop an expert level System 1 and could have more positive outcomes in quick decisions.

Prospect Theory and Loss Aversion

Prospect theory has been at the forefront of academic literature in recent decades. It continues to assist in understanding systematic deviations from rational decision making and expected utility theory (Levy & Levy, 2021). Kahneman and Tversky (1979) described decision making under different degrees of risks viewed as *prospects* or

gambles. They explained that several phenomena and preferences exist that are consistent with human loss aversion that violates classical utility theory and rational choice selection. These violations were found to be embedded in emotional and psychological tendencies of human decision making. When faced with monetary decisions, people tend to base their decision from specific reference points. These reference points determine people's decision rationale and ultimately are the determining factors in forming risk preferences. This loss aversion is prevalent in the decision-making tendencies of individual investors and professional advisor. This display of personal preferences in investor judgment comes from when an investor is faced with multiple investment possibilities; most sensible investors will select the outcome with the highest expected utility. Under utility theory, reference points from individual actions in decision making are not accounted for; the stated value of a particular measurement remains constant and does not affect future decisions and judgments.

Under prospect theory, the reference points from which individuals start affect future financial decisions. For example, when an investor starts investment with \$1 million and loses \$500,000, the investor tends to hold this negative outcome in mind for future decision making. Meanwhile, an investor who started with \$100,000 and increased his or her position to \$500,000 will have a different mindset on risk, and future investments could be riskier as mental accounting and overconfidence often surface. Although both investors have a utility of \$500,000, the investor who experienced an increase could have attributed his good fortune to skill, having elevated risk-seeking tendencies in future decisions. The investor who witnessed his investment drop from \$1,000,000 to \$500,000 will be more reluctant to sell out his position and have more of a

sunk cost bias. This illustrates the violation of the expected utility theory because the \$500,000 utility value is the same for both investors. Kahneman and Tversky (1979) noted that by adding these value reference points, emotional tendencies seemed to directly violate utility theory.

Many recent findings have still validated the original prospect theory findings. They show that people usually think of risk in probability, and people typically weigh losses more than they prefer gains. In their meta study, Alexander L. Brown et al. (2021) focused on testing prospect theory for validity and analyzed 150 studies. Half were as recent 2015; the results found consistency with earlier findings from Tversky and Kahneman (1974). When examining financial professionals, researchers have found that they behaved according to prospect theory and, they were risk averse for gains and risk seeking for losses (Abdellaoui et al., 2013). These financial managers were found to support violations of utility maximization, but they also were found to be more risk seeking, ignoring losses more than other prospect theory analyses.

Loss aversion is the tendency for individuals to avoid pain or losses more than they want an equivalent gain (Kahneman et al., 1991). Researchers have noted that the pain of losing is often twice as powerful than the pleasure of gaining (Yechiam, 2019). Yechiam (2019) also pointed out that the sensitivity to different degrees of losses can yield different results than the traditional loss-aversion data. This pain can be measured in probability questions individuals have to rationalize they can provide insight to how people engage in this phenomenon. As the value of the loss increases, so does the emotional effect on the action and the investor types and behavioral bias.

Heuristics

Heuristics are mental shortcuts or rules of thumb used in human decision making (Kahneman, 2011). The term is of Greek origin meaning “serving to find out or discover” and is the idea of solving problems that logic and probability cannot (Gigerenzer & Gaissmaier, 2011, p. 545). Heuristics allow the decision maker to act quickly and enable a decision to be made without stopping to rationalize and spend significant time on any particular issue. These decisions are generally predetermined judgments that people develop from their past experiences and awareness of associative patterns of data or input (Thaler & Sunstein, 2009). Associative pattern recognition is a manifestation of elevated capabilities of System 1, and the recognition of certain associative memories triggers the automatic system and stimulates the reactive brain. Gigerenzer and Gaissmaier (2011) indicated that the mind is constantly seeking patterns and conceptual associations of what it already knows; this is fundamental for human existence, and many heuristics are nondisruptive and can be more accurate than seeking standard statistical models.

Slovic (2018) explained that long before there were theories on decision making and risk modeling, there was intuition and people’s gut feeling of what feels right and what feels wrong in a particular action or decision. As human advancements in the physical and social sciences develop, more complex ways of utilizing tools and technology begin to make humans more situated to deal with their environments. Usually, when action requires quick decision, the mind must associate relative stimuli with similar memories and form the most probable answer. These memories must be able to be recalled quickly, and the mind’s memory retrieval skills connect and associate

patterns, symbols, and pictures to quickly form judgments that help with probability analysis (Benartzi & Thaler, 2007). These judgments based upon the associations are basic probability questions, which reduce random information into categories for eventual use in the decision process. The mind's exceptional human capacity comes from the ability to quickly categorize and associate the patterns, symbols, and pictures with the relative stimulus being evaluated. This is one of the foundational elements of human development and formation of individual heuristics (Slovic, 2018). Deeply rooted in the human evolution of the brain, these associative and adaptive recall skills were needed to keep our ancestors alive and are also at the core of forming behavioral biases and heuristics.

When it comes to investing and retirement, investors commonly depend on individual heuristics to guide their investment decisions. These heuristics come in many forms, and empirical findings have shown that investors overutilize and depend on these rules of thumb in too many financial situations. Often, when investors do not understand or do not have the financial knowledge to make financial decisions, they tend to do nothing. This inaction can create long-term consequences because of the reliance on System 1 and short-term thinking. In a survey done by Madrian and Shea (2001), they measured the participation rate of workers who chose to participate in their 401(k) retirement plan. When employees had to choose to opt into the retirement plan, they chose to participate only 20% of the time, increasing to 65% after 36 months of employment. When plan administrators removed the barrier of waiting 1 year to become eligible for the plan to immediate eligibility for new hires and moved the default election to automatic enrollment for new employees, the participation rate quickly increased to

90% and increased to 98% after 36 months (Madrian & Shea, 2001). Automatic enrollment had increased effects on participation, and even though participants had the option to opt out of participating at the initial enrollment, most did not do so. When participants have to make decisions based on information they do not understand or do not have, they often rely on inaction or inertia and do nothing at all. This inaction heuristic, or default bias, has been shown to have negative consequences to investors and retirement participants in the short and long term. This negative outcome could be a result of waiting or keeping the status quo, but the inability to act can have greater effects than acting and guessing wrong (Thaler & Sunstein, 2009). This means, if retirement participants do not start to contribute to the plan until later in life, they will have less in the plan than someone who actually invested in the plan and selected the wrong investments. A little bit of something is greater than a little bit of nothing.

As stated previously, these adaptive cognitive skills or pattern seeking tendencies have significant influence on decisions. These heuristics, or mental shortcuts, have also evolved and had unique positive applications in learning, muscle memory, and memory recall. When individuals are able to harness and understand how the mind seeks out these patterns and associations, they can often lead to more effective judgement than traditional statistical modeling (Gigerenzer & Gaissmaier, 2011). In his book *Moonwalking with Einstein*, U.S. memory champion Joshua Foer (2012) demonstrated this on his journey of developing and building an elite championship memory. Foer spoke of creating memory palaces where he paints vivid pictures in one's mind to help recall, categorize, and memorize numbers, words, and phrases. When he speaks of exceptional memory, he speaks of adaptive memory recall and the ability to retrieve

information from virtual pictures created in his mind. If the virtual picture is associated with long-term memories, such as the house that you grew up in or places you often visit, the placement of certain things in that virtual picture in your mind can store more things in the brain that can be available for retrieval in long-term memory. Trying to retrain the human brain to memorize random facts that are not essential for survival is a considerable task. However, retraining System 1 to allow certain nonessential facts to be associated with virtual pictures or associative memories can engage System 2 for long-term storage. According to Foer (2012), this associative memorization strategy is the preferred method for optimal memory retention.

For advisor and financial managers, the use of heuristics or mental shortcuts can cause managers to exhibit behaviors that can affect their returns. When experts depend on heuristics, they can create patterns that may be hard to reverse over time. For experts including tenured advisors their intuitive responses should be managed and suppressed to an acceptable level. People generally depend on experts and advisors not to be creators and innovators but to hold a superior level of empirical understanding that can help evaluate and mitigate risks. For advisors and financial managers this means that they may be able to create substantial value to their clients in knowing what stocks, products, and services not to pick instead of trying to beat the market. When practitioners understand research shows that when hedge fund managers buy expensive homes, they tend to underperform their peers in the 12 months subsequent to their residential home purchase (Ling et al., 2021).

These individual heuristics can be associated with cognitive biases that have been formed from associative memory and System 1 thinking. One often makes very logical

initial decisions clouded with irrational thoughts and emotions that lead to decisions based on incomplete information. The accuracy of these decisions is often underdeveloped perceptions and predetermined emotional responses that are necessary for fight or flight judgments. These tendencies also create preconceived notions or rationales that are susceptible to frequent human errors and bias.

Research has shown that heuristics can guide many investors in determining the decision-making rationale for their investments because some of these decisions may have the desired effect. Still, many do not always lead to an optimal investment solution. As investors consider their investment options, they tend to use price heuristics and anchoring bias (past return) to indicate which investment to choose (Lavin et al., 2019). While do-it-yourself investing and Robinhood have drawn in investors and created media attention in 2020, this attention induces intensified trading by individual investors, often creating increased risk and subpar investment returns. Even the robo-advisor has seen considerable growth since 2015, with significant firms offering some type of robo-advisor platform within their investing channels (Todd & Seay, 2021). Some behavioral economists and practitioners worry that these tools and platforms are very susceptible to systematic error. These behavioral tendencies can often have too much influence on investors staying invested in the market in adverse economic conditions.

In the medical arena, heuristics and cognitive biases have been found in various different studies examining medical decision making. One heuristic medical meta study revealed that out of 213 peer-reviewed papers, 68% of them showed a heuristic indicator affecting a medical decision making (Blumenthal-Barby & Krieger, 2015). When examining expert physicians rendering care under high pressure situations, such as baby

delivery and cancer surgery, these physicians have also been shown to rely on these heuristics in making patient decisions. Singh (2021) investigated whether delivery physicians exhibited heuristic tendencies when deciding when to preform vaginal versus cesarean delivery. The results from 86,000 deliveries showed that the physician decisions were indeed influenced by individual heuristics. Singh suggested that this evidence may lead to suboptimal patient outcomes. In addition, research from Olenski et al. (2020) showed that when patients were admitted to the hospital needing coronary-artery bypass surgery, physicians often used a numerical left-digit bias or anchored their responses upon the age of 80. Olenski showed that patients over the age of 80 had more conservative treatments than patients under age 80. Surgeons were less likely to commit patient to surgery after age 80 rather than just before age 80. Olenski found no differences when measuring surgeon decisions for ages 77 through 79 or 81st through 83rd implying there was a anchoring bias. In a similar study, researchers found that patients arriving in the emergency department over the age of 40 were 10% more likely to be tested and 20% more likely to be diagnosed with ischemic heart disease than patients younger than 40 (Coussens, 2018). Many quick-risk decisions by these professionals and experts require intuitive thinking that can form from their experiences. To become an expert in any chosen field, the expert must have certain conditions creating a stable environment when developing and refining the expert's skills. If certain fields cannot mimic a certain condition, the expert status is diminished, and refining and achieving positive outcomes from heuristics may be obtainable (Kahneman, 2011). While some heuristics can lead to negative outcomes, studies have also indicated that a

vast number of heuristics in medical expert settings are essential for developing positive outcomes in emergency based situations (Blumenthal-Barby & Krieger, 2015).

The Affect Heuristic

The affect heuristic refers to the emotional state of individuals when making a particular decision under risk. Decision-making research expert Paul Slovic (2018) described the affect heuristic as the “faint whisper of emotion” (p. 8) or the specific emotional influence creating a negative or positive state of being when engaged in a decision. This emotional state influences or affects the decision and can heavily influence any associated decisions in the future. When categorizing risks, the affect heuristic boosts the perception of the risk in relation to its emotional root. For example, if people are asked what they fear most from either dying from a terrorist attack or dying from heart disease, the emotional reaction of fear of a terrorist attack is the much more common answer, even though according to the CDC (2020), heart disease is the leading cause of death killing more than 696,962 people a year in the United States versus terrorist attacks killing approximately 40 people in the United States and 29,389 worldwide in 2020 (Statista, 2020). Perceptions of terrorism can usually boost feelings of anxiety and fear rather than thinking logically about the question and relying on valid statistics. This reliance on emotions for guidance can often lead to irrational behavior.

When people rely on the affect heuristic, the emotional tie to the decision problem quickly engages the automatic systems prompting any image of the question to mind. This process is how people quickly depend on the associative mechanism for matching images and internal visualization to the risk being evaluated. This process performed by System 1 quickly checks for memories to form associative emotional response. If there is

a connective emotional response, it will be a primal base for the decision process, and if there is adequate time to make the decision, the thought and connection can be moved to System 2 to check for rationality. However, if the decision must be made quickly or if the information is not reviewed for accuracy, the emotional perceived risk will be the basis for the decision.

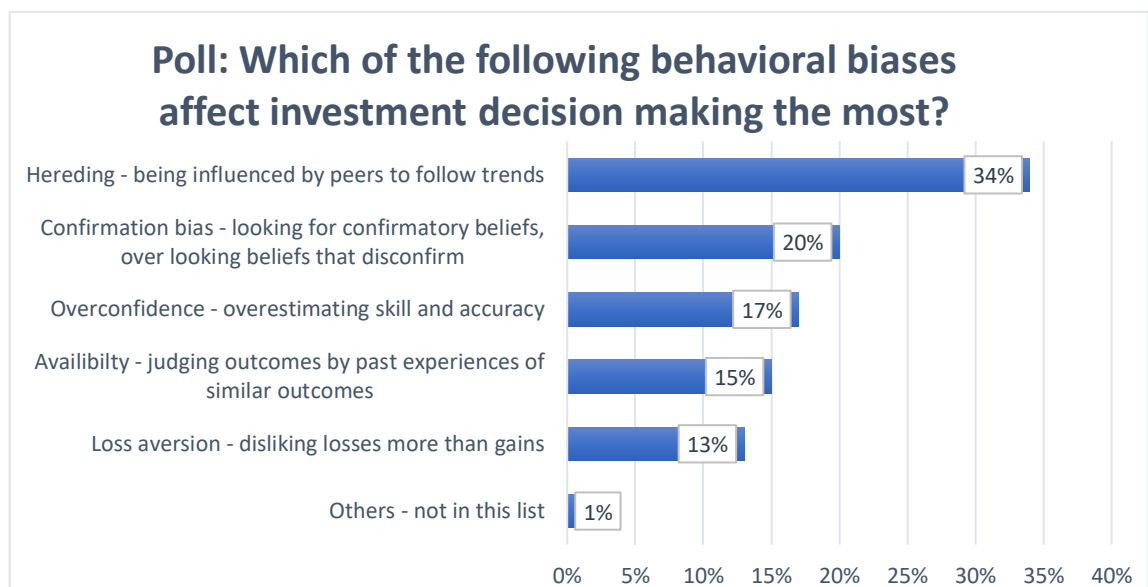
When investors consider different stocks to invest in, the affect heuristic can have a direct effect on their selection process and can attribute to inefficiencies in market prices. Akbas et al. (2015) revealed that socially desirable branded companies or fund companies having favorable characteristics in the product or service may actually have more informationally efficient movement in the markets. This suggests that socially desirable companies as opposed to sin stocks can have more activity from retail traders and have glamor affects that yield lower future returns. Equities without brand name or socially responsible characteristics may yield higher returns and have more institutional attention. Akbas et al. also found that mutual funds (MFs) tend to create more investor preferences and exhibit many of the same characteristics as their underlying socially desirable stocks, earning negative returns if in equilibrium. Similar findings from Riedl and Smeets (2017) showed that investors holding socially responsible funds tend to earn lower returns and pay higher fees for their socially responsible preferences. This indicates that investors emotional connections and social preferences have enough influence for them to forgo financial performance and suppress efficient rational behavior. This *faint emotional whisper* or ethical commitment can have a large influence and create an affect heuristic that is a guiding factor in their investment decision making.

Types of Investor Behavioral Bias

According to a 2015 CFA Institute survey of 724 investment professionals (see Figure 2), the top behavioral biases affecting client decision making were herding mentality, confirmation bias, overconfidence, availability, and loss aversion (Kunte, 2015). The findings were consistent with similar research that found herding and overconfidence to be the top biases that investors face when making investment decisions.

Figure 2

CFA Institute Survey



Note. From “The Herding Mentality: Behavioral Finance and Investor Biases,” by S. Kunte, 2015, August 6, Survey Results section, *Enterprising Investor* (<https://blogs.cfainstitute.org/investor/2015/08/06/the-herding-mentality-behavioral-finance-and-investor-biases/>).

Behavioral biases can be seen in investors of all skill levels, and susceptibility to these biases has not been found to subside with expert training within the investment field (Rzeszutek, 2016). According to Cerulli Associates, Charles Schwab Investment

Management, and Investment & Wealth Institute (2020a), 81% of advisors say they are currently using behavioral finance techniques with clients. Research has indicated that advisors are gaining more understanding of behavioral techniques and have been achieving better results in client implementation (CSIM, 2020b).

Although financial advisors are acquiring advanced knowledge in behavioral finance, many regulators and critics of the advisory industry argue that the actual behavior of advisors is compromised due to various conflicts of interest that exist in providing advice to clients. Many of the conflicts of interests advisors face are thought to be the result of a combination of advisor unaligned interests, regulation deficiencies, and inadequate education standards. However, could it be that many of these conflicts of interests and deficiencies exist as a part of the advisor's own personal behavioral bias? As discussed previously, many advisors continue to shift their practices from commissionable-based business to fee-based, fiduciary-based practices. While some advisors market and argue that this shift to a fee-based model aligns the advisors' interest with that of their clients, this shift could also bring more of the advisor's own personal characteristics when it comes to behavioral biases (Foerster et al., 2017).

While advisors try to mitigate risks for clients, they often have the role of a client behavioral bias suppression coach, which often happens when clients overreact to the current news headline of the day and irrationally leads them to want to sell out of their current portfolio. Advisors know that they can add value during these times by explaining and reminding clients of their investment objectives and financial goals. Advisors who remind their clients to hold their portfolio's positions when markets become volatile and engage in emotional and behavioral coaching often leads to better

client well-being and better client communication. When justifying advisory fees, some researchers assign a 40% incremental value to aspects of advisors engaging in behavioral and emotional coaching within the client relationships (Madamba et al., 2020). While this dialogue may indeed help investment relationships, it is not without some advisor personal bias, and certain biases can often be omitted in client recommendations. Most advisors are investors themselves and in order to suppress them they must also be aware of the cognitive bias in the first place. One Canadian analysis of more than 4,000 advisors revealed that advisors actually hold many of the same funds as their clients, and their actions were not intentional malice, rather, they tended to be overconfident and susceptible to their behavioral biases in providing advice (Foerster et al., 2021).

When clients choose an advisor, they often do so by choosing an advisor who has very similar beliefs about various areas of investor interest. Advisor's views must partially align with client's perceptions and not be too far removed from their client's own rationale and general outlook on life. This perception is generally formed from representative events and experiences that the clients have had in the past. These perceptions can be traced to associated discussions and introductions to new information from peers and media about what is an acceptable industry standard. Often referrals are made from a friend or family member who share certain views and opinions that are similar to each other and often construct a particular image of what advice should look like. R. N. James's (2012) neuroimaging indicates that during periods of stock market volatility resulting in underperformance, many investors tend to seek advice; this research also indicated that advisor personal connections were more important to clients than numerical performance.

Herdning

According to Keynes (1936), “Most, probably, of our decisions to do something positive, the full consequences of which will be drawn out over many days to come, can only be taken as a result of animal spirits” (p. 93). The term *animal spirits* has been cited and is thought of as the tendencies for humans to locate and align themselves to herdlike mentalities. Originally taken from Latin, *spiritus animals* was used to describe energy or spirit of an expectation that humans associate themselves with others in common actions (Clarke, 2016). Herding takes place when one follows the collective actions of others or when a person uses like-minded rationale to conform to the crowd. Various studies on past performance of MFs indicate, despite warnings that past performance is not a predictor of future results, investors in fact do rely on past performance for investment selection even though many of these funds fail to beat the market year after year (Bóta & Ormos, 2017). In addition, investors tend to use past performance as a guiding beacon in investment selection within their retirement funds. Filip’s (2021) study showed that historical investment performance had a significant impact on MF flows. Further research has indicated that retail investors continue to chase returns and do so rather quickly, usually within a few months of a fund’s superior performance. Rather than acting gradually or rationally, investors continue to display herdlike behavior even when they know they should not. Filip showed that even as the MF performance worsened, the sell discipline of retail investors was nonexistent after 2 or more years; this behavior also signaled that investors were adhering to the disposition effect as novice investors held on to losses way too long, and trend chasing did not help their long-term performance (Filip, 2021). Although individual investors show a lack of discipline in

bias suppression, research has shown that institutional and professional managers showed less bias behavior and more sophisticated asset allocation and investment selection. This professional bias suppression will not be captured in any of the advisor's return metrics, but is vital for sustainable long-term performance.

While all herding is not irrational and some believe that the collection of the group can lead to better outcomes, research has shown that better outcomes empirically suffer from mean reversion and herding is not the only behavior that increases bubbles as they apply to decision making and investing. Various studies have detected crowd and herdlike mentalities bringing certain avoidable risks to personal investment decisions (Litimi et al., 2016). Evidence of herding was found in the Dow Jones Industrial Average mortgage crisis, European and U.S. debt ceiling crisis, and the Chinese stock market crash of 2015 (Clements et al., 2017). Avoidable risks can have positive and negative effects to risk decisions, and as certain events happen in people's lives and certain market headlines sway investor sentiments, the emotional tendencies can bring irrationality, which can lead to negative investor outcomes. However, certain herding aspects are not all negative as Jegadeesh and Titman (1993) found in their investigation of buying stocks that have performed well in the past and selling stocks that have performed poorly, which was not a bad strategy in the short term. Their study examined and selected stocks for trailing 6 months returns and then held them for 6 months; the strategy realized an excess return of 12%. In the 3 to 12 months following a trade, the strategy was indeed profitable and not due to systemic risk although with a short-term strategy, researchers found abnormal returns dissipated after 2 years.

In recent years, stocks, such as AMC and GameStop, have demonstrated herding mentality and the irrationality of investor decisions. Meme stock traders riding the momentum of herd behavior have increased stock prices of highly shorted stocks. These stocks were shorted by large institutional hedge funds to take advantage of fundamental financial pressures facing the companies. Many meme stocks attracted younger inexperienced investors who follow social media sites, such as Reddit and YouTube, for investment advice (Aloosh et al., 2021). One U.S. survey revealed that one quarter of Americans declared purchasing at least one viral stock in January 2021 (Wolff-Mann, 2021). Regulators believe that this type of irrational behavior is causing destabilization in financial markets and can intensify asset-price volatility. When it comes to increasing bubbles at a particular asset sector level, herding again increased volatility and trading volume. Market returns and investor sentiments were found to have contributed to investor herding behaviors (Litimi et al., 2016).

Another recent herding phenomenon is the recent boom in cryptocurrency although there are estimates that over 6,000 different cryptocurrencies are in circulation; most of the current academic research has been focused on Bitcoin and Ethereum (Statista). Research has shown that traders often base buy and sell decisions off the directional path of major cryptocurrencies Bitcoin and Ethereum (Vidal-Tomás et al., 2019). From a behavioral perspective, the herding bias validation in cryptocurrencies has certain implication for asset pricing and modeling. Certain herding behavior was found in periods of extreme price movements, which exacerbated the risks as measured by volatility (Bouri et al., 2019). This presence was again replicated in other research, with similar findings showing cross-sectional correlations were stronger in bear markets as

compared with bull markets although levels were asymmetric among different cryptocurrencies (Kakinaka & Umeno, 2021). This has implications for regulators and financial professionals in assessing the risk and defining the risk profiles in holding or recommending cryptocurrencies. If herding exists, certain regulations in line with the promotion of a healthy market should be considered.

Many people know herding behaviors influence decision making, but are financial advisors subject to this type of behavioral bias? Conrad et al.'s (2006) study examined the recommendations of professional stock analysts, which showed that stock analysts were indeed subject to this type of bias. The study indicated that if a particular stock experienced a significant decline, analysts would likely downgrade the stock. If a stock moves higher, it is likely to initiate action in either direction, promptly issuing an upgrade or downgrade (Conrad et al., 2006). In addition, other studies have found that if significant moves in stock prices occur, analysts can have higher degrees of herding behaviors than when markets have less volatility. This irrational behavior can cause elevated investment risk within analyst recommendations, and analysts may be reluctant to have an opinion that differs from the private firm. Larger firms have been shown to react slower in issuing a recommendation than their independent research analyst counterparts. Investment banking analysts are reluctant to issue a downgrade on particular covered securities they cover (Barber et al., 2007). Barber et al. (2007) pointed to confirmation of findings from the Global Research and Settlement Act that this bias could be behavioral hindsight or herding bias. Recent research has indicated that no significant differences emerged in analyst recommendations after mergers and acquisitions activities or significant events occurred within a particular stock (Wu et al.,

2017). Buslepp et al.'s (2014) research pointed out that during the 1996–2003 time period, independent research was not found to be of quality compared to the 10 large investment banking research operations, and qualitative observations within their finding showed inconsistencies with the Global Research and Settlement Act methodology.

Investors often deploy funds in international stocks in the hope of diversifying risk and taking advantage of uncorrelated assets to smooth their portfolio volatility. However, studies show that cross-market herding reduces international diversification benefits (Economou et al., 2018). As global financial markets become highly integrated and dependent on international trade, cross-market herding has been linked to reactions to U.S. federal funds' rate and government policy strategy changes (Rahman & Ermawati, 2020). The international integration of markets around the globe have been compressed information to the palm of the investors hands, which is a result of continued technological advances in investment platforms and investor services that can amplify herding. When investors can hear or read the direction of the herd mentality, it confirms their financial decisions and their overconfident behaviors can become exacerbated. When examining financial professionals, herding is detected when stimulus or public information is given during a trading session. However professionals did not exhibit herding when stimulus was not introduced, and one interesting finding was that professionals exhibited contrarian tendencies when only trading on private information (Cipriani & Guarino, 2009).

Confirmation Bias

Confirmation bias is the tendency to associate and assimilate data that conforms to someone's shared beliefs and support one's own decisions. This bias overlooks facts

and various evidence that contradict one's own decisions. Those who rely on the confirmation bias selectively value irrational or easy to understand associative trends to confirm their own rationale and decision process (Park et al., 2013).

When investors seek out financial experts, they must first assess whether they understand and are willing to accept the expert's authority. This assessment is the confirmation of the expert delivering advice, and certain biases can confirm or reject the expert advice based upon irrational reasoning. This assessment often includes looks and the setting of the expert, and research has indicated that even face asymmetry can have a powerful role on people's perception of trust and confidence in another individual (Ariely, 2009). If the average investor is not financially sophisticated and cannot rely on analytical thinking or System 2 for choice selection, how can they trust financial experts if they have not developed a way to evaluate them? Zaleskiewicz and Gasiorowska's (2018) study suggested that people generally accept expert advice that conforms to their own opinions. They also found that when people's opinions were not salient, they tended to accept advice from experts who had conforming opinions to social norms, reflecting the expected behavior in society (Zaleskiewicz & Gasiorowska, 2018). Consistent with this confirmation bias, a study done by Ecken, P., & Pibernik, R. (2016) found that decision makers often ignore expert opinions even though they may be a beneficial source of information. Their study assessed more than 15,000 advice-taking decisions made by almost 1,000 experts from various industries and found that taking advice from experts was often ignored. Prior beliefs and confirmation of their individual opinions influenced decisions more than any other factor (Ecken & Pibernik, 2016). This information suggests that financial advisors who get too far from the conforming

investment opinions may result in client deflection. This means advisors must have a good understanding of client psychology and spend more time on developing client relationships so they can actually use the advisor's recommendations. If the advice that is not consistent with general opinion or too far from what the client can understand and associate with it would increase client defensiveness and create client biases that tend to be more prevalent and ultimately be harmful to the client relationship (Zaleskiewicz & Gasiorowska, 2018).

When financial advisors have clients with too much of their net worth invested in their own company stock, they could be taking on excessive risk. Client concentrated positions usually originate from the idea that investors allocate funds according to what is familiar to them. Many researchers believe that employee ownership of company stock carries excessive financial risk. Researchers have found that 15.3% of families in the private sector own employer stocks, and one sixth of these households' employer stock exceeded 15% of their total holdings (Kruse et al., 2021). Although this number has gone down substantially in the last 2 decades because of regulation and general awareness of companies like Enron, many companies still offer employee stock ownership plans and company stock purchase plans to employees. This type of single stock concentrated position risk can impose a great danger to clients' portfolio returns (Moisand, 2000). Some professionals and researchers believe that an 8%–15% position in a company stock may be acceptable if the rest of the portfolio is properly allocated and rebalanced; however, all too often these allocations are not reviewed for risk and are often subject to confirmation bias of their company stock (Kruse et al., 2021) although there are certainly dilemmas and tax considerations in holding on to low-basis, large single stock positions,

including step up in basis for older clients and preferential tax treatments for long-term dividends and capital gains. These benefits must be examined extremely carefully because studies have found that for many investors, they seem to underestimate or not factor in the risks associated with concentrated stock positions (Pfeiffer, 2016). Meulbroek (2005) found that employees investing 25% of their retirement plans in their company stock can sacrifice 42% of the stock market value because of loss in diversification. Often when investors allocate funds to their company stock, they are reaffirming and validating their decision to remain at their current job. This type of confirmation could be thought of as a natural tendency to protect and identify with a particular group or community. However, this validation and confirmation could come at a cost. Relying on what is familiar to investors to make their financial decisions may often lead to irrational decision making and could lead to suboptimal returns over time.

Investors are not the only ones subject to confirmation bias. In the health care industry, patients, nurses, and doctors have been empirically shown to have exhibited confirmation bias and status quo bias in rendering care to patients. In addition, nurses and doctors exhibiting advanced knowledge and epistemic authority have unique effects on patient decision making and the continued acceptance of doctor recommendations (Barnoy et al., 2011). Research has shown that when doctors and nurses are deliberate in providing patients with guidance and some type of recommendation, patients can perceive higher competence and authority in the doctor's recommendations. Patients perceive this health care professional as holding a higher degree of epistemic authority, which can have a positive outcome on patient acceptance of advice (Stasiuk et al., 2016). While doctor recommendations are what patients are ultimately seeking, this system of

thinking is problematic if tests and recommendations are not known upon intake or if patient care monetary costs do not warrant exploratory care. The patient's blind acceptance of any recommendation can lead to overconfident doctors and nurses who may give the patient unrealistic expectations. If the patient is anticipating a health care recommendation and does not receive one, the patient confirmation bias can lead to unintended costly doctor visits (Barnoy et al., 2011).

Confirmation bias can threaten patient care if not understood and acted upon by medical staff and authorities. This bias can lead to misunderstood labs, ordering procedures, and the labeling of specific reports. In one instance, a neurosurgeon requested a special dye to test the location of tubing to be threaded into the patient's skin. However, the pharmacy did not have that particular dye, and the hospital sent a different dye than what was requested. The administered dye had the same label, but unfortunately, it was titled *not for intrathecal use*. Weingart (2014) explained that the surgeon saw what they intended to see and administered the incorrect dye. The surgeon confirmed the label but did not think to read the particulars of the label because it looked the same as the prior label on the dye (Weingart, 2014). The doctor and team involved in this incident relied on routines and were affected by their confirmation bias in rendering patient care.

In the sports arena, confirmation bias is a driving factor that has been confirmed in the literature in various studies on sport betting and sports judging. When human judgments are needed in athletic judging, the scores that judges render omit their own confirmation bias. An examination of the Olympic games by Hilmer and Hilmer's (2021) research found that when events must be judged by humans, confirmation bias

was found in the results of the judged events. Their study of the past 20 years of Olympic games compared nonhuman timed, weighted, and measured events to that of human judged events. They found significant bias in the judged events as opposed to the nonhuman measured events. Although some of the bias could be a factor of how judges are selected by the International Sports Federations, committees and committee members did have a working knowledge of the event and its competitors, and most knew the competitors through prior or pre-Olympic competitions, which could influence the judge's decision either knowingly or unknowingly. This advanced knowledge of the competitors' previous performances could often involve confirmation bias when rendering Olympic decisions.

Confirmation bias can be good or bad; however, the tendency to act on irrational behavior can lead to unintended outcomes. Confirmation bias often can have unique applications to prediction markets, derivatives, and other complex products (Wolfers & Zitzewitz, 2004). This has been illustrated in sports betting and event betting as favorites or trends can often lead to decisions that have relevant aspects that affect probability. In spread gambles, such as in football or betting on an election, the bet is fixed at the point the bet is placed, and the odds and vigorish can change according to the odds setters' reacting to bettor imbalances. Changes occur based on input in odds setters' algorithms or those that set the lines. This is similar to horse racing pari-mutuel gambling in which odds are initially set by odds makers at the Morning Line and come out a few days before of a given horse race and later adjust according to the money wagered by betters in the pari-mutuel gambling pools. Often horses that are betting favorites can move the odds in an irrational direction, and line movements are a combination of herding and

confirmation bias of gamblers who react to emotional highs and lows of unconfirmed and confirmed events involving a particular race horse.

These types of biases are very influential in gambling. In Williams and Connolly's (2006) study, students were divided into two groups: one receiving statistical instruction on mathematical methods and one given no instruction. The data revealed that the students who were given the mathematical instruction were superior in calculating odds and in resisting bias behavior. However, this improvement in mathematical knowledge did not result in changing gambling behavior (Williams & Connolly, 2006). Without the behavioral bias suppression, the superior learning did not matter. This is another example of System 1 behaviors dominating human decisions and people being unable to be engage their System 2 thinking even when they had received the applicable training.

Overconfidence

Confidence is a known requisite in leadership and management that is essential for leaders, managers, and investors to overcome adversity (Joohee & Young, 2016). A lack of confidence can hinder success and slow down the decision thought process needed for critical risk decisions. However, when people are asked about their everyday tasks, such as driving, investing, and decision making, they tend to overstate their abilities (Ariely, 2009). Barber and Odean (2001) examined investor trading decisions and investment manager performance and found that most investors often exhibit a false sense of superiority. Studies have shown that the most overconfident investors are often most likely to hold the lowest levels of diversification and sophistication within their investment portfolios (Mihaylov et al., 2015). Overconfidence of investors in the stock

markets has been observed in most major stock markets around the world, and research has indicated that developing stock markets can often show even more overconfident behavior in investors than any other markets. When individual investors' trading history was examined in the Taiwan stock exchange, most of the trading losses were found to be linked to aggressive trading (Barber et al., 2009). These Taiwanese investors' returns had an annual lag in performance of 3.8%, and their losses were equivalent to 2.2% of Taiwan's GDP (Barber et al., 2009). Gupta et al.'s (2018) study that examined the trading and liquidity in the Chinese and Indian markets found investor behavior supported the overconfidence hypothesis, and the data revealed that even more accelerated overconfidence was found in periods of down markets. This overconfidence has been observed in individual investors, as well as professional money managers, and can yield imperfect and unwanted results. Puetz and Ruenzi (2011) examined overconfidence in equity MF managers and found that the frequency of trading rose after good past performance and this past performance did not have a significant effect on overall returns. This overconfident behavior was also confirmed after periods of accelerated positive momentum swings (Gupta et al., 2018). However, when managing assets and investments, the literature reveals that MF managers consistently underperform against their comparison index averages (Hobbs et al., 2021; Jin, 2015). While some academic and professional advisors argue that suboptimal fund performance is due to overconfident behavior, others believe that certain fund restraints, including fees, fund flows, and general marketing perception of the funds, could be to blame (Filip, 2021; Friesen & Sapp, 2007). Fama and French (2010) revealed that from 1984 to 2006, active MFs before expenses are consistent with the general market portfolio returns.

However, when management fees and expense ratios are added into the calculations, underperformance was the result. These findings show that it may be difficult to numerically point out the effect of overconfident behavior within investor returns. Overconfident behaviors are often difficult to determine, and for clients seeking experts to help them financially, hiring an unconfident advisor might not be as appealing.

The same overconfident behaviors found in individual investors have also been found in financial advisors. Suppressing overconfident behavior can create two interesting challenges. For advisors to understand that they are being overconfident, they must have the knowledge of the overconfident tendencies, and they must also be able to know how to suppress them. In a study done by Cordell et al. (2011), dual holders of the CFP and CFA were surveyed and compared against CFP-only holders on overconfident measures. Their results revealed that dual holders of the CFP and CFA were not as confident as CFP-only respondents. These participants were surveyed on aspects of their preparation for investment knowledge. According to the results, these dual holders of both CFP and CFA designations were attributed with a greater understanding of knowing they did not know. While financial advisors must exhibit some confidence in their abilities to attract and serve their clients, they also must beware of the weakness that lies in overconfident behavior. Investment industry professionals often rely upon their expertise to guide them in financial decisions. According to Bruza et al. (2011), operating with expertise means experts must make precise estimates whereas those with less expertise only make rounded judgements. This level of judgment distinction within investments could have significant effects on investment outcomes. Experts or those

with specific knowledge regarding any area or discipline requires definiteness of purpose, deliberate practice, and many hours in refining their skills.

Professionals in medicine, energy, education, and finance have developed their expertise in controlled regular environments. A professional's expertise cannot develop unless certain conditions are consistent so that controlled effort can be focused on and repeated under that condition. Experts have baselines for their decision-making skills, and they also understand what does not work in certain known conditions (Kahneman, 2011). Knowing they do not know something within their field or calculating risk of not knowing can often yield greater benefits than affirming what they do know. This reasoning can challenge people's thought process and aid in recognizing overconfident behavior. When investing in stocks or planning for retirement, there is not a regular controlled environment, and the variables are constantly moving with vast investor emotional swings. Experts in the investment fields might not receive the necessary feedback needed to assess their financial decisions with investor outcomes. While financial markets can be highly uncertain, there are certain consistencies in the equity market that can provide financial professionals with certain tools to mitigate risks, such as calculating correlation coefficients, understanding financial statements, suppressing bias, and aggregating portfolio diversification. These tools focus on the known consistencies of the markets, so investors have a better chance of staying invested in turbulent markets. Staying invested in the financial market during volatile or depressed markets is when many investors make mistakes because they let their emotions control their investment decisions.

When measuring investment management performance or any other expert performance, researchers have noted that practice does not make perfect, and practice only counts if it is deliberate, and achieving any level of superior mastery requires this intense focus (Ericsson, 2020). Ericson and Lehmann (1996) found that only through deliberate practice, refined focused effort, and approximately 10,000 hr of practice could a person's experience turn into exceptional performance. Some traders and investment managers will reference their tenure at a particular fund as a way of showing a superiority over other competing funds. This MF manager tenure has been found to be quite limited, and only a limited number of managers will actually manage the fund beyond 10 years because of intense competition (Jin, 2015). When investment and MF companies include tenure in marketing campaigns, it should be an alarm in overconfident bias tenure. One survivorship bias-free study covering MF manager performance over 80 years shows that there was no evidence of superior performance resulting from tenure of the manager of the fund. When examining for the relationship between tenure and fund performance, researchers found an inverse relationship because managers tended to have poorer performance the longer they managed the funds (Porter & Trifts, 2012). Research has indicated that investment managers consistently regress to the category mean, and stocks held widely by MFs do not actually outperform other stocks (Hsiu-Lang et al., 2000). However, over time, when managers do add excess returns for investors, they tend to exhibit more overconfident behavior, trade more aggressively, and underperform in their recommendations (Barber et al., 2007). Professional investment management should be employed to mitigate risks, explore relevant options, and understand the complexity of

products and services related to financial decisions. Researchers believe they should not be thought of as isolated return generators (Madamba et al., 2020).

Achieving exceptional performance with clients and meeting their expectations require financial advisors to have feedback on aggregate investment returns, net of tax, and a numerical value of representation on emotional and behavioral components of the client interaction. This is not an easy task, and as stated previously, investor overconfidence and other biases can sometimes lead to irrational behaviors that can be hard to assess over time. In investment and financial decisions, this difficulty results from many financial decisions of both investors and financial advisors having no immediate response to a particular course of action in the financial decision-making process. This means advisors rarely know the outcome to many of their client's recommendations because many of their recommendations may take 20 to 30 years to know the actual outcome. In addition, many of these recommendations are on large, infrequent financial transactions that may occur only a few times in a person's life. These large transactions, such as buying a house, planning for retirement, and selecting a medical insurance plan, are usually complex decisions requiring the help of an expert. However, these experts can have a difficult time developing expertise if the results of their efforts are generally unknown for many years.

In different employment disciplines, these influences or tendencies become a false manifestation of superiority, and overconfidence in investments leads to irrational decisions, which could create unintended consequences. When investors and investment managers are asked about their investment abilities, many will say they are good at their financial selections and tend to associate any gains in their portfolios with their skill

level. However, as a vast amount of the literature points out, investors, traders, and investment managers tend to trail market averages when their actual trading activity is examined over a certain amount of time (Barber & Odean, 2000).

In 2020, investors flooded the market into various promoted meme and social media stocks; investor overconfident behavior seem to fuel volatility (Lyocsa et al., 2021). In early 2020, a group of retail investors led a coordinated social media promotion of certain stocks, including GameStop, BlackBerry, and AMC, on Reddit's social media site. This coordinated effort by these investors was an attempt to *short squeeze* GameStop stock in the hope of having certain hedge funds covering their open short-sale positions (Bradley et al., 2021). Overconfident investors poured into these stocks and drove up volatility and volume. This overconfident behavior developed into herding and eventually created instability in the stock leading to a reversal from the stocks all-time highs.

The overconfident theory presents empirical evidence in the equity markets and shows that recent increases in returns are positively correlated with trading activity. In addition, a similar positive relationship was found in the options markets as well, even options traders seem to be bounded to the same overconfident bias as any other investor may struggle with (H. S. Chen & Sabherwal, 2019). When it comes to frequent trading, noise trading continues to defy rational thoughts on efficient markets, and only preliminary data show how noise traders actually are affected by positive or negative stimuli (Ramiah et al., 2015). Noise trading is the result of overconfidence and herding biases observed in deferent investor behavior producing abnormal results in certain securities. The noise is usual the result of news, reports, and mostly the social media that

investors and advisors are inundated with throughout the trading day. When consumers make financial decisions, they must rationalize through many probability problems, and it is easy to be influenced by the noise of the day. According to D. R. Lewis (2018), this tendency to be influenced by different sources is one of the reasons that seeking advice from experts seems very relevant for everyday investors.

There is an assumption that financial literacy can improve awareness of the overconfidence and behavioral bias in general, but as stated in the literature, financial literacy does not always relate to better financial behavior. Teaching investment concepts to test a student is one thing; however, teaching behaviors has proven to be extremely difficult. When investors are armed with a certain level of understanding of financial markets, they tend to have an overconfident judgment that can result in more errors arising from overconfident decision making (Verma, 2017). In research conducted by Lusardi and Mitchell (2007), wealth holdings from two cohorts of baby boomers found that higher levels of wealth were associated to retirement planning and financial literacy. This evidence indicates that when significant and deliberate attention is paid to financial planning, wealth increases in the aggregate, and greater client financial well-being can be achieved over time. Higher net worth between these planning clients versus non planning clients can also indicate that advice from an advisor extends far beyond the scope of investment returns alone (Lusardi & Mitchell, 2007).

The Disposition Effect

The disposition effect is the tendency for investors to sell assets that have increased in value and hold on to assets that have decreased in value. This tendency to sell winners and keep losers can have a dramatic effect on individual investor returns

over time (Kohsaka et al., 2017). Even when other components, such as mental accounting, regret aversion, and tax considerations are considered, investors have been found to still sell winners and keep losing positions and the tendency to avoid realizing losses is often a critical indicator of future investor behavior and action (Hersh & Meir, 1985). Investors or advisors who can suppress this tendency usually employ some type of trading or investment strategy, such as a stop loss order or assigning predetermined exit prices or some other automatically programmed action (Richards et al., 2017). The importance of when to get out and the implementation of sell disciplines is often more important than when to get into a stock position. Henderson (2012) added that the connection between prospect theory and the disposition effect can give clues on how to model for sells relative to break even. Henderson's examination findings do support the disposition effect and the understanding that investors generally realize gains when they are relatively small, and they only realize losses when they tend to be bigger or in many cases not even realized at all. To not realize losses at all increases the bias and increases lost opportunity risk by sitting on what is likely to be a depreciating asset. In addition, if investors fail to realize a loss, they also fail to capture tax harvesting opportunities leading to suboptimal after-tax returns. Research from Ravi and Ning (2006) showed that investors who have lower incomes and work in nonprofessional occupations have the highest disposition effect. Ravi and Ning also indicated that this disposition effect could be a result of tax implications. Selling stocks at losses and selling gains early could be associated with estate issues or tax implications of wealthier investors. When investors or clients need to bring down capital gains incurred during the year, many times they strategically do so by selling losing stock positions. This strategy often referred to as tax

harvesting offsetting gains with losses in the portfolios reduce tax implications. This strategy is often employed by wealthier clients and savvy individual investors to help bring down their tax implications in their nonqualified accounts. This type of planning takes considerable effort and monitoring of investor portfolios and can often get disregarded or altogether forgotten about, especially when investors are inundated with information and suffer from their own overconfident behaviors. Faced with these behavioral biases, investors can often be confused on what to do and when to do it because different portfolio scenarios and different tax implications exist at various times in their portfolios throughout the calendar year (Kahneman, 2011).

The rise of frequency trading has sparked concern in the investment community for many years, and day traders have added complexity to the investing environment. According to Barber and Odean (2000), when investors day trade more frequently, they have been found to lose money and suffer from suboptimal performance over various recorded time frames. Findings from Jordan and Diltz (2004) indicated that day traders have shown susceptibility toward the disposition bias. When they examined day traders' transactions from seven national securities firms, they found evidence of the trader's behavior consistent with disposition effect. These researchers also found that traders hold losing trades longer than they should, and they attributed this irrational behavior to the disposition's effect (Jordan & Diltz, 2004).

While the disposition effect has been consistent though many years of research, literature has indicated that there are times when the bias does have a weak form. When news about stocks is made public and the disposition effect moves in the same direction as might be intended by the event, investor underreaction can result in post event

predictability and can affect security prices slower than usual (Andrea, 2006). This delayed reaction by investors signals contradiction to the disposition effect's severity, and this behavior has also been seen in foreign investors who show higher loss aversion to stock pressure. Research has shown that when investors invest in foreign positions, they are prone to liquidate losing positions quicker than local investors. Foreign tendencies of investors to sell quickly coincides with the lack of knowledge and understanding of investing money abroad. This is because people are naturally afraid of the unknown (Talpsepp, 2011).

These same tendencies can also affect financial managers engaged in trading and recommending securities. These financial managers exhibit various levels of the disposition behaviors, but when testing for the disposition effect in MF managers, Ammann et al. (2012) found that while many of the fund managers did display this disposition behavior, they also found that the disposition effect only resulted in minor economic effect on overall performance. This was due to fund managers being bound to their strategies and prospectus objectives, and these predefined criteria must be upheld according to investment objectives so that investors know what they are getting into. In addition, MF managers also engage in smoothing capital gains and losses for investors, and as explained earlier, these predefined strategies can lead to bias mitigation. Different types of fund managers often have different types of objectives and performance goals set by peer and firm metrics, which can often influence buy-and-sell decisions, for example, in socially responsible funds, managers actually tend to realize losses rather than gains and certain funds by objective state they seek low turnover (Boumda et al., 2021). The

more financial advisors are aware of this tendency, the better they can deal with the disposition effect among clients and when engaging in client recommendations.

In contrast to stock investors, derivatives and options traders can have much shorter investment time horizons for their positions in securities. This short time horizon, trading costs, and suboptimal tax treatment of short-term gains have been known to be a drag on longer term returns. In a study done by Bergsma et al. (2020), derivative and options investors were also susceptible to the disposition effect, and their findings were consistent with existing literature on the disposition behavior. In addition to options, alternative investments, cryptocurrency, and real estate have also been subject to this behavior. In an examination of personal real estate transactions of professional asset managers, Ling et al. (2021) found that their effect on their fund performance revealed increased susceptibility to behavioral biases. When these professional hedge fund managers purchased their homes that were substantial in price, their hedge fund tended to have substantial peer underperformance in the subsequent 12-month period following the real estate transaction. The more the cost of the fund manager's home the more of an affect this had on fund performance. These differences showed a drag on fund performance between 6.48% and 19.92%. Ling et al. discussed that these distractions affected the transactions, and the emotional ties to the transaction could have been the result in fund underperformance. This type of result indicates that there is a correlated emotional connection involved in financial manager decision making and personal financial decisions.

Framing

Numerous studies have been done on the effects of framing in various applications and situations. The way that questions are framed or delivered can have critical effects and influence the way people rationalize and choose their decision.

Kahneman and Tversky's (1979) classic Asian disease problem involving a rare virus outbreak in a 600-person village gives a clear demonstration of the effect of framing:

Imagine that the US is preparing for the outbreak of an unusual Asian Disease which is expected to kill 600 people. Two alternative programs to combat the disease have been proposed. Assume that the exact scientific estimates of the consequence of the programs are as follows:

- If Program A is adopted, 200 people will be saved. (72%)
- If Program B is adopted, there is a 1/3 probability that 600 people will be saved and 2/3 probability that no people will be saved. (28%)

Which do You prefer?

Negative Frame:

- If Program C is adopted, 400 people will die. (22%)
- If Program D is adopted, there is a 1/3 probability that no one will die and a 2/3 probability that 600 people will die. (78%) (p. 453)

The Kahneman and Tversky (1979) problem results did demonstrate that when it comes to benefits, people will generally choose certainty and that when it comes to losses, people will generally take a chance to avoid losses. Today, as people around the world face COVID-19 mandates and political debates are held on how leaders should protect their people from the virus, studies indicate that the way leaders disseminate virus data

has an alarming effect on public opinion. In one Swedish study, researchers found that the way questions were worded about the pandemic actually influenced participant responses about the pandemic (Nilsson & Eriksson, 2020). However, a study including 88,181 participants from 47 countries revealed that when it comes to real world problems such as COVID-19, fear and anxiety did enhance risk avoidance and trust in government efforts with the coronavirus and lowered the effect of framing in respondents (Rachev et al., 2021). The Asian disease problem in the context of COVID-19 seemed to show emotional states of mind have notable effects to decisions tasks.

To be more risk adverse in a fictional context as opposed to the nonfictional context of the Kahneman and Tversky (1979) problem can affect the result of this problem in various scientific studies. Results from different frames of the problem tended to have various effects in different regions of the globe (Rachev et al., 2021). Although the classic Kahneman and Tversky (1979) Asian disease problem gives a clear look at framing effects on peoples' decision, researchers have shown that there is still debate of the actual degree of framing effects on judgements due to the way that the questions are constructed (Jullien, 2016). Some critics of the Asian disease problem indicate that the nonfictional context and the remote village scenario may yield different results than a real-life pandemic scenario.

From a neurobiological basis of the framing effect, researchers have given participants financial decision-making tasks under an fMRI scanner and confirmed Kahneman and Tversky's (1979) original study. Their data provided a neurobiological account of the framing effect by locating increased activation in the amygdala within participant scans (De Martino et al., 2006). The amygdala is the almond-shaped cluster

of nuclei located deep within the temporal lobe of the brain's cerebrum and is a core part of the neural system responsible for processing and engaging the flight-or-fight response. The researchers also found that orbital and medial prefrontal cortex engagement suppressed framing effects. This neurobiological confirmation helps bridge the scientific research literature to modern biological advancements creating validity and understanding to the field of behavioral economics.

Another classic example of framing from I. P. Levin (1987) demonstrated that peoples' decisions are indeed influenced by the way that their meat is labeled. I. P. Levin's study included labeling meat with "percent lean" versus "percent fat," and the results showed that people choose the 75% lean frame versus 25% fat frame. Even though these are statistically equivalent, people associated the 75% lean choice with higher quality and better tasting. In another study, List (2011) asked questions in a positive and negative frame and tested for the effects. List found that when he framed a phrase with a person's willingness to accept, that person was willing to pay more for a particular commodity, and when he framed the phrase with a person's willingness to pay, that person often did not have the same response for the same commodity. When the words *accept* was replaced with *pay*, even though the context was almost identical, the message heavily influenced the participants' decisions. Although there are many different attributions in forming a decision, many day-to-day decisions rely on relevant past experiences and quick rules of thumb to disposition the decisions. When people can quickly assess the magnitude of the choice problem, they can better compartmentalize the probable outcomes. The probability of these problems usually need some type of disposition, and if there seems to be insufficient data to conclude, these problems will

quickly get segmented into inaction. This inaction is a natural tendency for people to get stuck in the decision process. When people believe that a decision is too complex, they have the tendency to disengage thinking about it. This nonengagement forces people to rely on heuristics and to think of a similar decision outcome associating that problem to their current decision task (Kahneman, 2011).

When it comes to applying and utilizing different frames involving significant financial decisions, people tend to rely on System 1 as an easy method of rationalizing their decisions (Thaler & Sunstein, 2009). When people engage in complex problems and are in the process of making a significant financial decision, such as buying a car or house or planning for retirement, consumers tend to rely on readily available information that is given to salespeople, friends, or family. In today's information-abundant environment, most people will spend a considerable amount of time performing internet searches on what information will help them in their consuming endeavors. Although, in many respects, this can be beneficial to a novice consumer, the level of complexity in larger purchases may be too much for the average person to become concerned with. In the end, they tend to rely on System 1 and heuristic tendencies.

Larrick and Soll's (2008) research illustrated this behavior in their study on systematic consumer misperception in judgment in determining fuel efficiency. They argued that if one of the primary categories for buying a car was fuel efficiency, using miles per gallon (MPG) on the window sticker would provoke an irrational purchase decision. Their study gave participants the option of two frames: one under the MPG frame and one under the gallons per mile (GPM) frame. In the MPG frame, participants had the following two options: (a) buying a vehicle that got 19 MPG versus 15 MPG or

(b) buying a vehicle that got 44 MPG versus 34 MPG. In this frame, 75% of the respondents chose Option B. The math on fuel efficiency illustrated that Option A ultimately saved 14,035 gallons of gas for 100 cars versus Option B that saved only 6,684 gallons of gas. However, when Option B was introduced, and language was put in terms of GPM, 60% of participants then selected Option A. The difference in the way the question was framed or presented demonstrated that when MPG was replaced with GPM, participants seemed to choose the more rational choice. The MPG versus GPM resulted in different consumer perceptions and could ultimately affect financial decisions leading to various consumer car purchases (Larrick & Soll, 2008).

When it comes to investments, decision frames can have unique effects on investment choices. Framing can also have a unique effect on securities analysts when they use convincing and resonating messages with investors, and they tend to have better analyst rankings. Research has suggested that this is due to clever analysts who engage in framing and their target investment audience (S. Giorgi & Weber, 2015). Kumar and Lim's (2008) research in stock selecting showed that when investors pick and choose randomly for winning stock investment, they underperform those who have more clustered trades. Their research indicated that investors who execute more crowded trades are more likely to think in terms of a broad frame and think of trades holistically and thus hold less risky and better diversified portfolios and better risk-adjusted returns (Kumar & Lim, 2008). This broad frame decision making indicates that investors who think about an overall portfolio tend to have better investment allocations than those who base their reasoning on narrow frames or individual trades. J. R. Brown et al. (2016) showed that when it comes to claiming Social Security benefits in the United States,

decisions are strongly affected by framing, and when the decision to delay benefits is framed as a gain, respondents are more likely to delay. This finding could have significant effects in how financial advisors carry out their social security and retirement discussions.

Status Quo and the Default Bias

The status quo bias is a cognitive bias embedded in a decision that involves a person's tendency to keep things the same (Esselman, 2020). In classical economics, a decision would be centered with people seeking the maximum utility in a decision problem. However, in real-life decisions, the tendency for people to keep things the same can often lead to critical errors in the decision process (Samuelson & Zeckhauser, 1988). Understanding that people tend to not fully engage in any action requiring enhanced investigation and rational thinking has critical implications for choice architects and plan designers. Thaler and Sunstein (2009) explained that choice architects or plan designers must understand and take into account that many of their plan participants will exhibit inertia and rely on the default options. Effective plan design for medical, retirement, or any other plan requiring people to engage in making an actual decision can often result in the default option being selected. This means if choice architects want to have optimal plan engagement and design, they should spend considerable effort when initially setting up the default option. Various ways or default configurations can ultimately skew a plan or policy from the choice architects' original intent. The ethical risk involved in choice architects' understanding this bias means that they should engage in focused effort in default assignment (E. J. Johnson et al., 2012).

This cognitive bias suggests that when people are faced with engaging in a more complex decision process, they tend to rely on what is easy, and as explained by Kahneman and Tversky (1979), the easy answer is often the tendency for people to do nothing. Inertia, or inaction, is a choice, and typically inertia happens more frequently when plans are more complicated. In addition, when people do what is easy, they also tend to rely on what has been done before. To relate judgement problems to past experiences gives people some common ground or a reference point to help formulate and justify their answers. To rely on what has been done before is a type of rationalization that uses the associative memory system to break down probability or judgment of problems without the decision maker having adequate information. This it is often described in the traditional maxim “If it ain’t broke, don’t fix it.”

In the United States, many Americans invest in MFs for their retirement through employer-sponsored qualified plans, commonly known as 401(k)s. These plans allow participants to contribute a certain percentage of their pay to fund these tax-deferred retirement vehicles. Most programs require plan participants to select from a predetermined list of investment choices; many are MFs, index funds, and age- or risk-based asset allocation models. Generally, investment options within a retirement plan are available to all the participants in the plan, and they have the choice of selecting and moving within the different options throughout the year. There is usually a vast amount of literature, descriptions, and prospectuses to read though if plan participants choose to do so, and those who do engage in this practice have generally relied on past returns. Research has shown that when investors face difficult decisions, they tend to rely on options that are familiar to them, which means that investors tend to rely on easy-to-

understand information such as past returns or dividing their allocation equally over the choices. Thaler and Sunstein (2009) described this type of allocation as the 1/N heuristic or the tendency to allocate investments equally over all of the investment choices available. Plan participants relying on easy information often means that they rely on doing nothing, which results in plan participants ending up in the plan default option. In a study done by Shin et al. (2019), participants of a retirement plan were shown to maintain the status quo, and the effects of narrow framing effected their retirement savings decisions.

Kempf and Ruenzi (2006) found strong evidence of status quo bias among market participants. They found that when investors have more investment alternatives to choose from, they exhibit more status quo bias and tend to keep investment choices the same. When that number of other options is above 100, the data show the status quo bias is three times as large as if there were only 25 alternatives (Kempf & Ruenzi, 2006). Their research is consistent with Samuelson and Zeckhauser's (1988) findings on the status quo bias in retirement and health plan selections. According to a Teachers Insurance and Annuity Association (TIAA) survey, when tasked with developing an asset allocation for initial investment selection, one in four participants said they would just guess, and half of all participants selected 50% TIAA and 50% College Retirement Equities Fund (CREF), which split their contributions between the two choices. When participants of a retirement plan were allowed to change their initial allocation once a year, 28% never did, and only 8% reported changing more than once in 5 years. When the length of participation increased to 12 years, only 2.5% of participants changed their initial investment selection (Samuelson & Zeckhauser, 1988). When individuals choose

MF investments, they relied on the status quo or MFs they had invested in before.

Additional research has shown that even if initial investment showed that investors spent little time employing diversification when it came time for monitoring, modifying, or changing investment selections, many plans failed to shift any investment selection from what was initially selected.

Default bias is when people are presented with a preset course of action; most tend to accept or rely on the default option. This means that when people are tasked with making difficult or engaging financial decisions, they have been found to use the easiest option. In Shin et al.'s (2019) study, 4,689 employees participated in a survey, and one third engaged in retirement savings questions. The study found 88% of those participating in the plan relied on the default option. The default was set at a contribution rate of 5% of participant wages, which was matched by the employer by 10%. They also found that only 12% of employees contributed more than the default rate. These researchers argued that this current savings rate is far below the required amount needed to meet adequate future retirement needs (Shin et al., 2019). However, automatic escalation and savings elections have become common among today's defined contribution (DC) plans. Today's savings and participation rates have shown dramatic increases for participant plans, and many believe more work in the financial savings and investment arena can lead to large benefits to America's investing public (Thaler, 2015). These small changes or nudges have also led governments around the world to reconsider how information is disseminated and has prompted the establishment of various government teams to be focused on behavioral strategies to aid government initiatives (Daniels & Zlatev, 2019).

In Cronqvist et al.'s (2018) study, the Swedish government in 2000 gave its participants of its social security system the right to choose their retirement plan mutual fund selections from 456 leading MFs, one of which was a diversified default election. At first the Swedish government ran a campaign to get participants to select their funds and 66% did exactly that, but as time progressed and the campaign was over, that initial interest declined. After 3 years, only 9.4% of participants selected their own funds, and in 2016, that number was less than 1%. At the same time this Swedish active participation declined, the number of funds rose from 456 to almost 900, demonstrating as complexity rises so does inertia. Even among the initial do-it-yourselfers who actually chose their funds, 16 years later the median number of trades they performed was only one change (Cronqvist et al., 2018).

Inertia may call on choice architects to spend some considerable time in deciding and selecting a default election for their plan and their participants. While the goal should benefit the majority of participants and limit the effects to the minority, particular attention should be paid on what those goals actually are and for whom do they actually benefit (Thaler & Sunstein, 2003). Implementing a default option can also have significant increases in initial plan participant enrollment. Researchers have also noted that the effects of the default election's longer term may be less effective (Beshears & Kosowsky, 2020). Participant plan accumulations may not have as significant effects to overall participant balance improvement over time. The default automatic enrollment process does increase plan participation, but this may come at a liability increase. This reasoning is in line with the status quo bias because people generally tend to behave as

they always have and are at times reliant on past judgments. This tendency to rely on default options is the simple inertia of human choice.

Inertia can be financially problematic for investors, and the status quo can ultimately cost investors thousands of dollars in future retirement savings. What is more perplexing is although inertia can be demonstrated in preretirement age savers, it can also cost savers immediately. In a study by J. C. James et al. (2011), 401(k) plan participants who were over the age of 59.5 were found to be contributing less than the amount needed to get their employer match. This means that even though plan participants over the age of 59.5 were able to contribute and immediately withdraw their funds, they still failed to contribute to their 401(k) and receive the employer contribution. This employer contribution would have cost the employees virtually nothing, and they would have received the free money from their employer.

Anchoring Bias

Anchoring bias is a cognitive bias occurring when people rely on a particular experience or past piece of information that heavily influences their future decisions. When making decisions, people often interpret new information from a common reference point, or anchor, instead of looking at new information objectively. When decision making has substantial costs involved and empirical research is limited, many will seek expert guidance to help them determine a course of action. These experts can provide great insight and deliver more precise estimates than those outside the industry, but they can also be overconfident in their estimates by setting unrealistic expectations. Research has shown that one of the reasons experts show more superiority than nonexperts is because nonexperts have the tendency to anchor and round their decisions

to known number ranges (Bruza et al., 2011). Kahneman and Tversky (1979) gave mathematical equations to high school students and told them to estimate answers for a particular set of numbers within 5 s ($8 \times 7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1$ and $1 \times 2 \times 3 \times 4 \times 5 \times 6 \times 7 \times 8$). Even though the mathematical equations came to the same answer of 40,320, the student's median guess for the equation $8 \times 7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1$ was 2,250, and the student's median guess was 512 with a smaller number equation.

An example of the power of the anchoring effect in financial decisions is the tendency for people to associate the number 62 with retirement. In the United States, research has indicated that when people think of an age to retire, they tend to think of two ages: 62 and 65 (Knoll, 2011). These ages were found to be in no part random. In C. C. Brown's (2006) health and retirement study, the most frequently reported retirement ages were 62 and 65. The study revealed that only 13% of participants choose any other ages. Influenced by this reference point, premature savings decisions become affected by this age anchor. A key factor to these age preferences is that in America, 62 is the earliest age a person can take Social Security, and 65 is the earliest age a person can apply for Medicare benefits. Because many employers in the United States now do not cover medical for retirees, most American workers are dependent on Medicare. Medicare is the largest social program in the world, and most people associate age 65 with retirement even though this age might not fit their particular life need (Chandra & Garthwaite, 2019).

One negative implication to this anchor is that by using 62 as guide for retiring, many retirees could acquire Social Security benefits prematurely, which could ultimately create suboptimal retirement income. In addition, some researchers believe that the idea

of the government running out of funds for Social Security benefits may frame and create a powerful anchor in the mind of future recipients. This could give future recipients the incorrect message that if they do not take their Social Security benefits early that it might be gone (R. W. Johnson, 2018). Most Social Security income recipients do not engage in any type of retirement planning or formal calculations in considering their Social Security income options. In the United States, the Social Security Act was signed into law on August 14, 1935, and was born out of the Franklin D. Roosevelt era. This plan was designed as a supplement to retirement for retirees and to help with income shortfalls of disadvantaged Americans. According to the Social Security Administration (2022), to receive benefits, a person needs at least 40 credits or 10 years of employment. The full retirement benefit is based on a participant's full retirement age (FRA), which is 67 for everyone born after 1960 (as shown in Table 1). Even though most retirees considering retirement now must wait until age 67 for their FRA, most have a common sticky anchor at age 65 when determining their retirement (Deshpande et al., 2020). If workers take retirement benefits early, they are subject to a reduction in their benefits. This reduction, assuming an FRA of 66 and 10 months, would reduce benefits 29.2%. This reduction is substantial especially for lower income earners who might solely rely upon this benefit. In the United States, one third of all eligible Social Security benefits are taken at age 62 (Fitzpatrick & Moore, 2018). However, researchers also have noted that without Social Security benefits, 39.2% of elderly Americans would have incomes below the poverty line (Romig, 2022).

Table 1*Age to Receive Full Social Security Benefits*

Year of birth	FRA
1943–1954	66
1955	66 and 2 months
1956	66 and 4 months
1957	66 and 6 months
1958	66 and 8 months
1959	66 and 10 months
1960 and later	67

Note. The Social Security Administration also refers to FRA as NRA. From *When to Start Receiving Retirement Benefits*, by Social Security Administration, 2022, p. 3 (<https://www.ssa.gov/pubs/EN-05-10147.pdf>). FRA = full retirement age; NRA = normal retirement age.

Another retirement pitfall to the Age 62 anchor is the age gap between Social Security benefits and retirees eligible for Medicare. According to the Social Security Administration, most Americans are eligible and will receive Medicare at age 65. According to P. Allen (2019), the average government payment to SSI is \$1,348.49, but a typical subsidized health care plan can cost \$4,053 to \$6,625 per year. This 62 to 65 age gap can create a substantial financial risk. This does not consider state exchanges and programs that could subsidize coverages for lower income workers. Various coverages and state programs can be set according to the federal poverty levels and could potentially help workers find affordable care (Lore et al., 2012). However, research has shown that when people choose medical plans, they often do a poor job. Most participants rely on heuristics in the decision process and do not have the adequate knowledge to select the most economic medical plan for their life situation (Bhargava et al., 2017).

This cognitive anchoring bias shows that when people make quick financial decisions, they often anchor their estimates to familiar, past events and associative patterns. In behavioral finance, many investors and advisors have been shown to skew their investment decisions toward certain benchmarks and historical data. Although historical data are at the core standard deviations calculation, many investors rely on only recent past performance to make an investment decision. They also tend to anchor their prospects of future returns to a relatively small set of historical data points. This is consistent within the behavioral finance literature in developed countries as well as developing countries (Khan et al., 2017). When investors rely on only the latest performance for their investment decision rationale, they can often have unintended investment performance. Short-term, past performance can be a poor indicator of long-term trends, and the tendency to rely on short-term performance can lead to availability and anchoring bias errors.

Investors have commonly relied on momentum and past returns for investment selection. When investors do spend time examining their investment choices and MF characteristics, they do tend to have better asset allocation and reduce performance bias (Husser & Wirth, 2013). However, the perceived risk developed from these individual investment characteristics can change frequently. Many investors are influenced by their current attitudes and moods, and these current behaviors can have tremendous effects on investment allocation and results. The more the investors' emotions interfere with their choices the more they can be susceptible to anchoring and performance bias (Kozup et al., 2008).

This type of bias has also been documented in the medical field with physicians and staff involved in patient care. One example was a 69-year-old patient who arrived in the ER with shortness of breath, cough, and dyspnea on exertion. Upon examination at an urgent care a day earlier, the patient complained and presented the same conditions and was diagnosed with bronchitis and sent home. When the patient's symptoms worsened, the patient returned to the ER the next day, and physicians at the ER ordered a point-of-care ultrasound to check the lungs and heart and found an acute pulmonary embolism (J. Allen et al., 2020). Because physicians are trained to evaluate and treat according to symptoms, obtaining supplemental information and adjusting care often can be overlooked, and reliance on heuristics and anchoring bias can have unintended patient outcomes.

Anchoring bias has also been associated with courtroom decisions, and attorney requests often appear way out of line with other awards or sentences in similar cases. Enough and Mussweiler (2001) found that judges' sentencing decisions influenced the prosecutor's demands. The more the prosecutors pushed for higher sentences the stronger the anchoring effect was observed. In the courtroom, attorneys often demand a certain sentence length for the accused or a certain sum of money for a plaintiff, anchoring numerical amounts to serve as reference point for setting the stage for jurors and judges. These demands are often initially set as excessive numbers used to anchor courtroom decisions in a particular direction (Chapman & Bornstein, 1996). When attorneys engage in this practice, they are trying to set an anchor or certain reference point so that judges and juries can compromise from that original anchor; often these anchors can have a tremendous effect on courtroom judgments.

The Compromise Effect

The compromise effect is a phenomenon that arises when decision makers settle on a middle ground or intermediate center option within a given choice set. When individuals are faced with a particular decision problem, and they must choose between similar options, research indicates that many will tend to compromise with either three or more particular set of options (Camerer et al., 2003; Simonson, 1989). When decision makers need to choose between two equally valued options that may have differences in perceived quality or superior features, they tend to prefer the superior option; however, when a third option is introduced to a particular choice problem, their decision tends to be effected by the third option, causing them to move their selection to the middle option (Simonson, 1989). An explanation of this effect by Huber et al. (1982) showed that when a decision maker must choose between two similar brand options, Brand A and Brand B, the introduction of a third option, Brand C, can increase the attractiveness of the middle selection, Brand B option. Although different attributes, such as price, features, and perception, may also effect the asymmetric distribution and rationality of the selection process, when the variables are held constant, this middle tendency has been observed and validated in various studies (Huber et al., 1982). Similar to the anchoring effect, the introduction of certain options during the decision process can have a direct effect on decision-maker perception; within a group of options certain alternative selections may have more weight in the decision process and decision makers may be influenced with the introduction of additional options. When decision makers are faced with two similar options and a third option is introduced, they have employed this tie-breaking strategy or heuristic behavior. This shortcut in the decision process can give the decision maker

comfort and ease by choosing the middle option. When the options are closer within a selection set, decision makers tend to choose the middle option and compromise. This behavior shows that people are more prone to pick the middle option, even if this choice is not rational (Beauchamp et al., 2020).

The compromise effect can also have large unintended consequences in the risk determination arena. Because investors, executives, and managers must engage in risk-seeking actions to accelerate growth, they also are tasked at keeping their principal intact and keeping their current positions within a given company or organization. When investors and business decision makers must make choices that have large economic consequences, their rationality can give way to the intermediate choice set and the compromise effect (de Clippel & Eliaz, 2012). Business decision makers under pressure from investors and stakeholders must weigh the economic impact of their decisions against the risk of getting fired. When this happens, good decision makers rely on top opinion from opposite ends of the decision question; however, many faced with these judgement problems often compromise between the two selections. This also applies to investors and financial advisors who must face the possibility of a gain or loss when making investment decisions. While compromising may mitigate risk, financial advisors often seek a compromise in risk determination to gain client acceptance. This advisor action not only could lead to optimal client returns but also could skew the actual client-risk tolerance scores leading to suboptimal returns over time.

Camerer et al. (2003) pointed out that asymmetric paternalism should be employed to aid rational investors from making costly mistakes. Advisors and individual investors must understand the consequences of risk determination. Risk determination is

often associated with understanding an investor's asset, income, experience, and financial education levels. Once this information is gathered, advisors can articulate the risks of different diversified portfolios and help identify a suitable portfolio that aligns to the client's profile and risk perception. While gathering client profile is strait forward, the client-risk perception can be harder to ascertain and understand. Therefore, advisors must employ suggestions and communicate what other investors have done in similar situations. When determining client risk, the power of suggested group validation has been found to be a contributor toward identifiable individual actions. J. T. Edwards and List's (2014) research in charitable giving showed that increases in donor contribution rose when a specific amount was suggested. They also showed that suggesting what others have contributed affected giving rates (J. T. Edwards & List, 2014).

Availability Bias

The availability bias is a decision-makers tendency to rely upon readily available information. This tendency to rely on readily available information rather than engaging in rational discovery can lead to cognitive errors when making decisions. This information is extracted from associative memory and is formed from recent experiences and events that can have a significant effect on decision-maker outcomes. For example, Bhargava et al. (2017) examined choices of medical coverage for 23,894 employees at a large U.S.-based company. The researchers found that even when employees were given the choice to create their own insurance plans according to deductible, copayment, coinsurance, and out-of-pocket maximums, participants still made financially inefficient plan selections. Their estimates showed participant selections cost them an extra \$372 per year, or 24%, by switching to an equivalent higher deductible plan. They also found

that 65% of participants failed to correctly answer questions on plan comparisons, and 49% failed at plan cost estimations. The baseline selections or dominate choices indicated that many participants relied on lower plan deductibles, even when it was not economically justified. When determining their selections, participants tended to rely on the limited information available to them and not engage in any actual calculations for their decision process. Another example of availability effect was found in an examination of Morningstar sustainability rating and MF flows. Ammann et al. (2019) found convincing evidence that retail investors shifted money away from lower rated funds into highly rated funds during the 1st year of the rating publication. Although the move to a highly rated fund may seem to be logical, studies have shown that most investors do not move their investments after initial selection (Cronqvist et al., 2018).

For investors, availability can have a unique effect on investment and retirement decisions. For example, when investing in a 401(k) plan, many plan participants rely on whatever information is readily available to them upon plan participant inception. Their decision typically relies on heuristics in their fund selection, which means that many investors will see a list of fund returns and choose to allocate their funds based upon the current historical returns listed on the website or accompanying literature. When participants are browsing through available options, they tend to choose funds that have performed well in the current reportable periods. This may be a good thing if the fund is a well-diversified, low-cost fund that matches the participant's risk tolerance, but most often it is not.

When investigating retirement plan savings, Agnew (2002) measured a 401(k) plan with 73,000 plan participants and found that many investors put a significant amount

in their investment allocation to company stock. The overall allocation to their company stock in this plan was 49%, and the company stock had a 20.6% annual 10-year return versus an S&P 500's annual return of 14.7% during the same period. This was significantly higher than allocation of company stock in other plans, and it was a quite concerning finding due to single stock risks. Participants in the plan relying on available information showed a clear indication of a company past performance bias and a tendency to believe that the company will keep having the same performance in future years. This also indicates that investors would rather invest in the company they know and work for rather than the more rational decision to invest in a well-diversified S&P 500 option. Benartzi (2001) noted that participants have been found to have higher allocation to their company stock when trailing performance is higher. This is problematic, since single stock risk in company stock empirically leads to under diversification and higher risks. Benartzi found that stocks that performed well in the last 10 years had a 39.7% allocation toward company stock while the firms that performed poorly had only a 10.37% allocation. This has been verified in a study on 401(k) participation. According to the Survey of Consumer Finances administered by the U.S. Federal Reserve, when investors experience downturns in the markets, they often reduce risk by reducing financial assets from their portfolio holdings (Bricker et al., 2012). Bricker et al.'s (2012) research indicated that when investors experience negative events in the market, they often tend to follow up with reaction that is based on that available event.

The availability bias takes on various forms in investment decision making and can dramatically affect long-term investment performance. Many investors in the United

States and other developing countries show a tendency to make choices affected by herding and the availability of information and past performance as a leading influence on investment decisions. In investments, a related version of the availability bias exists in the home country bias—this is where people from a particular region or country choose to invest in their home country. Although this could be beneficial in limited circumstances, from a diversification standpoint, this rationale in the selection process is often flawed. In a Swedish example, investors were tasked with selecting their own MFs for retirement, and many selected the funds with the greatest past returns and familiar Swedish names. These Swedish MF names were representative of the investors' home country and invested primarily in their home country stocks. This Swedish study also showed that even the diversified global stock default election contained 17% in Swedish stocks. By primarily investing in their home country, they inadvertently under diversified because Sweden represented only 2% of the world stock market capitalization (Cronqvist et al., 2018). In an Austrian study, dividend imputation credit significantly impacted retirement savers' allocation toward Austrian dividend paying stocks. This dividend imputation credit gave taxpayers certain dividend tax credits that were called franking credits, which could potentially reduce the taxpayers' taxes (Butt et al., 2019). However, while these credits gave investors financial incentives to use dividend paying stocks in their portfolios, the available information could create investor bias in certain securities.

In the health care arena, recent experiences with clinical evaluations and clinical challenges can induce the availability bias in doctor–patient interactions. In Mamede et al.'s (2010) study examining resident doctors, 2nd-year doctors were found to make errors consistent with the availability bias. These resident physicians attributed

frequency of a diagnosis with actual clinical evaluation. This premature reasoning led to flaws in the evaluation process. Subsequent application of analytic reasoning was shown to reduce these cognitive errors (Mamede et al., 2010). Recalling past experiences is essential for physicians to estimate and triage patients when in an emergency setting; however, when the availability bias creates its own trend in treatment and care, the definitive line for when this is employed can often be hard to determine. In a study by Poses and Anthony (1991), the effects of the availability heuristic on physician judgment of the probability of bacteremia showed that physicians significantly overestimated the likelihood of the occurrence.

Representativeness

The representative heuristic is a typical human understanding that objects will have a certain connective probability and a specific cognitive shortcut to say that “A” represents “B.” It is the basic human assumption that one thing is related to another (Tversky & Kahneman, 1974). This is commonly understood as a specific stereotype or association that a certain known probability is associated with and an object or occurrence. As people engage in their thought process, they often rely on the representativeness heuristic; this is when the associative, pattern-seeking tendency of System 1 links certain things together and helps form quick conclusions. These conclusions are created through quick probability calculations that the human brain performs based on associative life experiences. To illustrate this, people often identify the color red as representative of danger or caution; think of a stop sign or red on an exit sign. This is because for thousands of years human experiences with the color red have usually been associated with danger, either the danger of losing blood or the danger of

fire or extreme heat. For example, if people see red on the floor, they tend to think of danger because that red could be blood, and the thought of losing blood heightens awareness. It arms the human body by sending specific doses of adrenaline and dopamine to prepare for a future event. The fear mobilizes the automatic mechanism for survival and engages System 1 thinking in probability questions and calculations used for decision making.

The representativeness heuristic is essential for human decision making; however, the tendency to rely on these heuristics entirely can cause critical systematic errors (Tversky & Kahneman, 1974). Investors who have had recent exceptional stock performance generally consider recent performance as an indicator of future returns. Research has indicated that when individual stock positions go higher in personal portfolios, investors tend to sell stocks with gains and not sell stocks that have performed poorly; evidence of this disposition effect have been recorded in U.S. investors as well as emerging economies investors (G. Chen et al., 2007). In addition, when investors select MFs for their retirement accounts, they often use past performance as the leading factor in selecting funds. Holden et al.'s (2015) study found many MF investors invest in MFs primarily through their retirement accounts, and these same investors use past performance as their primary tool in selecting their investments. Even though past performance mandatory disclosures are on client prospectuses, statements, and websites, the disclosure "past performance is not a guarantee of future results" does not actually influence investors' decisions. The research has shown that past performance is still the most influential factor shaping the investors' opinion and guiding their fund selection (Holden et al., 2018).

The tendency to associate bad performance to MFs is widespread in the literature, and selection of MFs has generated many questions of irrationality among investors (Jin, 2015). In addition, when investors face complex decisions regarding their retirement plan selection, a representative heuristic shows the tendency for investors to choose names of funds that are familiar when selecting their investments. While MFs have shown underperformance in the literature, many investors still utilize them extensively (Malkiel, 1995).

In Krawczyk and Rachubik's (2019) study, random people were asked whether they wanted their lottery ticket to be a random sequence of numbers or a pattern sequence; most chose the random sequence because it was random. However, there was no statistical difference to justify their selection. The results demonstrated the participants associative bias. People tend to associate random lotteries with randomness in numbers. This indicates that people often have a good chance of associating a particular action or event with their interpretation of related facts and patterns. Isolated this might not reveal any major disruptions in the thought process, but implications from association thought patterns and understanding the finding of this study reveal that people could depend on past returns for their financial future outcomes. The idea of depending on past performance should not be used to determine investment choices, but people often rely on past returns for future investment decisions. Husser and Wirth (2013) revealed that past performance does indicate how people select funds in their retirement choices and that disclaimers and warnings that past performance does not guarantee future results are ineffective.

Bias in Responsible Investing

In a paper by Fisher and Malde (2011), bankers and financial managers were investigated and found to have failed to understand the risks associated in complex financial products or asset backed securities. Fisher and Malde proposed that heuristics or cognitive adaptive toolboxes were primarily responsible for the irrationality in financial decisions making. When 2008–2009 financial crisis occurred, certain heuristics were thought to be replaced by new understandings and new mental tools, depending on the complexity level. Fisher and Malde reasoned that when complex issues arise, a new set of heuristics play a role in determining action. When developing possible explanations for the failure of triggering moral imagination to the crisis problems, people naturally use default heuristics in developing new rationale in facing new challenges, and soon after the crisis is gone, they returned to the normal way of doing things. This engages System 1 or shortcut thinking and it creates moral barricades that can create unpredictable behavior. The more human rationality is correlated to predictable behavior the stronger and more severe a particular bias can be ingrained in the mind. This type of reliance on any precrisis heuristics impedes learning and was identified by examining responses of bankers who actually reported being sorry for their actions (Fisher & Malde, 2011).

In addition to complex challenges, behavioral biases and heuristics used in making a decision have also been demonstrated in influencing ecological and social choices. Consistent with prospect theory, feelings of guilt about negative choices on the environment can often influence a decision. Choice makers are often influenced by certain associations and relative social acceptance, creating certain mental shortcuts in

forming decisions that could be perceived as negative ecological decisions. When forming these views on ecological behavior or social responsibility, pictures of oil spills, deforestation, and waste facilities can produce a mental shortcut in people based upon this depiction, which can create a false perception of reality. Vanguard, a leading U.S. asset manager, has a lineup of socially responsible funds, which is a passive exchange traded fund (ETF) that excludes companies, such as adult entertainment, tobacco weapons fossil fuels, gambling, and nuclear power. Included in the holding of the fund as of August 31, 2021, is technology weighting at 32% of the fund assets, including companies such as Apple, Microsoft, Google, Amazon, Facebook, and Telsa. The fund has assets of \$5.3 billion, and top 10 assets are 28.8% of the fund. At a glance, this socially responsible ETF seems like a quick reliable choice for anyone considering an ESG fund. However, the real question is how people interpret social responsibility; people could also consider the impact of the production of the information and communication technology (ICT) industry. Research from Belkhir and Elmeligi (2018) showed that if left unchecked, the ICT sector alone could contribute to more than half of the current relative carbon footprint contribution of the whole transportation sector by 2040. In addition, research from (Xiucheng et al., 2021) indicated that despite efforts to slow emissions from global carbon emissions from the ICT sector, it continued to grow and acceleration in countries such as India and China where many of the communication device manufacturing process takes place. Excluding this fact, the overlap could be problematic in diversifying because these holdings already exist in many passive broad-based U.S. index funds and ETFs. Using socially responsible frames for these products could result in investors developing powerful socially responsible biases. This perception

could manifest itself into what is socially accepted, and these decisions may not be backed up by valid reasoning.

Summary

While the current empirical literature in the field of behavioral finance focuses on understanding whether biases exist and the degree in which those biases influence decisions, expert decision makers must understand how these studies can aid in their own decision process. These empirical investigations set a foundational understanding of expert decision making and aid in developing new strategies on how to mitigate cognitive errors and negative outcomes. By qualitatively investigating and relating current literature to the decision process of practicing financial advisors, new understanding can foster discussion on behavioral values and strategies in behavioral suppression.

CHAPTER 3. METHODOLOGY

This qualitative phenomenological study focused on understanding the behavioral biases that could affect financial advisors' and portfolio managers' decisions. A qualitative method was chosen to provide a theoretical lens for the examination of the decision process and the rationale of advisor recommendations. This theoretical lens used for the examination process required adequate working knowledge of the industry and understanding the context in which responses are given. The interpretive research requires reflexivity and a working understanding of the industry that require a range of interpretive tools. This includes strategic, ethical, and basic regulatory knowledge to interpret the participants' delivery, answers, and context (Creswell & Creswell, 2018).

When engaged in qualitative discovery, the researcher is a key instrument in understanding multidimensions of delivery, and collection of data can be instrumental to the findings themselves. Phenomenology involves understanding the experiences and consciousness of participants and is key in the discovery process because this method relies on multiple participant perspectives and requires the researcher to seek saturation among the participant responses (Charmaz, 2006). When engaged in practitioner discussions, professionals can often understand the forum or context that is required to deliver an industry acceptable answer. This type of response can be synthesized, captured, and elaborated on when the researcher is the instrument in the process of data collection. This interpretation of data is used to understand participants responses and what context that the responses represent (Ravitch & Carl, 2021). The use of the researcher as the instrument is one of the key reasons why a qualitative method of research was chosen for the study. In addition, this study is an exploratory investigation

into the expert decision process rather than identifying and statistically testing specific independent and dependent variables. Silverman (2014) explained, “Quantitative data is strongest on revealing inputs and outputs of a particular phenomenon, qualitative data can reveal how social phenomenon actually work in real time” (p. 46). The selection of a qualitative research study depends on whether the researcher is in search of how people perceive certain phenomenon rather than a quantitative investigation on measuring social facts.

Rationale for Qualitative Methodology

While some quantitative surveys have asked financial advisors what factors they perceive influence their client’s investment decisions, they do not address the qualitative aspects of how these same investor biases can affect the financial advisors’ decision process. Understanding the process involves not only identifying the outcome of the decision but also identifying what factors form that decision. Understanding how a decision is formed helps identify possible cognitive errors in judgment. Qualitative methods were used to understand the possible behavioral bias aspects of financial advisors’ decision making and providing an in-depth description of practice, context, and setting.

In qualitative analysis, the researcher is thought of as the primary instrument used in the collection of data, the dependence of self-reflection and reflexivity in delivering relevant assessments, and is required for the discussion and interpretation. Having a multi-facet understanding of advisor and client risks in decision making may offer different practical insight into the formulation discussion development and data collection. This type of analysis within the advisor field can allow the researcher to apply

specific findings that validate empirical quantitative studies adding validity to previously related research findings (Oriano-Darnall, 2006). In Overton's (2007) research, interviews of CFP founders indicated that behavioral finance was the strongest theme to emerge from their qualitative findings. This finding validated the need for additional research in advisor decision making and the behavioral finance area (Overton, 2007). In addition, Mayes (2013) found that 69.5% of investors used unsophisticated procedures of investment decision-making methods, and 56.7% of respondents were negatively influenced by behavioral biases.

When advisors are tasked with understanding and determining client risk and aggregate asset allocation, they are tasked with interpreting qualitative questions. Their approach in capturing client financial pictures can rest not only on the client goals, income, and balance sheet data but also on nonverbal questions, open-ended questioning, and the reflexivity of the advisor. This is understandably important because studies have shown that 77% of investors give full discretion over buying and selling decisions over their accounts (Monti et al., 2014). When advisors are granted discretion over clients' accounts, the clients depend on the advisor to ensure that they fully understand the clients' objectives and risk tolerance.

Research Design

For this qualitative study, the information was captured by conducting 21 interviews of practicing advisors. The researcher sent out an invitation (see Appendix A) and once participants expressed interest in the study informed consent was sent via email (see Appendix B). These advisor participants had at least 8 years of experience in their current advisory role and managed at least \$50 million in client assets. The advisor

experience was essential to this study because of the known dependence for younger advisors to conform to their firm or senior advisor views (Kitces, 2016). In addition, younger advisors generally have a different compensation agreement with large employers, and many have not established their own client segmentations. Although no nonclient-facing advisors were used in this study, the researcher acknowledged that behavioral bias does affect younger advisors as well as supporting advisory roles.

Nineteen semi structured interviews were conducted in person and recorded using an H2n Zoom digital recorder, and two interviews were conducted and recorded using a web-conferencing platform. Along with the digital voice recorder, this researcher also took contemporaneous notes during the interviews. All interviews were partially transcribed using Otter transcribing software and then again refined by the researcher to find errors in transcription. These 21 recorded responses produced more than 600 pages of transcriptions and 22 audio hours of recorded time. The average duration of the interviews was 45 min and took place from March 8, 2022, to May 5, 2022. By engaging participants in this qualitative study using a predetermined set of open-ended interview questions (see Appendix C) centered on the experiences of the participants and how they form their investment decisions, the researcher was able to extract various codes and themes that emerged from the data. The instrument used to interpret advisor responses were dependent on the researcher's reflexivity and focus on the relevant practice issues. The focus was on advisor's decision making under risk and understanding any biases that influenced their decisions or providing recommendations to their clients. The researcher's assessment included advisor's body language, delivery, and tone on any particular response and included understanding factors that were consistent across

advisors' responses. Participants' experiences were multidimensional, and when investigating their decision processes, understanding the development of the rationale leading up to the decision was often as important as the decision itself. Therefore interpretation, rather than a simple description of participate responses, could hold critical insight to multi risk scenarios and the decision-making process. Another critical component to interviewing and engaging with practicing financial advisors under risk scenarios was the language used during discovery because many descriptions were dependent on the researcher's experience as a financial advisor. During the interviews, advisors were informed that they should speak candidly and that the researcher was primarily interested in the way they formed decisions rather than the actual response. The researcher attempted to interview all participants in their offices and kept questions in casual conversation format.

Qualitative banking research from Grosen (2014) showed that semistructured interviews can capture uncensored feedback that is critical to understanding current practices in banking transactions. Qualitative responses within Grosen's bank study also captured and illustrated common perceptions on how the customers' interaction is conducted by retail advisors. Capturing this type of engagement is complex and not easily captured in a quantitative survey or sampling study due to advisor responses being associated with the uniform "right answer" and not necessarily the answer that is used in practice. In another qualitative research banking study, Andronikidis and Dimitriadis (2003) gathered 27 banking consumer participants in three groups and interviewed them by examining their perception toward financial issues and banking sales process. The participants' attitudes were also recorded to assess how they liked the banks process and

what products and services were perceived to be helpful. When employing a grounded theory method, Andronikidis and Dimitriadis found that the natural flow of the discussion yielded new insights and perceptions on how consumers perceived the financial institution products and services. Results from the participants' dialog showed that consumers use emotional instincts when engaging in the decision process. Andronikidis and Dimitriadis also noted that perceptions were related to ethnic and cultural profiles, which were critical to understanding financial aspects of client-engaging financial institutions.

Research Questions

While qualitative research has gained popularity over the years within the behavioral science literature, the techniques and practical uses have depended on the researcher's ability to understand and interpret what is important in the discovery phase and analysis. The research questions and topics should be carefully developed by the researcher and should be close enough to current issues and have relevancy among participants. This is so the participants are not disengaged in responses or person-to-person interviews (Strauss & Corbin, 1998). If the majority (70%) of participants' responses agreed or sentences agreed with a common response of other participants, this was a strong indication of a validation. These answers, if applicable, were then checked for past empirical validation to give support to consistent themes or opposing findings.

The following research questions guided and directed this qualitative study:

1. What behavioral bias has the most significant effect on financial advisor recommendations and investment decision making?
2. Do financial advisors use framing techniques when interacting with clients?

3. Do financial advisors' behavioral bias affect client-risk tolerance selections?
4. Do financial advisors exhibit a moderate-risk tolerance selection bias?
5. Do financial advisors comprehend the perceived value of understanding behavioral biases?

In the United States, there are nearly 670,000 active registered financial advisors. Of this number, 316,000 are engaged in client-facing recommendations and decision making. According to FINRA (n.d.-b), investment advisors who manage more than \$110 million must register with the SEC, and an advisor who manages under this amount must register with the state they conduct business. This study's interview questions were asked of a convenience sample of practicing financial advisors, registered investment advisors (RIAs), hedge fund managers, and portfolio managers who managed or team managed more than \$50 million in client assets under management (AUM). Over 50 advisors from the U.S. Pacific Southwest were considered to participate in the study. Twenty-one advisors were chosen based on their availability to be interviewed from March through May of 2022. The sample included eight advisors who were independent operators, three advisors who were fee only, and the remaining participants were dually registered with large broker dealers. f. The advisors and managers were required to have at least 8 years of experience providing recommendations for their clients and being directly responsible for making client recommendations and decisions. This study included dually registered advisors who were directly engaged in client recommendations and who had discretionary abilities in decision making. An advisor who is dually registered indicates that the advisor is registered with a broker dealer and as an investment advisor. While current literature has focused on certain aspects of individual

investor biases or institutional investor influences on recommendations, there are few studies that focus on individual financial advisor behavioral biases (Foster & Warren, 2016). Existing literature investigating similar areas of this research include financial advisor overconfidence, value of a financial advisor to clients, use of advisor related to performance, emotional intelligence of financial advisor, perceived behavioral bias of financial advisor, advisor framing, and various measures of financial advisor effectiveness (Enhelder, 2011; M. B. Lewis, 2016; Roberts, 2020; Söderberg, 2013; Todd, 2019; Yoa et al., 2020). Of the current existing research studies, few include qualitative data on advisor's decision making or perceived advisor bias engaged in the advisory discipline.

This study included 21 advisors who were selected using criterion sampling. This method of sampling was used to identify certain participant attributes and provided an in-depth qualitative lens to identify behaviors that were represented in a larger group (Suri, 2011). This number was chosen according to similar scientific studies from finance and health care professions (Oriano-Darnall, 2006). Researchers have indicated that a theoretical saturation point was researched between 23 and 26 participants in the health care field, and in financial professions between 10 and 20 participants were commonly used in academic literature (Foster & Warren, 2016; Oliveira de Moura et al., 2022). Creswell and Creswell (2018) explained the qualitative method of research begins by collecting information from participants then identifying themes and categories that can be developed into identifiable patterns consistent with accepted practitioner theories. Ravitch and Carl (2021) pointed out that each 1 hr interview will likely produce 30 pages of transcripts, and depending on the organization of the transcripts, 100 or more pages of

transcripts will need to be coded for the findings section of the paper. This study's interviews contained over 600 pages of transcription, which was consistent with Ravitch and Carl. These patterns and theories can be compared to the existing literature to check for rigor and consistency; they must also be interpreted by the researcher to create reference points that can be used to extrapolate relevant questions for future research. Practitioner's responses could also uncover new areas of focus that could result in new advisory awareness, which eventually could also provide value to other researchers and practitioners.

After completing and collecting the interview data, transcriptions were done in two parts: through Otter transcription software and the researcher's handwritten revisions of the original transcription. Handwritten revisions were added to accurately transcribe certain interviews that were of poor audio quality due to an outdoor interview setting. The recordings were loaded into ATLAS.ti, a computer aided coding program that was used to aid the researcher in coding and categorizing themes from the advisors' responses. By scanning and grouping data into identifiable codes that represent specific themes and categories, similar respondent answers were identified and investigated further to assess whether responses were consistent with current empirical research and current advisor best practice. A preset code list was not developed, and all concepts and codes emerged in NVivo as the data were interpreted. Once the participants' responses had been properly coded, repetitive themes and categories emerged, and new bias information helped with the identification of new findings. Interviews were conducted with the goal being identifiable themes and participant responses reaching a point of

saturation when no new information provided by participants were assessed or added value to the research findings.

Confidentiality

In interviewing advisors who had established practices engaged in client recommendations, interviews and any notes for this study remained controlled and password protected from unwanted disclosure. Protecting participant confidentiality was of utmost importance, and consideration was given to any ethical consideration in protecting participant responses (Kaiser, 2009). In addition, some advisor demographic data were omitted from this study to protect participant amenity and confidentiality. Even though no identifiable client or firm information was the topic of any line of questioning, the researcher ensured that any traceable, private, and confidential data shared by individuals and their organizations remained protected (Guillemin & Gillam, 2004). The researcher also ensured that participants represented a diverse population of firms so that no concentration of any one line of business, form of compensation, or any one firm would lead to unwanted researcher bias.

Validity and Quality Criteria

This method was selected to include a closer account and deeper understanding of the advisory industry by including insight and interpretation from practitioner experiences. Understanding this researcher's interpretation was not without some researcher bias. The methodological integrity was upheld by referencing the associated literature and providing only a basis for understanding certain relevant and irrelevant practitioner issues. Associated literature provides a working understanding of known issues but can often leave the degree of the finding absent from practical application.

One example from the field of medicine revealed that a quantitative survey of surgery patients indicated 79% of respondents wanted to know as much as possible about their upcoming medical procedure. However, when surgery patients were asked in a qualitative study about the communication from the doctor regarding the procedure, many preferred to know more about postoperative care rather than the details of the actual operative nature of the surgery (McNair et al., 2016). This key observation of the degree of the responses and explanation gives practical guidance on the patient's engagement rather than just checking a box of the legalities of the procedure. This degree of explanation of doctor-to-patient communication is like the advisor-to-client engagement when developing and explaining a plan for the client's life savings. If advisors, like doctors, focus on the operative nature of planning, filled with disclosures and regulations, patients or clients can find themselves uninformed of the postoperative and planning care or how to maintain retirement income. The degree of communication and the information preferences of participants reveals that understanding this qualitative aspect of the issue can be just as important as the question formation and any finding from empirical quantitative results.

The methods used in qualitative research mainly comprise a narrative, thematic, phenomenological, ethnographic, or grounded theory to capture and synthesize data and report essential findings with readers (Ravitch & Carl, 2021). Narrative researchers study the lives and focus on capturing information through stories of participants. Thematic researchers focus on certain themes consistent across their observations. Phenomenological research captures human experiences or certain phenomenon. Ethnographers' study and ascertain information about culture over a specific time frame.

Grounded theory shows views and experiences of participants according to their discipline or interpretation. Each of these methods creates certain lenses to capture qualitative data, and these lenses can be focused and magnified through various researcher methods according to discipline. Once researchers can understand the data under theoretical magnification, they can later determine specific hypothesis they wish to test in quantitative formats.

Phenomenology is an approach that can provide a powerful way of understanding and assessing participants' experiences and perceptions (Smythe, 2012). Specifically, phenomenology is a method for researching humans in a psychological way that transforms data into expressions and can be more relevant to psychological assessment within certain contexts (Creswell & Creswell, 2018). This means that a certain consideration or weight is given to the attitude or perspective of the researcher when clarifying and interpreting data or a priori phenomenon (A. Giorgi, 2012). This attitude or perspective is essential for understanding and assessing the interpretation rather than the description of the information. The empirical illustrations of numerical data or the mathematical representation may limit the researcher's ability to capture the development of a particular outcome. Capturing and comparing certain variables using the traditional numerical methods may underserve the understanding of certain human conditions that may be more informative than an isolated hypothesis or fact. Husserl (1931/2013) argued that the a priori or knowledge that is independent from experience and empirical data serves as a philosophical science that can provide distinctive meaning to a person's view, interpretation, and personal philosophy. A. Giorgi (2012) explained that it is essential to separate general descriptions from interpretations, and the main difference is that a

description does not need human experiences to draw conclusions about context or meaning. Interpretations, on the other hand, use associative assumptions that give a relevant context to the meaning of data being collected.

The use of a qualitative study that employs phenomenology as a method of assessing the effect of financial advisor experiences in financial decisions is crucial in understanding the behavioral components of evaluating risks. The value of assigning certain risks levels to certain clients is not always an easy task. When clients and advisors are under stressful situations, stressful stimuli could affect client-risk tolerance assessments and could also play a factor in financial advisor recommendations. This is important because client investment objectives must align with client-risk tolerances. By taking a convenience sample of financial advisors and investment managers, this study aimed to interpret the responses by observing and analyzing the context and nonverbal questions that the financial advisor discussed and exhibited during the researcher's interview questioning. By looking for consistent themes within the advisor discussions, advisor responses were compared to existing literature, and if any new findings in the advisor decision process were found, they were analyzed for relevance (M. B. Lewis, 2019; Todd & Seay, 2021; Wismer, 2022). Once the interviews were completed, they were then coded and mapped to their themes to help identify recurring points of interest in the data and support any existing decision research. Coded interview responses were compared to one another to assess the patterns that clustered around central themes that the advisor seemed to omit across the concepts. They were further investigated to understand the models and frameworks that these financial professionals operate in, which was key to discovering practitioner behavior and decision beliefs. For example,

the emotional context of a client who has lost a spouse or a long-tenured employee who has lost a job-can often influence client-risk tolerance scores and can also demonstrate a client emotional intelligence (Asad et al., 2022).

When under stress, understanding loss aversion and the role it may play in advisor oral interactions may yield practical application to understanding risk assessment with clients rather than a systematic scoring system of traditional-risk tolerance questionnaires. Advisors and investors often say one thing and do another, which can move their judgments toward irrationality. Understanding that the advisors' investment decisions are closely related to their own personal investment decisions can also indicate that advisors' emotions and experiences can clearly affect investment decisions. This means when investors or advisors think about risks and uncertainty, they commonly recollect their own life events. Life events such as job loss, divorce, large financial losses, or loss of a loved one have a large emotional toll that is not easily captured in survey data. This creates a gap in the literature for the need to explore the behavioral tendencies of advisors through oral examination.

The responses in this study could provide important information to researchers and practitioners on what behavioral aspects may influence advisor decisions. It has been well documented that financial advisor responses to certain questions can be influenced by the frame of the information being given. There also has been data that show that when financial advisors engage in discussions, they assume they know what client oral statements are more relevant than others (Snelbecker et al., 1990). More recent data suggest that by keeping certain questions in the advisor's discussion exploratory, the investigation reduces the chance of framing effects in participant responses. A financial

planner's systematic process in developing strategies for achieving identifiable goals is a discovery process itself and should be examined in the same way for investigators to identify and convey the data to readers. One qualitative study revealed that every one of their participants responded favorably when asked about including behavioral finance to their practice, and they all had at least a limited understanding of its implication in client outcome (Overton, 2007).

While many studies are hypothetical studies on heuristics and cognitive biases, they do not show practitioner questioning on financial influences on decision making. In the medical field, cost indicators or references to the cost influences of a decision were only shown in 16 out of 213 medical heuristic studies (Blumenthal-Barby & Krieger, 2015). As researchers aim to detect and test for cognitive errors in judgement in decision making, it is also important to understand the financial context and the setting in which certain decisions are being examined. Testing qualitatively for validation of cognitive biases is essential for understanding the relationship between a particular bias and a particular outcome. Failing to capture the financial aspect and costs imbedded in the decision process may skew the findings original intention. This builds a strong argument to understand and discuss with practitioners in the field what behavioral bias they believe may influence their decisions.

Limitations in Methodology

Limitations in this methodology include inaccurate themes, misinterpretations, disconfirming evidence, discrepant data, and outliers. Although in qualitative data there are no set rules for interpreting data, inconsistent explanations and interpretations can be problematic in reaching a shared understanding. While some researchers believe

transcripts do not ensure rigor, agreement in the triangulation of data should be of particular importance to building accurate, inciteful interpretations (Ravitch & Carl, 2021). Also limiting qualitative data collection is abstract speculation, and interruptions of the natural flow of discussion may counter some relevancy of the question-and-answer setting. This displacement can cause the data to become off topic, and rigor could show distortion (A. James, 2013). Qualitative methods were used to ensure that participants' responses captured the essence of the research questions. Although quantitative data analysis is accepted in finance and other disciplines as a proven method of research and discovery, the scientific community has also identified difficulty in applying or replicating academic findings in practice. Pharmaceutical company Amgen oncology and biotechnology researchers Begley and Ellis (2012) found that when they tried to validate 53 landmark studies for targeting cancers, they could only confirm six, or 11%, of those same studies. Begley and Ellis's findings indicated that replicating research is difficult, and when stakes are high, such as finding cancer, even researchers can be overconfident in their research findings.

Advisor responses that are isolated to quantitative data surveys only could have the tendency to deliver conservative answers when delivering survey responses, and many firms could restrain this type of data being utilized for fear of bad publicity or unidentified questionable ethics. This avoidance could limit the effectiveness of the survey findings and narrow the scope of advisor understanding. This is of particular importance to this study and was the primary contributing factor of the choice for qualitative investigation.

CHAPTER 4: FINDINGS

The findings in this chapter are based on the participant interviews, which were interpreted and synthesized through the researcher's qualitative lens. The participant interviews occurred in different locations and settings, with primary location emphasis toward creating an interview setting that resembled the advisor's similar day-to-day business decision setting. These locations and settings had no known effects on the results of this study. This qualitative phenomenological study aimed to understand and identify perceived behavioral biases affecting financial advisors' and portfolio managers' decisions. Many of the participant responses had discussions related to current practice issues, compensation, ethical considerations, and strong influences on decision making. The findings from this study contribute to a wide field of behavioral economics and to consumers, practitioners, and regulators in understanding the financial decision process of investment professionals.

Interview Setting

This study included 21 interviews that were conducted between March 8, 2022, and May 5, 2022. Nineteen interviews were conducted face-to-face, and two were conducted via Zoom. The 19 interviews were audio recorded with a personal digital recorder, and two interviews were audio recorded by Zoom, a web-based conferencing software. These recordings were then transcribed using Otter, a transcription software, and additionally checked again for auditory accuracy by the researcher. All interviews included comprehensive handwritten notes; various participant notes contained nonverbal interview-setting information, including location, setting, advisor attire, and perceived

mood of the advisor. Interviews included preliminary demographic advisor data questions including age, education, experience, and qualifications (see Table 2).

Results

This study was focused on experienced advisor decision making and judgments; all participants had between 8 and 30 years of face-to-face advisory experience in a client-recommendation role. All participants or teams managed at least \$50 million in client AUM. All participants were from the United States and resided in California.

Participants were predominately male, and most of their risk tolerances were aggressive, with 15 aggressive participants, five moderate, and one conservative. Five of the 21 participants were female; seven of the 21 participants had an active CFP designation; four of the five females had an active CFP designation. This study's number of CFP practitioners was consistent with the percentage of CFPs in the client-facing advisor industry. Existing research states that out of 311,305 active financial advisors, 90,569 have received the CFP designation. Although not by study design, this consistency is representative of one third of the practitioners who hold the CFP designation.

Table 2*Participant Demographics*

Participant	Gender	Age	Risk tolerance	Years of Experience	AUM	Revenue	% Fee based	Education
1	Male	35–49	Aggressive	8	\$50,000,000	\$400,00	61–90	HS
2	Male	35–49	Aggressive	10	\$50,000,000	\$600,00	50	HS
3	Male	35–49	Aggressive	19	\$70,000,000	\$550,00	61–90	Bachelor's
4	Male	35–49	Aggressive	10	\$50,000,000	\$400,00	61–90	Master's
5	Male	35–49	Aggressive	20	\$89,000,000	\$3,900,000	61–90	Bachelor's
6	Male	35–49	Aggressive	15	\$89,000,000	\$3,900,000	61–90	Bachelor's
7	Male	50–65	Aggressive	20	\$100,000,000	\$1,000,000	61–90	Bachelor's
8	Female	35–49	Aggressive	20	\$80,000,000	\$800,000	100	Bachelor's, CFP
9	Female	35–49	Aggressive	20	\$100,000,000	\$800,000	50	Bachelor's, CFP
10	Male	50–65	Moderate	20	\$80,000,000	\$700,000	61–90	Master's
11	Female	50–65	Conservative	20	\$80,000,000	\$600,000	100	Bachelor's, CFP
12	Female	35–49	Moderate	18	\$70,000,000	\$700,000	61–90	Bachelor's
13	Male	35–49	Aggressive	18	\$90,000,000	\$600,000	61–90	Bachelor's
14	Male	35–49	Aggressive	22	\$1,000,000,000	\$1,000,000	61–90	Bachelor's, CFA, CFP
15	Male	35–49	Moderate	8	\$160,000,000	\$250,000	100	Bachelor's, CFP
16	Male	35–49	Moderate	18	\$160,000,000	\$1,600,000	100	Bachelor's
17	Female	50–65	Aggressive	24	\$60,000,000	\$400,000	61–90	Master's, CFP
18	Male	35–49	Aggressive	8	\$50,000,000	\$500,000	31–60	Bachelor's
19	Male	35–49	Aggressive	18	\$65,000,000	\$400,000	31–60	Bachelor's
20	Male	35–49	Moderate	20	\$550,000,000	\$3,900,000	61–90	Bachelor's, CFP
21	Male	35–49	Aggressive	17	\$100,000,000	\$900,000	61–90	Bachelor's

Note. AUM = assets under management; CFP = certified financial planner; CFA = certified financial analyst.

This study's group of participants was well educated, with 19 holding at least a bachelor's degree, three holding a master's degree, one holding a CFA, and seven holding an active CFP designation. In addition, most advisors held their Series 7, Series 65 or 66, and health and life insurance licenses. Series licenses are a national minimum requirement to provide investment advice to the public and are required in all states. Many participants achieved other designations during their careers, but because of costs and unfamiliarity among the public, many of these designations were disregarded, or advisors let them expire; in addition, internal designations were not discussed.

Demographics

The results of the findings were examined and listed in relation to the research and interview questions. The first codes were the participant responses grouped and categorized according to the advisor interview questions (see Appendix C). Axial and selective coding help identify specific characteristics found within participant responses. This fractured the data and gave rigor and depth when cross-checking responses for consistency. The 12 advisor interview question response codes and associated response codes generated between 20 and 55 codes per question. Aggregate participant discussions and open questioning generated 113 selective codes. Grouping and theme development were conducted in the context of the participant responses. Identifying codes and groupings formed the basis for this study and illustrated consistent responses and in some cases exact participant answers. Utilizing the qualitative software, ATLAS.ti, codes could be associated with relevant context and adjusted to provide clarity. The search function within the program categorized and checked for the

association within participant dialog. As a result of this interview synthesis, a conceptual model was developed to explain better the themes found in this study.

The categorization and identification of participant responses, as shown in Table 3, are associated with conversations centered on the research questions. The participant interview questions centered on the relevant research question without fully explaining how or why behavioral topics applied to the conversation. This type of engagement was chosen as casual, open-ended discussions rather than a question-and-answer survey format. During the interviews, the distinction between ethics and advisor bias awareness provoked participants to form a defensive response with a generalization about advisor practice rather than their processes and decision actions. In various participant interviews, the questions were delivered out of order in most cases to prevent uniform ethical reasoning and response; this approach was well received and prevented generic textbook responses.

Table 3*Common Participant Question and Responses*

Research question	Interview question	Perceived bias	Common participant response
1	1. What behavioral biases do you believe affect Advisor investment decision making the most (i.e., herding, confirmation, overconfidence, availability, and loss aversion)?	Herding	<ul style="list-style-type: none"> • Participant 10: “So I think that herding is a big part of that.” • Participant 13: “I think it’s herding.” • Participant 21: “I think big one is herd mentality and you know, some, some advisors can be a little bit too overconfident.”
1	2. Do you believe advisor chase trends in products and services offered to their clients? What type of trends do you currently see affecting advisors today?	Herding	<ul style="list-style-type: none"> • Participant 5: “Yeah, I would say that advisors do. Okay, yeah, I will say advisors, the majority advisors do track trends.” • Participant 7: “I think our industry in certain economic conditions may force advisors to chase trends. So yes.”
1	3. Do you believe advisors invest in products and services familiar to them? Why?	Status quo	<ul style="list-style-type: none"> • Participant 4: “That’d be the where people get stuck in their old ways. Yeah. And they utilize the same product, same strategies.” • Participant 6: “I think repetition is on the same guidelines of memory, like memorizing. So you do something so often, that it just becomes second nature. And you’re really memorizing it. Before your understanding.”
1	4. Do you believe advisors have screening methods for new products and services (i.e., annuities, stocks, ETFs, MFs)? If so, how and why is that method determined?	Herding	<ul style="list-style-type: none"> • Participant 8: “And I do use the experience of peers.” • Participant 18: “For me, it’s either going to be with other fellow colleagues to pick their brains as far as what they’re doing. To get some ideas.”
2	5. What are your thoughts on determining client risk tolerance? Do you have a current method of determining risk? If so, why is this method used? In a perfect world, how would you determine risk tolerance?	Availability and Recency	<ul style="list-style-type: none"> • Participant 14: “So risk tolerance, I think the most important thing is to remember that it changes.” • Participant 20: “So for me, personally, we just in conversation or, you know, encountered risks and definitely has to do with the current environment.”

Table 3 (continued)

Research question	Interview question	Perceived bias	Common participant response
4	6. Do you believe current regulation creates a moderate investment bias for investment professionals to classify clients?	Moderate	<ul style="list-style-type: none"> Participant 3: "I would say about 75 to 85% of my book is considered moderate." Participant 13: "Balanced strategies? Yeah. Um, so we 85% of clients fall into that profile."
3, 2	7. What is the best way to explain risk and reward to a client (i.e., charts, graphs, and numerical representations)?	Confirmation	<ul style="list-style-type: none"> Participant 9: "I think anything that's visual and give you an image is better than just looking at the numbers." Participant 14: "Yeah, totally. I tried to be as visual as possible."
1	8. In a percentage, what do you believe has more of an impact on client returns: the investments and services used or client behavior? Why?	Availability and Recency	<ul style="list-style-type: none"> Participant 2: "So I would say maybe 70% client behavior." Participant 21: "Client behavior 100%."
1	9. Do you believe it should be necessary for advisors to have a unified standard for calling themselves financial advisors (i.e., CFP, CFA, and CIMA)? Why or why not?	Confirmation	<ul style="list-style-type: none"> Participant 8: "I do. It is why I personally pursued my certified financial planning designation." Participant 10: "Yeah, I would, I would think, I would think it's got to be a period of at least 3 years."
1	10. Do you currently use or plan to implement behavioral finance strategies in your practice? If so, in what form?	Overconfidence	<ul style="list-style-type: none"> Participant 9: "I can't say I intentionally do it, but I'm sure probably I do." Participant 14: "I think I mentioned, we talked about this quite a bit in the office. And the number one thing I think an advisor needs to do is to be aware that they even exist."
1	11. Should behavioral finance topics be added to the current licensing or popular designations requirements? Why or why not?	Availability and Recency	<ul style="list-style-type: none"> Participant 18: "Yes because I think that's kind of a recipe for a lot of the mistakes are made." Participant 17: "My thinking plays a huge role in the kind of advisor I am and how I'm able to help my clients. So the more I work on my own thinking, the more I can help my clients with their thinking."

Table 3 (*continued*)

Research question	Interview question	Perceived bias	Common participant response
1, 4	12. What two regulations do you think do more harm than good? Does the disclosure “not a bank, not insured and may lose” have any effect on client perception, and what would be a better way to convey that message?	Projection	<ul style="list-style-type: none"> Participant 9: “I think all regulations are there’s always unintended consequences that hurt people more than they expect. And if they hurt, they’re hurting the common public.” Participant 14: “Well, I think I think public communication probably holds us up the most, right? ... how you can and can’t communicate with a client.”

Findings From Participant Responses

Four themes emerged from the participant responses, along with eight fundamental biases. The first theme identified was advisor conformity, the second was advisor experience, the third was advisor understanding and assessment of risk, and the fourth was the advisor availability heuristic. Each of these four themes was formulated from the recurrent responses within the participant dialog; these four themes also encompassed the biases they represent. Premature advisor judgments can lead to predictable errors causing behavioral biases; therefore, the stimulus must invoke the response. How participants develop their responses is when the bias associates with a given behavior. As shown in Table 3, the perceived biases among participants were found to attach themselves to common areas of advisor practices, but not all biases were easy to recognize.

The most reoccurring bias observed in the responses was herding; the researcher used advisor conformity as a broader theme because conformity includes a direct social adherence and alignment to group behavior, not just basing a decision on the crowd's direction. Another recurrent response found was that when advisors are faced with risk judgments, they often conform and seek peer validation. Conformity and peer validation are often thought of as a natural human behavior, but lack of engagement by advisors can lead to herdlike behavior and a predictable conformity bias.

Findings in this chapter are shown and categorized by research question. Research question findings are supported and examined by the supporting participant questions and responses. Participant responses are included for clarity and validation; the data included questions and various responses to identify the context and perceived

meaning of the participant dialog. Context can also help identify meaning, and response meaning can help stay on topic. Because many participant responses veered off topic through portions of the discussions, it was essential to fracture responses for consistency in explanation.

Research Question 1: What Behavioral Bias Has the Most Significant Effect on Financial Advisor Recommendations and Investment Decision Making?

Research participants' common responses included herding, overconfidence, loss aversion, confirmation bias, status quo, and availability or recency bias. The participant responses showed that herding was the most frequent response during the interviews; this bias was followed by overconfidence and availability. Advisors expressed herding or conformity within their responses and admitted that their recommendations had to partially conform to various industry trends for client acceptance. However, responses also indicated that the current environment could change that response. Changes because of information from past events showed clear evidence that advisors are susceptible to various availability or recency bias levels. Repetitive phrases indicated that herding, overconfidence, and availability biases helped identify the bias roots of the research themes.

Question 1 one was derived from a CFA survey done in 2015 to assess the CFA readership responses in understanding what behavioral bias was most common among investors. In this qualitative research study, the question was refocused on understanding advisor biases.

Interview Question 1

Interview Question 1 asked, “What behavioral biases do you believe affect advisor investment decision making the most (i.e., herding, confirmation, overconfidence, availability, and loss aversion)?” Question 1 was derived from a CFA survey done in 2015 to assess the CFA readership responses in understanding what behavioral bias was most common among investors. In this qualitative research study, the question was refocused on understanding advisor biases.

Participant responses supported the CFA survey (Kunte, 2015) that revealed herding significantly influenced investment decision making. Similar to the CFA survey, the qualitative participant responses from this study also indicated that overconfidence and loss aversion were among the top behavioral biases of the CFA respondents (see CFA Figure 2). Herding, overconfidence, and loss aversion were common discussions among participants and were found more frequently than any of the other biases.

Participant 10,

So I think that herding is, is a big part of that. But I think it could also be loss aversion.

Participant 14,

It is a lot easier to be wrong if the crowd is wrong with you. And so, you know, you don’t want to miss the trend. Clients would ask about that or wonder why you haven’t participated.

Participant 5,

I would say overconfidence, overconfidence, in the sense that, you know, if things are going really well, you know, maybe you’ll have to put in gambling terms,

maybe look to, to push, you know, push the bet a little bit further. When, you know ... the prudent thing to do is to reduce the [*sic*] risks and take the profits, you might, you might push that bet a little bit further through overconfidence.

Participant 14,

So I think loss aversion is a big one. I think recency is a big one. And probably overconfidence.

Participant 21,

Some advisors can be a little bit too overconfident, creating, I would say almost like an egotistical adviser, that, you know, it's his, his recommendations are always better than the other person's recommendations or the other firms [*sic*].

Moreover, that gets in the way of helping the client find some strategy that will fit their needs.

During the interview, participants were not presented with the advisor interview questionnaire and no mention was made of any behavioral biases during the first questioning. Only when participants asked for bias examples or gave long pauses after the question was asked were examples given from the questionnaire to aid participants in responding. Many participants noted that the answer was dependent upon various economic conditions. Different market conditions could influence different investment decisions, bringing on different behavioral tendencies among investors and advisors. These responses showed the availability or recency bias in the advisor's thought process.

Participant 10,

Yeah ... sometimes it is, it is based upon where we're at in a given market cycle? And that will change the outlook of not only clients, but also advisor? You know,

we should have the knowledge and the understanding to recognize where we're at in each market cycle, but sometimes we don't. So, I think that herding is a big part of that.

Interview Question 2

Interview Question 2 was aimed at discussing advisor herding and a possible susceptibility for advisors to follow trends in the industry. During the interview process, the researcher began the interview with Interview Question 2 rather than Interview Question 1. This was done for two reasons: not to give participants background information on behavioral biases indicated on Interview Questions 1 and 2 and not to frame the next questions in the interview process. This was due to initial indications of many advisors not knowing the names of many of the behavioral biases although they did explain examples of them.

Interview Question 2 asked, "Do you believe advisor chase trends in products and services offered to their clients? What type of trends do you currently see affecting advisors today?" Advisor chasing trends in decision making is a direct question about herding, but it also addresses the availability of information that advisors have. The aim of Interview Question 2 was to help identify and understand a possible herding bias within participant responses, and 16 of the 21 participants did indicate that advisors do chase trends. An interesting finding was that many participant responses indicated that peers and other industry professionals (internal and external wholesalers) could considerably influence advisor decisions and result in the formation of a trend.

Participant 15,

I believe so. Yes, a lot. A lot of it has to do with the wholesalers that they meet and then influence that they have on them. Its [that] their being sold, the product to sell to their clients.

Participant 20,

I believe some advisors do. Especially products and services that can help them grow their business, or has a very strong recent benefit. Right. So for example, last year or earlier this year, you would hear advisor, talk about private credit. So it's not any better than any other asset class. That [the market] doesn't have a better [return than] a credit return. They might miss out. So that was a good story. But they didn't really know. Right?

What was unclear was the fact that many of the responses were answered in third-person pronoun. This signified that participants believed other advisors tended to herd, but they were confident that it did not affect them. In addition, participant responses transitioned between experienced advisors and younger advisors when they discussed advisor trends. Participant 21, "I don't let it affect me. But I could see how it would affect the younger, up and coming advisor. That's trying to learn more."

Many advisors have indicated that their decision making was not immune to group conformity. They believed that it is much harder to explain to clients why a consensus view may be wrong rather than just conforming to popular opinion. When making investment selections, many advisors discussed their dependence on firm research and other industry professionals for guidance. While this system and process for client decisions and allocation is undoubtedly warranted and a standard satisfactory

practice, the basis for that decision is unclear. Participant responses showed that advisors could be affected by conformity, and outside pressures could weigh heavily on their investment decisions. Conformity was seen in several of the advisor responses, and conformity bias and risk tolerance bias could occur when making decisions based on conforming rather than client objectives. This advisor conformity was discussed in many of the responses; advisors tended to speak of conformity as a preferred option because of not wanting to get it wrong or to face liability or compliance issues.

Participant 7,

So for most people that would take a look at their investment philosophies. Yes. You could go for a low-cost passive approach and have faith that capital markets will continue to function properly. And that, more often than not, you're going to outperform active managers. However, research will also show that when people feel pain, they don't like to go about it alone.

Interview Question 3

Interview Question 3 addressed advisor familiarity bias; when advisors influence clients, much of this influence can come from the advisors' familiarity and investment preferences.

Interview Question 3 asked, "Do you believe advisors invest in products and services familiar to them? Why?" Twenty advisor responses agreed that advisors do recommend and invest client assets in strategies, products, and services familiar to them. Participant 6 indicated that it was "human nature" to invest in things you are familiar with. However, many advisors' responses indicated that they depended on their peers for guidance; this was a common theme related to advisor experience and advisor

conformity. One data-driven research finding was that less experienced advisors seemed to rely on peers more than more experienced advisors. After examining and coding for younger participant responses, the word *peers* in less experienced advisors' (less than 10 years of experience) responses revealed that this was a frequent response among them compared to more experienced advisors.

Participant 1,

So I like to utilize my, my resources. And, you know, luckily, I'm fortunate enough to have a pretty good group of advisors, and some that specialize in different things. I'm not the annuity guy, you know, and so in a lot of annuity scenarios, I may call another advisor ... but I typically start off with, with, with, my peers.

When asked when a strategy or product becomes familiar, participants indicated that when they pitched a strategy or product enough, it became familiar. They said that through repetition, they could commit the sales process or strategy to memory, and it would then be familiar to them and committed to memory. Participant 6 indicated that memorization could come before understanding it. This response could indicate that participants might be relying on their intuitive System 1 in forming their decisions.

Participant 6, "I think repetition follows the same guidelines of memory, like memorizing. So you do something so often that it just becomes second nature. And you're really memorizing it. Before your understanding it."

Expert memorization is not bad or good, but complex topics that could be explained in a framed manner could lead to errors and client misunderstanding. This could also demonstrate that advisors may understand strategies and products

conceptually. However, they may adopt new products and services based on their familiarity. As stated by Participant 6, this familiarity is gained from repetition, so there is also a tendency for the participants to depend on what is familiar to them. More importantly, when ideas are committed to memory, they are hard to unlearn, which leads to strong expert bias and can result in cognitive errors. Participants indicated that eventually this permanence turned into unchangeable advisor attitudes, and as advisors became more experienced, their ideas and recommendations were said to remain status quo.

Participant 7,

I think we're somewhere in the 60 plus category [reference to the industry average advisor age]. Right. And when you take a look at that, I don't want to say you can't teach an old dog new tricks. But the fact of the matter is, is that they for the most part, have established practice, may have, golly, I would say, some consideration, but I would say lower considerations for growth within those practices, they're probably more interested in being able to sell the practice and having the generational transfer of that practice.

Participant 8,

Unfortunately, advisors are human. And we tend to take the path of least resistance. I would say, as a whole, again, it comes I would say, this one's a little more barbell. So young advisor, and also your older advisor. Right? Either because when you're younger you have lack of knowledge or because you're older and you want to stick with what's familiar because it's easy. They're just, they're

done. There is the middle ground [that] is always, I think, what's driving and pushing the field.

Participant 10,

Especially when you have like newer advisor that I've seen over the years, when they become successful telling that story and they see, you know, commission or fees, etc. Then they started going in that direction. And they could, it could be a one-trick pony for a little bit of time.

Research Question 2: Do Financial Advisors Use Framing Techniques When Interacting With Clients?

Research Question 2 addressed financial advisors' communication and the use of framing when interacting with clients. Participants' responses indicated that broad and narrow framing is commonly used in depicting gain and loss scenarios with clients. Based on prospect theory, there is an understanding that how people address and ask questions can significantly affect how people respond to that question (Tversky & Kahneman, 1981). These frames have been empirically found in many investment settings, and the use of narrow frames can significantly affect investment and savings decisions (Shin et al., 2019). Predictable effects on judgments through framing have broad implications on financial decisions. Framing can happen in various settings; in the context of this advisor's communication to clients, the advisor's responses indicated that careful consideration was used in the communication with clients. In addition, the advisor used short stories, examples, and visual depictions with client engagements. Client communication regarding investment and risk tolerance centered on client experience, and the advisor's preferred method of explanation was to use visuals with

clients. Participant 14, “Yeah, totally. I tried to be as visual as possible. ... But anytime I can, I want to be visual and explicit about it. Because then it leads into, you know, other conversations about whatever.”

Advisors talked about assessing client situations quickly and understanding whether clients were risk seeking or risk averse. This client input and stimulus was the basis for advisor engagement; advisors would then know what type of communication would be necessary for the client interaction. This client personality identification also presented advisor confidence in assessing the client’s situations, but all too often, responses carried overconfident tones within their replies.

Interview Question 7

Interview Question 7 asked, “What is the best way to explain risk and reward to a client (i.e., charts, graphs, and numerical representations)?” Almost all participants indicated that they use visual communication to help illustrate risk and build client understanding. Participants indicated they used visuals, charts, and drawings in 50% to 80% of their client meetings. Some indicated that they had their favorite charts and graphs or would use a legal pad and draw out a concept for a client. Most discussed drawing out a gain and loss scenario that could depict well-defined upper and lower average volatility levels. Most participants also explained that they had to be very simplistic in their explanations, and their language had to be tailored to the client’s financial understanding.

Participant 1,

I usually like to use, like a Morningstar hypothetical. And, and your probably, you’re probably very familiar, but inside of there, it shows kind of its worst 3

months and best 3 months and worst 1 year and best 1 year, and so on and so forth.

Participant 2,

Sometimes people are visual, sometimes they're auditory, or sometimes, you know, they, they need something to be written down so they can see it, or drawn out. And so I try to get all aspects of it, so that they to ensure that they fully understand; when I show them something in writing, they, they get the concept; I feel like more hits home because they actually see the numbers; they see the drops from the history.

Participant 7,

So, I will do anything from being able to draw it out based on research that I know and the averages that I know, then continue to play it out.

Participant 9,

I usually use stock market as example. And I show a market index chart so the client can actually see the ups and downs. And I let them know, textbook definition ... I usually use very kindergarten terms; I like roller coaster a kiddie ride, and move like a turtle. You know, I want to make sure I explained to them in a way that they could understand and not be intimidated.

When under pressure to make a financial decision, client understanding is often influenced by risk scenarios and client perception of the advisor. This can leave clients and advisors more prone to the framing bias. This happens when people must make decisions quickly and in a more intuitive manner. Consistent with empirical research, experts can often use visuals to help illustrate concepts and risks to a client; many of the

advisor's graphs and charts aid in the educational process (Coleman & Banning, 2006; Rodriguez & Dimitrova, 2011). Not all framing has negative outcomes, and correct implementation can create a positive client outcome. Because of low numeracy rates and low client financial education, participants discussed the need to show simple and uncomplex illustrations, graphs, and drawings. Because of regulatory compliance issues, many participants discussed drawing out pen to pad rather than other types of visual illustrations. Participants discussed that this is in part due to illustrations and marketing paperwork having to be over regulated. According to participants, third-party research firms such as Morningstar, used by 12 of the 21 participants, provided beneficial illustrations of risk and allocation concepts. When illustrating a concept on paper for a client, advisors responded that they could have better client understanding. However, they also indicated that these drawings could be more susceptible to narrow framing. Participant 17, "And I think it also depends upon how we as advisors frame things. Yeah. You know, what is the, what is the picture I'm painting for you."

During the interviews, participants showed the researcher what actual illustrations they shared with clients. Many of the participant illustrations and visuals that the researcher viewed in the participant's office were narrowly framed. These very powerful educationally focused pieces were not product specific and were general concepts. Many pieces were focused on long-term market performance and showed charts of the market going up over 20- to 30-year periods. Although most preprinted literature was concept based, some information was narrowly framed on positive long-term outlooks on markets and strategies. Participants also shared pitch books and preprinted hypotheticals used

with clients. These educational and informational pieces were the preferred method of explanation used in client education.

Participant 18,

So I typically will use charts. I use Morningstar charts; I typically will have like the S&P as an index versus let's just say a moderate portfolio to let you know, how we did versus the S&P showing that look 2008, I always include 2008. For me, when I do an illustration, I always show you gotta have the worst time ... not necessarily to scare them, but set the expectation of what to expect.

Participant 17,

So yeah. So, I'm going to look at four, and five star funds, generally. And it's not that Morningstar is the end all, be all. It's not, it's just there are so many; why in the world would I pick another one?

The participants action in illustrating a four- or five-star fund is a widely used tool among today's advisors. However, the basis of that decision could be framed in a way that might indicate that a star rating system is a standard industry measurement among all investment choices. Morningstar is a public company and independent research firm. As indicated by participants, Morningstar is an excellent tool for research, and many advisors accept the rigor that Morningstar upholds. The entire rating system and analyst research publications are a paid subscription service and proprietary tool. The Morningstar star rating system was introduced in 1985. The star rating system is based on expected utility theory, utilizing historical data, discounted cash flow method, and fundamental analysis to determine star ratings (Kräussl & Sandelowsky, 2007). Morningstar was not the only third-party research used or mentioned by participants; they

also indicated that they depended upon their firm's research (investment banks) in making investment decisions and relying on firm asset allocation models in forming risk tolerance selections. An interesting note is that large-firm models are usually based on historical correlations and general statistics on specific asset classes; sometimes, these third-party researchers and firms can be wrong. One study by (Blake & Morey, 2000) Blake and Morey (2000) revealed very little evidence that highly rated funds outperform median-rated funds. The Morningstar study indicated that rated funds had low predictor values (Blake & Morey, 2000).

As previously discussed, many investors and clients have been shown to be uneducated and unsophisticated when it comes to investing. When advisors use a measurement star system in simple explanation to clients, they could effectively use a broad-based frame. Clients should be aware and advisors should take the time to explain how the tools and the methodology used in the star-selection process works within the context of their investment strategies. Another repetitive participant response was that language had to include dollar amounts versus percentages. Advisors indicated that clients did not seem to understand percentages very well and that risk scenario and fees needed to be clarified in actual dollar terms. This low level of numeracy among clients was also exhibited in understanding fees because they are usually only stated in percentages and not dollars. When the researcher asked participants whether stating fees in dollars should be a requisite for client contracts, many participants said "no," but most indicated that it was essential to explain to the client. Participant 15 (interviewee asked should fees be stated in dollars?), "So excellent question. For the client, absolutely. If

I'm a consumer or a client, we can already see that the client doesn't relate percentages to dollars, and they don't know the difference."

Advisors indicated that they spend much time educating clients on financial concepts. Advisors also addressed talking to clients using a series of narrow frames when discussing financial concepts. This was done for educating clients and keeping them engaged. Participants often spoke about the low financial literacy of clients because many uneducated clients seek a trusted advisor to help them with their financial questions. Positive frames could help with the development of general financial education and client overall understanding.

Participant 3,

It sounds bad, but most of these people are so damn uneducated about this stuff.

Participant 21,

I would say, out of 100 clients, you're going to be five or less, five or less? Yes, for financial literacy, you're going to get maybe 10% of those clients that are more experienced and more, you know, financially literate.

Participant responses were often overconfident in long-term aggregate market returns and the selection of client-risk tolerance. Many participants indicated that they would be able to educate a client enough in one or two meetings in order to get a good indication of client-risk levels and client objectives. Participant 14 stated that he could tell whether a client was a *jumper*—a jumper was described as a client who would get out of the market as soon as the market was in decline. Advisors indicated that they had a good understanding of client future behavior based on one or two client meetings, but as discussed previously, human behavior can be hard to predict.

Participant 14,

I mean, the number one giveaway is like, if they answer the phone, and like [*sic*] hear, like CNBC blaring in the background. I know I've probably got somebody who's, who's, you know, he's a jumper, right? You got to bring him in, walk them off the ledge.

In addition, advisors indicated that they had a superior understanding of the client's risk tolerance and preferences developed through experience. Although most advisors had considerable client assessment experience, their confidence in client assessment showed overconfident behavior when making recommendations based on just 1 or 2 hr of interaction. Advisors' consideration for client emotional awareness and understanding seemed to be tied to recent events, and framing responses were shown to be more effective in the sales process. When faced with more stressful market environments and market stimuli, these illustrations and frames seem to be used more frequently by advisors. Many advisors indicated that more communication leads to more managed client explications, the ability to calm clients by minor portfolio adjustments as opposed to significant portfolio adjustments, can prove to be a profitable strategy. These participant adjustments can leave clients with a better feeling of the current situation, and their current understanding level rises with advisor interaction. As past experiences can cloud client judgment, advisors need to have specific methods in place to help limit advisor susceptibility to the same market stimuli responses. While minor client adjustments to portfolios can help suppress client negative behavioral tendencies, ongoing screening methods and service model discipline by advisors can lead to long-term client effectiveness.

Interview Question 4

Interview Question 4 asked, “Do you believe advisors have screening methods for new products and services (i.e., annuities, stocks, exchange traded funds [ETFs], and mutual funds [MFs])? If so, how and why is that method determined?” Screening methods for strategies and products used by advisors were subject to many of the same framing bias as any other consumers of a financial products. However, advisors having predesignated methods of a selection process were perceived as having less susceptibility to these same behavioral biases. In forming decisions, many advisors described their reliance on software such as Morningstar and other programs to help with sophisticated screens. However, many participants also indicated they relied on their peers and other industry professionals for guidance. All three advisors with less than 10 years of experience mentioned that they consult with other advisors and industry professionals when forming decisions about products and services.

Participant 1,

I would say not a specific process, but starting with the peers and then starting and then going online and speaking with the actual carriers individually.

Participant 18,

Typically, for me, it is either going to be with other fellow colleagues to pick their brains as far as what they’re doing, to get some ideas also ... Or if I see a successful advisor that done it for a while, you know, like to pick their brain like, hey, you know, what typical strategies to use are using now.

More experienced advisors mentioned their reliance on a screening process or investment philosophy rather than peer influence. However, many did mention firm

research and Morningstar investment screens as a trusted and adequate method for introducing new products and services.

Participant 8,

And I do use the experience of peers that are in the business that have been in longer that have greater educational basis than I do. And obviously bigger books and greater tenure that I will turn to them if I've got a question or even if that filter of Morningstar isn't providing competent information.

Participant 14,

So yeah, there's quite a lot of due diligence that goes into it; we're fortunate to have a pretty good stable of offerings. And so if we were going to add a new one, it would have to measure up to prove that it's better than what we already use.

In addition, female advisors also mentioned that they welcomed peer and industry professionals for ideas and support with finding new products and services. When female participant responses were coded for peers within this interview question, they were very likely to seek peer opinion. Although three of the four female advisors held their CFP designation, they appeared less overconfident than their male counterparts. This female characteristic was also shown in the literature (Barber & Odean, 2001). Their discussion and acceptance of peer, firm, and industry professional guidance were clearly indicated within their responses addressing screening methods. Participant 9, "And then maybe wholesalers, like if I'm interested in it, then I just call the wholesaler desk in general to get more information."

Research Question 3: Do Financial Advisors' Behavioral Bias Affect Client-Risk Tolerance Selections?

Risk tolerance selection is essential in financial planning because selecting the most appropriate risk can have a critical impact on client experience and long-term client returns. The process of the advisor identifying the correct risk tolerance for a client can be a complex process because different client types and economic environments can lead to imprudent choices and improper classifications. Advisors generally determine a risk tolerance that matches a client's goals and objectives with the correct strategies, products, and services. However, when advisors are tasked with identifying a client's risk tolerance, many different client attributes and advisors' behaviors can affect their client's risk tolerance selection. The focus of Research Question 3 was to see whether participant responses showed any biases that advisors used in client-risk tolerance identification and determination.

Interview Question 5

Interview Question 5 responses indicated that risk questionnaires are a weak assessment tool in identifying the correct risk tolerance with clients. Participant responses also indicated that advisors had to be very good at articulating the concept of risk to the clients. The communication of risk to clients depended on three primary sources: resources available to clients and advisor, the experience of the advisor and clients, and the regulation of that communication process. Interview Question 5 also asked participants why they used their current method of determining that risk, which many indicated was dependent on the client's conversations and knowledge of investments.

Interview Question 5 asked, “What are your thoughts on determining client-risk tolerance? Do you have a current method of determining risk? If so, why is this method used? In a perfect world, how would you determine risk tolerance?” Advisors often use questionnaires and intake forms to assess client risk. However, most participants pointed out that although they might use a questionnaire, that is not their preferred method, and some indicated they do not even use one. Grable (2020), an expert on risk tolerance, indicated that many risk questionnaires depend on the risk questionnaire takers’ mood. This implies that clients are illustrating the affect heuristic, and mood can affect risk tolerance scores and client–advisor interactions. Grable also pointed out that the repeatability of many questionnaires is extremely weak, and the reliability of such questionnaires should be carefully considered. In this study, participants referred to questionnaires as a baseline or something they must do to satisfy their compliance departments; all but two participants even discussed questionnaires. Most participants revealed they mainly use verbal discussion and related stories to acquire a client’s true risk tolerance. Some participants even remarked that questionnaires are usually worded wrong and conducive to moderate scores.

One recurring acknowledgment by participants was that risk tolerance changes with life experiences, which was the most frequent acknowledgment in Interview Question 5 responses. Participant responses supported projection bias, which Grable (2013) explained as a relationship between stock prices and risk tolerance. Irrational judgments form projection bias from recent events and information that can heighten or deflate investor perceptions. Participants explained that risk tolerance often changes with the economic conditions as well as personal life conditions of clients. Participants also

indicated that through conversation, they could ask about the client's past financial experiences; advisors explained that client experience could not be captured in a questionnaire or from a client answering that they have 14 years of investment experience. They explained that having someone depositing money blindly into a 401(k) is not exactly an active investment experience. The participants suggested that it was more of how active clients were with investing and what happened during those engagements that gave them confidence and real financial education.

Participant 5,

Another thing is, regarding risk, just risk tolerances, you can sort of look at a client's, you know, what is your past trading experience? What have you traded, what are you currently holding, you can get a feel for the type of positions that they, they typically buy or sell to get an idea of their risk tolerance.

Participant 7,

The interesting part is that when you start looking at things qualitatively, because based on the certain responses, it, you can't really use standardized questionnaires; you may have an outline, but you may deviate completely from the outline ... because it gives you a little bit more context as to why they may respond on the quantifiable questionnaire, why they're willing to seek certain levels of risk. So yes, we use questionnaires. But we don't necessarily use them as the end all be all.

Participant 20,

So for me, personally, we just use conversation or, you know, encountered risks, and it definitely has to do with current environment.

Participant 14,

So risk tolerance, I think the most important thing is to remember that it changes. And so when the market is going up, a client believes that their risk tolerance is more than it is. And when it goes down, when the market starts to decline, that's when you really find out what somebody's risk tolerance is, right.

Participant 14,

That's a good question. So one life event can change it, right? And so you got to stay. Part of the reason you want to stay in touch with clients and understand the life events they're going through since that can change the risk tolerance. You know, if you get if you get a million dollar bonus, you probably have a higher risk tolerance this year than you did last year, but you've got some house money.

Interview Question 12

Interview Question 12 also showed that advisors can be affected by regulation and that these regulations and policies could have unintended client consequences, which could lead to improper risk tolerance selection and affect the aggregate client relationship. When regulatory and firm influence affects the advisors' ability to work with certain clients, advisors indicated that this can be problematic. The implementation by their firms to handle such regulatory risks can positively or negatively affect advisor's allocation and future investment decisions. While certain market regulation may be necessary for markets to function properly, practical implementation of rules and regulations may cause serious investor and advisor behavioral biases.

Interview Question 12 asked, "What two regulations do you think do more harm than good? Does the disclosure 'not a bank, not insured and may lose' have any effect on

client perception, and what would be a better way to convey that message?” Participants uniformly agreed that while regulations were necessary, the actual application and perception of a rule or regulation was different among firms and compliance teams. Participants also agreed that the implications of regulations created certain problems in proper risk tolerance identification and selection. When advisors believed clients were taking on unnecessary risk, their responses indicated to err on the side of caution. When advisors err on the side of caution, they can knowingly bring down the client’s original identified risk tolerance. Most participants agreed that there was too much regulation and that the confusion harmed clients and limited their ability to serve the need of the client.

Participant 3,

It is entirely too much. I mean, it’s entirely too much of everything.

Participant 3,

I’m going to email you 110 pages of disclosure; I’m then going to email; I’m then going to hand you another 200 pages of disclosure in person with the documents that were printed out. And then I’m going to hand you a 60-page managed contract ... either digital or in print. Investments are no less risky. They’re no safer than they were 10, 20 years ago. ... But for the most part, this stuff that our clients buy are no less or no more safer than they were 20 years ago. And all of our jobs are harder. And only clients benefit is they get 500 pages of disclosures.

With many firms having various interpretations of rules and regulations, the perceptions of those rules by partitioners, compliance officers, and firms set precedence for proper implementation and adoption of the rules or guidance. Participants believed that implementing these rules and guidance can often be overdone in fear of client

lawsuits. When larger firms must identify liability risks and implement broad measures to protect themselves against legal actions from clients, these measures can often lead to unintended industry and client consequences. One example of this comes from FINRA's Rule 3010 and 2210, which govern the rolling over a 401(k) to a roll-over IRA. When employees leave an employer, they generally have four choices for their defined contribution (DC) plan or 401(k): (a) leave the money in the plan, (b) roll over plan assets to an IRA, (c) roll over the plan assets to another 401(k) plan, or (d) cash out the plan balance and face tax implications. Advisors who help with this decision are subject to these regulations and the DOL fiduciary rules. The issue stems from advisor and firms weighing the risk and reward of taking on new clients. So now, most large firms have established do-it-yourself business channels to help with this line of business. A research study by Vanguard, one of the largest retirement plan custodians in the United States, showed that the median IRA balance of 4.7 million plan participants for all ages was \$82,297 (Alling & Clark, 2021). This means that more than half of these Vanguard plan participants could not work with most of the researcher's experienced participants. As mentioned previously, most of these advisors and firms have client asset requirements starting from \$100,000 to \$250,000 to receive total compensation for working with clients.

Participant 9,

I think all regulations are always unintended consequences that hurt people more than they expect. Moreover, if they hurt, they are hurting the common public. ...

You know, it's, it's unfortunate, but and now, this client with \$10 to \$20,000, in their IRA account, they can't, they can't find someone to help them build it. They

can't find someone decent enough. That's not just on the phone, right? To help them build to \$100k, \$200k, that's the unintended consequences. There's always so much of that with every regulation.

Another finding adding to the complexity of the advisor–client relationship is the client paperwork and literature that clients must fill out and receive when working with a financial advisor. In most DC plans, participants' complexity has increased, and many clients do not understand basic financial terms. When learning about their retirement plans, investors must answer questions such as “What is the difference between a strategic value fund and a new world bond fund?” This type of investment language involving retirement options creates financial education barriers when saving for retirement. Participants indicated that investors had difficulty understanding various disclosures and the language of IRAs and retirement plans. Misunderstanding in retirement plans was consistent with Dvorak and Hanley (2010) who found that retirement plan participants had very little understanding of plan fees and expenses. Only 28% of investors were found to understand what an expense ratio was, and many other participants in their study were extremely confused. In addition to understanding the language and fees, when clients want to roll over a 401(k), they have to understand what options are available through their current employer and then figure out what is important from a sometimes 100-page disclosure. When clients are faced with complex questions they often suffer from inertia.

Participant 10,

I mean, I've obviously, I've seen a lot of changes over the years, I think. I think the concept of like the fiduciary rule was good in concept. Because once again, to

reiterate what I was saying before, I think that all advisors to come into it with that mindset in putting the client before their own interests, or that of the firm's. But in terms of the documentation and the processes, firm wide, right, I think it's, I think it's doing more harm than good.

Participant 14,

Individual communications with clients, right, no texting, kind of prohibited this and prohibited that. And, you know, like, I can tell you on our side, when it comes to email communication, you know, the pucker factor is so high that I'm, a lot of times I feel like I'm not being fully honest, in my response to a client. So they aren't as informed as they should be. Not because I'm worried about them, because I'm worried about some compliance officer who's operating under some perceived regulation.

Participant 20,

Texting? I mean, some firms are smart. Enough already how hard is it to set up a phone so we can focus on it this day and age, how can you not text.

Participant 21,

I believe I feel like our industry has been attacked by regulation. There's just a ton of examples and that's just one of them named [disclosures] but uh, you know, [what] the mortgages did in 08 really made it get worse because some of these mortgage brokers were only worried about their commissions, you know, doing variable loans. Furthermore, who was regulating them? You know, so, you know, do they have a U4 for that.

Another consistent advisor response found in Interview Question 12 was that Spanish-speaking advisors indicated that current regulation did not help Spanish-speaking clients. When advisors discussed client segmentation, Spanish-speaking advisors indicated that this segmentation hurt their clients in receiving qualified financial assistance. While the effects of firm and advisor regulations on Latino and Hispanic culture is beyond this study's scope, all Spanish-speaking advisors indicated that they believed that current firm and financial regulations had negative implications to their clients. The researcher noted that these Spanish-speaking advisors did indicate that their clients did have sizable retirement savings, but most were risk averse due to a lack of understanding and a lack of financial education.

Participant 18,

Not only that, like having the alternative language as well in Spanish. Because, you know, certain large firms where they prefer to speak Spanish some do understand English but not that good, and they can't even be helped because of the regulations, so they call a 1-800 number because, and you know, they can't discuss it in a different language.

Participant 21,

I think so I believe the industry, as a whole, I mean, you still can't get any Spanish literature. You know, it's starting to be a little bit more mainstream, and you have Spanish-speaking advisors that are on TV radio, that are explaining basic financial literacy to clients. But I can see where a lot of firms have, you know, excluded those clients and made it a little bit more difficult for them.

Research Question 4: Do Financial Advisors Exhibit a Moderate-Risk Tolerance Selection Bias?

The tendency for advisors to classify clients in a moderate-risk category was shown in this group of participant responses. This supported Ansari and Phatak's (2016) study that found that over 50.1% of investors were moderate, and even more, investors fell into different moderate levels. Moderate-risk tolerance and moderate allocations can be associated with a balanced investment portfolio approach, and that allocation frequently comprises 50% to 70% stocks and 30% to 50% bonds. Understanding if most investors were found to be moderate in various studies, advisor selections should be in line with that risk population. However, to address this research question, responses had to indicate that there was an actual advisor bias and not just a classification fact.

Interview Question 6

Interview Question 6 asked, "Do you believe current regulation creates a moderate-investment bias for investment professionals to classify clients?" When discussing Interview Question 6, no distinction was made for different degrees of moderate risk, acknowledging that many firms have various degrees of moderate risk generally three to six selections within the moderate allocation sleeve depending on their firm models. For this question-and-answer discussion, the conversation was directed and focused on three essential risk tolerance selections: conservative, moderate, or aggressive.

During several of the discussions, the concept of the compromise effect was introduced. Many advisors were familiar with the concept but not how it might affect their discussions and client decisions. When participants engaged in the compromise

conversation and discussed clients not wanting the extremes, they seemed to disengage in their explanation and retract their initial responses. They insisted that it might still be an actual moderate bias.

Participant 3,

I would say about 75% to 85% of my book is considered moderate.

Participant 9,

Yeah. If I open up, if I have to open an account, well, if I have to open the account without the first initial long conversation type of meeting. I will just do moderate, right in the middle and then later I might change it.

Participant 6,

I think it's firm down to advisor instilling fear in the advisor, to say, if you have one thing on your U4, it's going to follow you for life. So you don't have, there, a slap on the wrist in our industry. You're, you have one bad thing on your U4 you look like a criminal by your firm.

Participant 14,

Oh, absolutely. Yeah, I think the average client and their portfolio has less risk than they should have, and is leaving a lot of return on the table. Because there is no upside for an advisor to allocate them properly and actually, subject them to market volatility in many cases. Because you know, the upside is the client wins. The downside is you get sued.

Participant 12,

Because if you were to talk to a client about their risks all the time, and you show them high, medium, low, everyone just feels more comfortable, like, okay, I'll just be right in the middle, right, where everyone else is, we will compromise.

Participant 13,

I don't know, I have my own. And that is that balanced portfolio will always win. I've done the math. And I can prove it, in very, very simple format, but I can prove it to you.

When participants explained risk to clients, many did so under the basic investment risk definition: the more risk you take the more return you should get. Many of the participants also mentioned the Efficient Frontier and Monte Carlo simulations for illustrations. Currently, this is an accepted and prudent practice administered with clients. However, when moderate risk is selected prematurely or generically, the identification and selection of a client-risk tolerance can have little meaning. In addition, as advisors deal with their own risk tolerances and satisfy compliance requirements, moderate-risk tolerances can become uniform and encompass all risk levels until later in the relationship.

Participant 15,

Because advisors are naturally also are dealing with their risk tolerance.

Participant 20,

Although it is true, I mean, the majority of my clients, that I see are somewhat moderate. Again, so for me, unless you're all in CDs or are your trading options and individual stocks and things like that. Your somewhat moderate. And it's

just, are you in the higher side of moderate or lower side of moderate. So that's the way I see it.

Participant 21,

I think it's the clients, you know, you show them the risk tolerance levels, how it works. And, you know, most clients end up there. ... So you know that moderate level seems to be a big choice; I could see how advisors would use it more often, just to make sure they're not taking more risks for the client, and the client is more comfortable. But I believe that ultimately, clients will end up usually in moderate.

Research Question 5: Do Financial Advisors Comprehend the Perceived Value of Understanding Behavioral Biases?

Addressing this question required two basic understandings: the value that advisors bring to the client relationship and whether advisors differentiate and articulate the value of suppressing behavioral biases. Value, as discussed in Chapter 1, can mean different things to different people. The perceived value of a financial advisor is often dependent upon client understanding, communication, and the trust developed within the level of client engagement (McCarthy, 2020). Often the value of an advisor working for a client can come in the form of behavioral coaching, financial management, and emotional intelligence (CSIM, 2020b; Madamba et al., 2020). As more awareness of behavioral finance continues to aid financial practitioners, advisors have become aware of the separation of the value within the context of financial management and behavioral bias awareness and suppression. Advisors in this study seemed to understand the

importance of behavior to their clients' overall financial outcomes as discussed in Interview Question 8.

Interview Question 8

Interview Question 8 asked, "In a percentage, what do you believe has more of an impact on client returns: the investments and services used or client behavior? Why?" Most participants indicated that client behavior impacted client returns more than any investment product or service. Participants explained that their job was not merely investing money, asset allocation, or portfolio management, it was more behavioral in nature. The real value was understanding through education and client behavior then matching that behavior to the appropriate risk tolerance and asset allocation so that clients could stay invested though volatile market conditions.

Participant 1,

I would say client behavior by far. I would say that, that. That trumps everything.

Participant 2,

So I would say maybe 70% client behavior.

Participant 5,

I would say client behavior. But the reason for that is, if the client gives you a false impression of the risk, they end up wanting to pull out ... right. So I think it's a lot of client behavior.

Participant 7,

70/30, maybe 65/35, you know, behavioral to actual investments.

Participant 8,

Client behavior? 100%.

Participant 10,

That I'd say maybe 80%. Client behavior.

Participant 15,

Client behavior, because behavior, you can have a great product, you can have a great service. But behavior can still dictate the return of that great product and service.

Participant 20,

Client behavior, because okay, because clients get bombarded with so much. You know, sensation and emotional news. They tend to get too emotional. Okay. And our job half of the time, a lot of the time, that comes as a part-time psychologist, or behavior coach.

Participant 21,

Client behavior 100%. I mean, studies have shown if you just even just stayed in the S&P 500, your average rate of return is just, it's been great. But you can show, and I even tell this to clients, when you show them a Morningstar chart of the S&P or any fund, that you're showing them. And I always [show] this, from Point A to Point B on this graph, it looks great. But most people don't make it from Point A to Point B, because at some point, they give up, because [sic] volatility gets too extreme for them. They don't get it and they're not comfortable. And they make an irrational decision. And usually, it's an emotional decision.

Interview Question 9

Participants stated that clients often did not understand the role of a financial advisor, and many of their clients had no idea of the different licenses and designations that advisors might have acquired. Today, the word financial advisor is used loosely and in many contexts. Traditionally, the term financial advisor is related to the term investment advisor and is generally used to describe a professional providing advice to others for a fee or commission. However, there is no uniform way for consumers to quickly identify and differentiate different advisors. Interview Question 9 discusses the need for a unified financial advisor standard and what advisors' think that standard should be.

Interview Question 9 asked, "Do you believe it should be necessary for advisors to have a unified standard for calling themselves financial advisors (i.e., CFP, CFA, and CIMA)? Why or why not?" Many participant responses prompted the secondary question of what and how should a unified standard be defined. Participants indicated that there should be an experience qualification for younger advisors entering the business. Participant 21 explained that "my younger self" was susceptible to many more behavioral biases that could affect client outcomes. Participant 17 gave an example of an aviation pilot, referring to the specific hour requirements to operate different aircraft. In addition, Participant 20 explained that most experts have a requirement or residency for specific expert fields.

Participant 3,

For 19 years, I've been a financial consultant; I've been a wealth advisor; I've been a financial advisor; I've been a stockbroker, sitting at the same desk doing

the same thing. But I've had, you know, 12 different titles. So I could see some value to society to standardize the language. So that it has some meaning.

Participant 6,

It's tough? Because anybody can pass an exam? But does it give you the experience to call yourself a financial adviser? So is it experience that you need to get to that level of being a financial adviser?

Participant 8,

Gosh, it's horrible to say out loud, but I really do think that the minimum standard should be a CFP.

Participant 10,

I think that they need to have enough time to see the different aspects of the business, and to have some experience under their belt. Really, before they start providing recommendations, that's going to affect the long-term viability of somebody's, let's say, in retirement or state. Yeah, I would, I would think, I would think it's got to be a period of at least 3 years.

Participant 13,

After licensing, same thing with practicing versus theory right. I'll give you a book. This is how you drive a car you can memorize until I give you the keys. You still don't know how to drive their car. You need to work for like 5 years.

Participant 15,

I would say you'd have to become either a CFP or CFA; you'd have to be securities licensed. And because you're dealing with a client's insurance, you would have to be insurance licensed. So it would be triangular.

Participant 18,

Of course, you know, making it a minimum to get like a CIMA or CFP, I think that eventually should be a requirement.

Participant 19,

Definitely. A bachelors. And then timing wise, at least 2 years in the seat was an assistant, that you know, that would provide some time [in the business]. Yes, some guide to that standard.

Participant 21,

Um, I definitely feel like there is. There should be some standard. But I don't necessarily feel like you need a designation to be able to be considered a financial adviser per se. And so, but there should be a standard I would say education obviously, you know, having licenses what education training, which is a I would say minimum, I would say like a bachelors in business finance so that that person has at least the understanding of the basics of economics and business or ... psychology.

Interview Question 10

Advisor awareness and education are key to an advisor's value being attributed to bias suppression. When more attention and emphasis is given to behavioral tendencies, fee justification and transparency may help clients and regulators understand advisor rationale. Interview Question 10 inquired into advisors' current practices and addressed whether these advisors actually use behavioral finance strategies within their practices.

Interview Question 10 asked, "Do you currently use or plan to implement behavioral finance strategies in your practice? If so, in what form?" Participants had

mixed responses when it came to the implementation of behavioral finance strategies. While some participants knew exactly what behavioral finance strategies were, some participants clearly did not. In a Cerulli Associates, Charles Schwab Investment Managemnt, and Investment and Wealth Institute (2020b) study, advisors who discussed behavioral finance topics with their clients were far more likely to gain new clients than their counterparts who did not. They also showed that this behavioral discussion was happening more each year as advisors became aware of such concepts. Cerulli Associates et al.'s research indicated that many participants understood the concepts but did not focus on explaining them to clients. Some participants even responded with a puzzled look when it came to asking them if they used behavioral strategies with clients. Participants 2, 8, and 13 made an apparent confused face gesture, signifying that they did not exactly understand what was meant by behavioral finance strategies, even though they did explain certain instances of behavioral interventions. All advisors seemed skilled at assessing their clients' emotions and dealing with clients' concerns.

Participant 12,

Right now I do a lot walking them off the cliff. Right now, a lot. But generally, when meeting with a client, we do kind of discuss that. And that, that's what we're here for is to try to remove that emotional factor for them and deal with the logical thing.

Participant 13,

No, not really.

Participant 17,

Yeah, I do. It's an important component of the work we do. Because we're trying to help people despite themselves. And sometimes the best choices are not intuitive. In fact, they're counterintuitive.

Participant 19,

I do not. But I know it's important. And after talking, I should probably look into it more.

Participant 20,

Yeah, and so I have also quoted some of these known biases [with clients].

Interview Question 11

When discussing the behavioral finance topics, advisors should be aware of known biases that may affect advisor and client decisions. However, often that knowledge is not acquired through current licensing and other financial curriculums. Although many participants talked about understanding and the importance of behavioral finance topics, adopting additional education requirements could be challenging to add to general licensing requirements and curriculums.

Interview Question 11 asked, "Should behavioral finance topics be added to the current licensing or popular designations requirements? Why or why not?" Most participants indicated that behavioral finance topics should be added to the current licensing and popular designation requirements. Participants often reflected on previous questions and believed that identifying a particular situation that might embody a particular bias could help them make better decisions.

Participant 3,

Yes, I have trained, I have trained and had people shadow me. Ten or 15 times over my career, right. That's what corporate training is ... And they may talk to you about how to use the computer and how to use a certain application, like how to use this and how to use that. But no one says, hey, here's ethical selling guys ... they acquired from whoever they're sitting next to, and hopefully the person that they're sitting next to for that 6, 8 week shadow process has some sort of moral compass.

Participant 4,

I think it should. I think people should be educated on it.

Participant 6,

I think definitely on the advisory level. Yeah.

Participant 7,

So to answer your question, yeah, I definitely believe behavioral considerations and probably in an academic setting.

Participant 12,

I think it can be added as an educational piece. But because not everyone's behavior is the same. So, it's not like a concrete thing, if that makes sense. But I think it's good to understand how to handle those situations when you're in them, because we are in those situations every day.

Participant 18,

Yes because I think that's kind of a recipe for how a lot of the mistakes are made. Emotion, once emotion gets involved. And that's the hard part, especially when

you have your money working for you. You know, that's where the mistakes are made.

Participant 17,

My thinking plays a huge role in the kind of advisor I am and how I'm able to help my clients. So the more I work on my own thinking, the more I can help my clients with their thinking.

Themes

Four themes emerged from the participant responses: (a) advisor conformity, (b) advisor experience, (c) advisor risk assessment, and (d) availability heuristic. Each of these four themes was taken from the recurrent responses within the participant responses; these four themes also encompassed the biases that they represent. As indicated in Table 3, the perceived bias among participants fell into seven fundamental biases. The most prevalent bias observed in the responses was herding; the researcher used advisor conformity as a broader theme because conformity includes a direct social adherence and alignment to group behavior.

Advisor conformity was a common theme developed from the participant responses as group awareness and peer dependency were often discussed. Participants expressed the need to check with their peers and other investment professionals when deciding or providing recommendations. Many advisors were looking and checking for group consensus, ensuring that if they were wrong then they would not have to be wrong alone. The participant process of conformance and discussion on financial planning gave a perception of comprehension and gave advisors' actions transparency. Participants discussed financial plans, and these plans provided a process, and with any repeatable

process, it can be refined and improved. Processes can also help advisors channel information, often avoiding various biases that may interfere with their rational thought process and can aid in identifying when errors can emerge. In addition, advisors seem to utilize and rely on fellow advisors and other industry professionals to form decisions. Reliance on peers and experienced colleagues has benefits and consequences because conformity leads to biases, and the experience of peers can also lead to bias of hindsight and intuitive judgments.

The second theme found was advisor experience. Many participants expressed the difference between experienced advisors and nonexperienced advisors. Many participants talked about how they had been more susceptible to various biases early in their careers. In addition, experienced advisors talked less about peer guidance and more about methods. This seems logical as tenured advisors gain confidence in what has been influential throughout their careers. When advisors were asked about what standards and the requirements to be an advisor were, most spoke about the need for a residency or a minimum number of years under a senior advisor. The participant codes advisor education, licensing, CFP, and advisor experience appeared over 94 times in the study. In addition, the word *know* was the most common term in the research word list excluding adjectives. The more experience participants had in this study, the more they perceived to know; while the participant education level and the experience were higher in this convenience sample of participants, the word know appeared 1,938 times. This repetitive observation was interpreted as advisor overconfidence. Experts in any field have a certain level of confidence developed from their education and experience.

However, when routines become too repetitive and confident behaviors manifest into overconfident behavior, errors can develop and affect expert decision making.

The third theme was advisor understanding of risk; the understanding and the assessment of risk was a frequent code in the participants' responses. The term *understanding* was seen 111 times, and the term *risk* was seen 511 times within the participant responses. The basis for this theme was the frequency of the combined terms *understanding risk*. As indicated previously, advisors must understand different types of risk, not only the investment risks but also the behavioral aspects of risks, practice risks, and risk tolerance. The typical bias associated with this theme was moderate-risk bias. Moderate-risk bias was the most talked about risk allocation selected across all participants. During the participant interviews, they were asked what percentage of their clients were moderate. More than 90% of participants responded that their book of business was heavily weighted into the moderate-risk category. When participants responded with a percentage, their response was 70% to 80% of their client book of business was a moderate risk. This has significant practitioner implications, and many participants indicated various reasons for their moderate-risk selections; however, no consistent clear indication of why this risk was selected was given.

The fourth theme was advisor availability; participants frequently addressed pressure from what was happening in the markets, practice trends, and firms. As discussed previously, availability bias or the availability heuristic is the tendency to use quick, accessible, identifiable information to form decisions. Participants in this research consistently talked about the need for available data and assessing what advisor resources were for judgment and guidance. They also discussed that client behaviors were

dependent upon the market cycle and market events to help identify strategies that would work with clients. These services and strategies often coincide with the current market conditions because advisors and clients seem to over react in turbulent markets.

Summary of Results

Advisor herding, conformity, and experience were the most frequent bias dialog recorded among the research participants; participants seemed to agree that advisors were subject to many of the same biases as any other investor. While acknowledging different biases found within the advisor responses, participants tended to be overconfident in omitting themselves from their interview responses. Many participants responded that they were affected by certain biases when determining and assessing client risk. In addition, many strongly believed that there was a current moderate-risk tolerance bias within the client evaluation process.

Participants also indicated that they could see how recent events, the media, and other professionals affected their behavior, and many demonstrated the availability heuristics used within their decision process. Most participants also acknowledged that their duty was always to put the client first, but they expressed that it was hard to pinpoint what the best interest was perceived to be in every client situation. Different clients value different things, and the need to set the expectations and define the scope of the engagement could determine the advisors' effectiveness. Participants often spoke about how every individual client is different, and the strength of the relationship could create minor client and advisor bias. These findings are similar to Korb's (2006N) (Korb, 2006) showing that each relationship is different, and the decision process is predicated on the value of the relationship rather than the results or simple investment returns. Also,

participants indicated that they would rather subject their client to less risk than go with a risk tolerance questionnaire assessment. Participant aversion to risk can create less optimal client outcomes and lead to noncohesive advice.

As discussed previously, clients have two primary risk decisions: trust the advisor and act on the advice given. These client decisions set the stage for advisor guidance, and advisors frequently employ different strategies and techniques, including framing and using visuals, to aid in the explanation process. This advisor guidance can include behavioral suppression examples and strategies to create advisor value. This can come in the form of suppressing harmful behavioral tendencies, such as not selling stocks that go up quickly and not acting on the latest news coverage. This awareness and client discussion helps educate clients in the area of behavioral finance and builds trust in future risk discussions.

CHAPTER 5: DISCUSSION AND CONCLUSION

This chapter provides a general discussion of the significant findings contained in this study. The discussion and findings were also magnified in search of practical application and implications of various themes found in the research. As discussed in the previous chapter, the general understanding and awareness of investor and advisor behavioral biases can positively and negatively influence client outcomes. However, understanding where and why those biases form was at the core of this study. If advisors are aware of these concepts, they could provide value to clients through client financial education and insight on validated behavioral concepts. Findings related to the advisor application are contained in these discussions. Advisor and industry implications are also included in this chapter, with a chief aim at bias awareness and understanding.

Discussion

The study results were mixed; some interviews seemed to validate various academic findings on decision-making bias, and a few questions resulted in unsupported claims about expert advisor bias. Many of the participant responses used the words such as *we* or *most advisors* when addressing the questions, meaning they were attributing their answers to advisors in general and not answering specifically for themselves. This made some responses unclear on what stance a participant took on an issue. During the interviews, participants frequently said that most advisors are susceptible to behavioral tendencies, but they also said the bias did not affect them. When some of the participants responded with the personal pronoun *I*, they tended to be reserved about their possible behavior in the decision process. When the question was redirected, and the researcher asked a second time to refine participants' responses, they continued to utilize the third-

person pronoun *we* or *advisor*. When specifying whether that was what they saw in other advisors or whether that behavior was specific to their behaviors, most participants still responded using the word *advisor* and eluded the direct question. While many participants avoided using the pronoun *I* in their responses when they did say they were susceptible to a certain type of behavioral biases, most participants referred to a past or younger self, and very rarely could they identify with any one individual bias.

Research Interpretation of Findings

This research aimed to understand the awareness and the degree of immunity financial advisors perceive to have against common behavioral biases. This qualitative assessment of understanding financial advisors' behavioral biases was centered on client interactions and advisor recommendations; this was the central focus in identifying expert biases. Participant interviews and discussions helped explore new ideas about biases that may affect the advisor decision process. Repetitive and consistent interview responses were a clear indication of advisor biases in the decision-making process. Although many biases were confirmed during the conversation with participants, data-driven findings revealed that only a few consistent behavioral biases indicated clear points of validation and saturation. Among the known empirical biases found in this study were herding, overconfidence, availability or recency bias, loss aversion, confirmation, status quo, and narrow framing. Among other frequent biases found were projection bias, choice supportive bias, and moderate bias, among the most exploratory biases within this study (as shown in Table 3). All biases presented in this research, excluding moderate-risk bias, have been identified in past academic literature and empirical research studies. This study is consistent with many past professionals and academic findings, and many of the

same cognitive errors and biases found in average investor behavior have also been found within the decision-making discussions of the study participants. One critical point found within this research was that the more participants were aware of any particular bias the more they could clearly articulate that bias. Their responses during the interviews indicated that if they could communicate that behavior with clients, they could adopt practical strategies to suppress or avoid predictable cognitive errors. Client communication that involves giving examples of various behavioral biases that have been demonstrated in similar client situations can provide clients with real-life examples that they can actually remember and aid in investment decisions.

Research Question 1: What Behavioral Bias Has the Most Significant Effect on Financial Advisor Recommendations and Investment Decision Making?

Advisors can have many different environments and experiences shaping their investment attitudes and behaviors. In this study, herding or conformity, overconfidence, and availability were the most discussed biases within the interviews. Consistent with various studies on investor behavior, herding and conformity seems to be amplified through volatile market periods and the focus of media attention (Kashif et al., 2021).

As more investors and advisors have more information available to them, the media influence continues to exacerbate this behavior. These biases can breed and feed into the formation of other cognitive biases; when someone finds a mental shortcut that works, the person often associates and attributes it to something the person did. When herding yields positive results for investors and advisors, security concentration, over diversification, and strategy crowding can make investors overconfident in their decision making (Barber et al., 2020).

When one bias outcome influences another bias outcome, very little learning can take place, and developing advisor expertise will not be likely. As advisors attribute market performance to their skills, they can become overconfident. They incorrectly believe their performance could serve as the independent variable and the market the dependent variable in a calculation. However, many times it has very little to do with advisor skill, and any variation or value should be attributed to effective asset allocation, client communication, and behavioral bias awareness. Measuring behavior value is often very hard to do, and creating a client perception of that value can be even more challenging. Suppose the expectation is given and a perception of behavioral value has been accepted. In that case, advisors and clients can feel more confident and know that better communications will lead to better client outcomes (Salter et al., 2011).

The recurring identification of herding, overconfidence, and availability within this study also suggests that advisors should talk about current investment themes, trends, and available strategies. If they do not have organized thoughts about the current state of the economy and strategies to complement investor preferences, they might lose the investor's attention. When participants talked about being under pressure in delivering advice, they indicated that they rely on what is familiar and available to them. They indicated that they usually go with products and strategies committed to memory. Many participants in this study revealed that they usually rely on one or two fund families or allocation strategies for over 80% of their client's recommendations. This does not mean they use one product or allocation selection for each client because most fund and exchange traded funds (ETF) companies have strategies in most risk categories, and many firms have model allocations that have best-in-class asset managers or fund

allocation sleeves. However, this does demonstrate that advisors invest in what is available to them and what they are familiar with. Although most of the time this seems like a prudent practice, familiarity can be a breeding ground for advisors to rely on heuristics when recommending and making financial decisions.

To distinguish whether an advisor is using a formulaic rational investment selection process or whether decisions are made from heuristics is often difficult to discern. All too often, advisors' overconfidence and availability turn into quick thinking, and mental shortcuts are used. This was shown in the participant responses because many indicated that they did not have a uniform way of assessing risk or determining investment strategies. Many participants said they relied on their past experiences with similar client types and depended upon other advisors or firm tools to aid with investment selection. As experts, advisors should be able to articulate their investment strategies and recommendations with their clients, but how they originate seems not to be thoroughly investigated by advisor practitioners and other industry professionals. Unclear responses in the participant interviews indicated that the development of screening methods and risk determination show that expert advisors might be using mental shortcuts for decisions and client recommendations.

When advisors must decide on risk, that decision depends on financial incentive, liability risk, and availability. This is similar to what has been found with medical doctors in the delivery room. When mothers present complications in the delivery room, doctors have been found to rely on various heuristics in prematurely performing a cesarean delivery (Singh, 2021). When experts must make a decision, and a methodical

way of executing that decision is not predetermined, mental shortcuts, overconfidence, and availability can slow rational thinking.

Research Question 2: Do Financial Advisors Use Framing Techniques When Interacting With Clients?

When investors look to advisors to help with financial decisions, effective and responsible communication is at the heart of establishing trust in client relationships. Before this trust can be established, clients must put themselves in a vulnerable state, requiring them to share very personal information and their emotional tone with the advisor (Ragatz, 2021). This communication between a professional, financial expert and client should be built with trust and understanding. Ethical commitment and responsible behavior foster effective communication, but when sales and marketing practices start channeling information and creating financial frames, these frames can dominate financial judgments (Himick & Audousset-Coulier, 2016).

With the adoption of the best interest and fiduciary rules among financial professionals, a perception of a higher standard of care has been established for advisors. This higher ethical commitment and attention was intended for advisors to act in the client's best interest, but the adoption of such standards is not without debate. Participants believed that implementation and adoption has unintended consequences. Participants of this study believed that most advisors already operate under the best interest contract and fiduciary standard, and additional regulation could only harm clients in the long term. Ideally, the advisors' compensation should align with client objectives and overall client well-being. How advisors might create powerful financial frames when discussing market strategies, products, and services can help connect and disconnect

client understanding. When narrow framing occurs, this can have significant financial effects on long-term savings rates and client financial well-being. Narrow framing, as discussed previously, is a bias that occurs when people look at a problem in a narrow context rather than the long-term consequence of that decision (Shin et al., 2019). When clients look at retirement savings within a retirement plan or IRA, they often can only see the current dollar amount that reduces their paycheck or creates a cash outflow; most do not think about the time value of money concept or tax-deferred savings growth. This also ignores employer matching or possible current tax deductibility of contributions. Other narrow frames that have been discussed in this study include fees and risk tolerance selection. When clients focus on fees or commissions, advisors can indirectly and directly build frames that can complicate client perception (Tharp, 2021).

Understanding fees from both an advisor's and client's perspectives can be a considerable task. First, advisors must understand the fees within product sets and avoid conflicts of interest. Second, advisors must believe in the fee model they operate under and effectively communicate their rationale to their clients. Whether advisors are fee-only, registered investment advisors (RIAs), or hybrid advisors, effective communication can shape and frame their messages in accordance with their business model beliefs. The concern is that the advisors do not fully explain to the client the various ways the advisor gets paid. Participant responses indicates that the differences in advisor models and compensation forms should be discussed in the initial meetings before any sale is made. Besides lengthy disclosures, clients receive very little education on the types of business models a client can choose from, and these clients who are unaware of these models may regret the method of payment they have selected by default.

Another observation is the majority of the participant advisors had asset thresholds that clients must have to work with them. From a client perspective, lower fees are ideal. Clients want the lowest advisory fee possible. However, from a practical standpoint, this might not work in their best interest. Ultimately, if clients want diversification and the lowest fee, the quick answer can be .07 basis points in an index fund or ETF. Hopefully, investors can tolerate the systematic risks, unsystematic risks, and behavioral aspects of investing. For these clients who use only fees as an indicator of success, their only barrier to long-term investment successes would be themselves. However, as indicated within the academic research and this study's participant findings, most will not be able to figure out where to start, and for those who do start investing, many will not be able to withstand the market ups and downs and their own irrational behaviors. Participants in this study agree, for those investors who can invest on their own and be disciplined enough to stay with a given strategy, they should not be hiring an advisor. One thing investors and clients must be careful about is using a fee as an excuse not to invest. This fee becomes a narrow frame and can ultimately lead to investor inertia. Sometimes the easy thing to do is to select a low-cost investment because this creates an easy mental shortcut to finding an investment, and as discussed previously, mental shortcuts can often have negative implications in practice. When utilizing an advisor, understanding what certain fees are for must be correctly articulated by the advisor to the client so that the correct expectation is set. Within the participant dialog, the researcher found that advisors are not opposed to breaking the fee apart when disclosing it to clients. Breaking a fee apart could include a .50 for investment management and .25 for risk assessment and .25 behavioral coaching adding to 1%

(Pagliaro & Utkus, 2020). Participants in this study also discussed the need to use numerical estimations in fees rather than just a percentage within their management contracts. This numerical representation is similar to other financial contracts, such as home loans, personal loans, and car loans. These differences in advisor communications can help set reasonable expectations with clients. When explanations start with objectivity and are goals based, narrow framing could be reduced because goals and objectives can reduce the narrow context of the discussion or examples.

Research Question 3: Do Financial Advisors' Behavioral Bias Affect Client-Risk Tolerance Selections?

Financial risk tolerance selection is an important piece in matching and determining a risk tolerance selection. Financial risk tolerance selection is dependent upon a variety of client factors that include investment experience, investment education, and risk appetite. Financial risk tolerance is usually the major factor in the selection of client asset allocation. This client allocation will generally set up the client for a low or high volatility experience. Although no asset allocation can isolate a client from all systematic and unsystematic risk, it can provide a good defense for clients who worry about financial market volatility. Advisors who are involved with determining what financial risk tolerance matches the client, this process usually involves advisors using risk questionnaires and general conversation regarding the riskiness of asset class and the risk a client is willing to take. Participants agreed that the primary assessment tool in risk tolerance determination is oral conversation, and many participants agreed that risk questionnaires are often useless. This finding supports empirical research that shows risk

questionnaires have little value in correctly identifying investor risk preferences (Grable, 2020).

Some opponents of questionnaire's have often discussed the use of financial frames in questions of risk. These questionnaires have also been found to be too long to administer, and when clients must complete them, they often rush through the questions. Advisors have indicated that they are faced with determining risk from client experiences and financial education, and as they put it, this is an oral process; however, what is not talked about is the fact that accepting risk or selecting a higher risk for a client is usually dependent upon a certain reference point or possible anchor that the advisor has in mind. This means advisors may attribute or anchor higher risk tolerance levels to those that have more wealth and attribute low conservative risk scores to those that have less wealth (Grable & Lyons, 2018). During the interviews, participants noted that risk preferences are not constant, and they change throughout a client's engagement. Participants also indicated that the market environment is an important variable in client-risk assessment; when markets are volatile, investors naturally seek safety; however, participants also indicated that heightened volatility distorts the behavior of a client.

In this study, only three categories of risk were used in interview discussions. However, the researcher acknowledges that most advisors and firms use various degrees of risk tolerance selections or firm-recommended model risk allocations. For example, firms could have nine models: three different versions of conservative, three different versions of moderate, and three different versions of aggressive. In addition, some firms rely on outside providers such as Morningstar benchmarks to match client-risk tolerance scores. No matter what risk allocation models are used, there are regulatory requirements

that advisors must adhere to, and documenting this discussion and client profile must be included for compliance and liability purposes. What is unclear is that even though there are certain standards and traditional measurement of risk, methods of determining risk are subject to individual interpretation. Without understanding the context or the reference point of the advisor-to-client discussion, the fundamental interpretation of what the client thinks about risks lacks solid understanding. This understanding could be based on the assessment of emotional intelligence of the advisor and the affect heuristic in clients (McCarthy, 2020).

Consideration for advisor bias affecting risk tolerance was an interesting topic of discussion. Participant responses referred to risk as a changing evaluation process, but advisors did not have a systematic way of changing that risk tolerance score over time. Participants indicated that most of their clients were already in retirement, and most indicated that 70% to 80% of their clients were moderate risk; these constant variables might create an argument for advisors to not change risk tolerance scores with clients. However, when good advisors become afraid of compliance and client complaints, a safety bias might affect client-risk tolerance selections. In addition, when advisors talked about client-risk tolerance changing over time, they often referred to market volatility, and this could also suggest that their own reactive view on the current market bleeds through to their client-risk assessments. When participants addressed market declines, they frequently indicated that they would take small steps to address the behavior without interrupting the long-term asset allocation. These small steps used in risk on scenarios are rational choice decisions and actions that advisors should utilize with clients in periods of volatility. Participants also indicated that if they thought the market was

coming down, they would use safer products and strategies with clients to help keep them interested and participating in the financial markets. This advisor belief in current market conditions and future market outlooks is a great predictor of client allocation and product alignment. Foerster et al. (2017) found that the greatest predictor of client allocation is the risk preferences and allocation of their advisor. This group of participants supported this empirical finding.

Research Question 4: Do Financial Advisors Exhibit a Moderate-Risk Tolerance Selection Bias?

Moderate-risk bias is the basic tendency for advisors or investors to select moderate-risk tolerance for their investment strategy. Moderate-risk bias arises out of the need for advisors or investors to avoid accepting risk tolerance extremes. This risk preference bias is very similar to the concept of the compromise effect because investors do not want to select extreme choices within a product set or investment strategy (Simonson, 1989). Research has shown that understanding the optimal number of consumer choices and the implications of behavioral bias can have large effects to client overall financial well-being (Ekströma, 2021). This research also indicated that optimal choice selection can control the effects of the compromise factor (Yoo et al., 2018). Participant responses demonstrated that the investor avoidance or inertia can have tremendous impact to advisors and their clients in risk tolerance selections and investment saving decisions. The finding in this research is consistent with a recent study of the importance of behavior in financial and investment decisions (Alling & Clark, 2021). Most participants in this study indicated that the hardest part of their job was selling the concept of investing and getting clients to invest for the first time. This client-

educational process is not without struggle, and most advisors point out that a large part of their business is retirement planning. The popular discussion of why over 40% of Americans do not have any retirement savings shows that those who do have savings have usually acquired it in the form of defined contribution (DC) or more commonly known as a 401(k) plan. Advisors have indicated that the reason most investors stay with the plan is because it is a forced savings plan, with automatic payroll deduction and penalties for early withdrawals. In support of this finding, Thaler's (2015) study indicated that the adoption of not only the payroll deduction but also the automatic enrollment of payroll deduction and default elections increased savings rates and account balances in DC plans. The study indicated that 74% of plans with 1,000 participants or more have adopted such programs, and other programs such as a California's Cal Savers have helped with increased savings rates and labor compliance issues regarding an employee's election to participant in safe harbor retirement plans. With each new behavioral understanding, new practical application can aid in the discussion and ultimate adoption of effective plan architecture. This plan architecture involves identifying how the plan will be set up and how many of the default choices should align with the best interest of the plan participant. Participants in this study who provided DC plans directly to business clients should understand the behavioral aspect of employee elections and should carefully explain the effects to their clients.

As experienced advisors become aware and consider the client implications of behavioral science, their rationale and understanding can have unique implications to client well-being. This involves in advisors running discretionary portfolios for clients and their decisions on what products and services should be discussed and used with

different clients in different capacities. When advisors are aware of the concept of plan architecture and what correct plan architecture might look like, they may avoid over complexity, confused clients, and liability issues. Understanding what Thaler and Sunstein (2009) called libertarian paternalism can have unique implications and unintended consequences to the advisor's rational decision process. This means when advisors set up their strategies and product lineups for recommendations, they can articulate that they are not showing the universe of investments, but by using channel factors, they are able to break down strategic concepts into parts. By acknowledging and disclosing the investment selection universe and then keying in on certain investment strategies and not products, they can effectively serve clients.

Research Question 5: Do Financial Advisors Comprehend the Perceived Value of Understanding Behavioral Biases?

Discussions centered on advisor value is a constant debate among academic, professional, and social media critics, but the benefit and focus continue to remain on return on investment. When critics target advisor excess return, they are assigning value to only one component of the advisory role (Bergstresser et al., 2009). Although generating risk-adjusted alpha or higher returns is certainly a focus of all investment managers, participants' explanation of value indicated that advisors' value to clients was a behavioral one. Most participant explanation of value included matching client understanding and experiences to certain risk strategies, but when clients engage in this activity alone, the process could be difficult. If an average investor has very little financial education, odds are understanding of their own behavior biases could be problematic. This illustrated in various studies showing that the average individual

investor fails to consistently outperform long-term market averages (Barber & Odean, 2000). Subpar individual investor returns versus the market suggest that many investors may be susceptible to making predictable errors in financial judgments. Armed with the on-demand trading tools of cell phones, computers, and high-speed internet, individual investors and advisors could be more prone to their own heuristics and overconfident behaviors. For many investors, attractive digital access trading platforms along with social media influences set the stage for large herding behaviors to emerge. This leads to increased market volatility and more frequent economic bubbles.

When advisors are aware of behavioral biases, they can be proactive with clients, developing strategies that can assist with bias mitigation. When advisors discuss certain behavioral tendencies with clients, clients might build more tolerance for market volatility. This education process can lead to rational decisions and build a defense against reactive and irrational judgments. Advisors who understand the value of behavioral coaching can focus time and attention on educating clients on rational goal-based advising and creating objectivity within their recommendations. When clients become bombarded with media and investment distortion, advisors who have educated clients on the effects of behavioral biases could develop better client relationships.

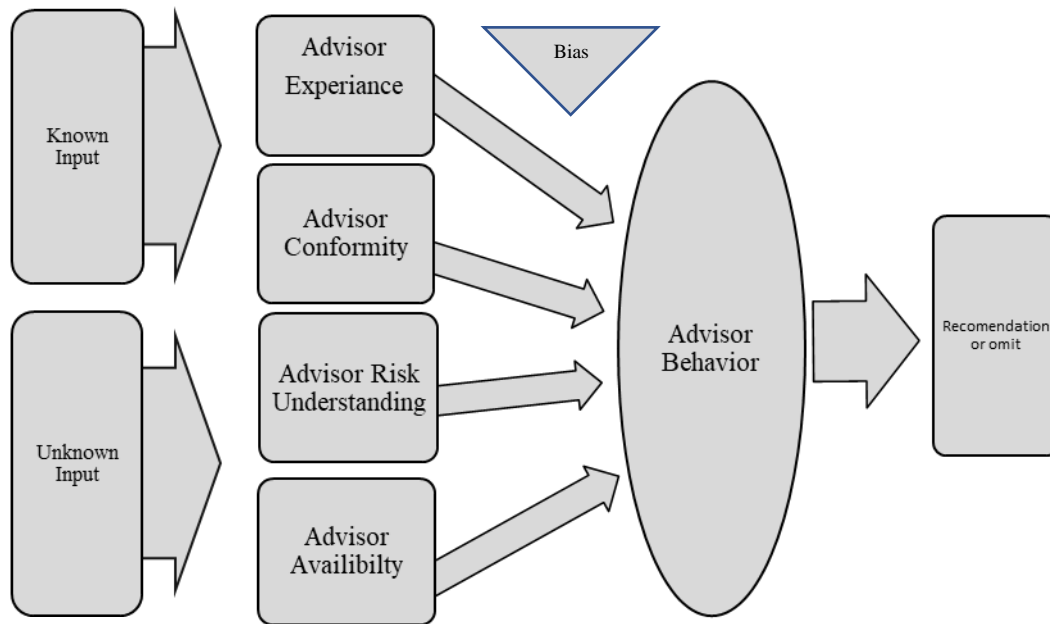
Conceptual Model

In direct accordance with the themes established within this research, a conceptual model was developed to aid in the explanation of the advisor decision process. Based on the current analysis and related academic literature, this preliminary conceptual model has been formed to understand how the financial advisor decision process is used in current practice. The model has four overarching factors that are derived from the

themes of this study and illustrate the contribution to the advisor decision process. This process is illustrated in Figure 3 and shows the known and unknown input or stimulus, followed by the four common factors found in the advisor decision process.

Figure 3

Financial Advisor Decision Process



This process is an illustration of the perceived rationale used in the development of advisor behavioral judgment. Developed from the participant responses and relevant academic literature, participants indicated that behavior was the biggest contributor in client returns and outcomes. The participant responses helped form the assumption that advisor behavior is at the center of advisor decision making and ultimately client recommendations. By taking the four factors from the themes developed in this study, a conceptual model added validation by illustrating the advisor decision process. When advisors are in the decision process, the four factors are used and weighted according to

the advisors' assessment of their client input. This input includes characteristics, goals, and complexity of the objectives. Once a weight is given to the factor, a bias can form and interfere with the formation of advisor rationale. This advisor rationale should engage System 2, and decisions should depend on logical and reasonable factors rather than System 1 intuitive thinking. Depending on the severity of the bias, possible predictable errors in judgment can affect advisor decision development and ultimately taint recommendations used in client interactions.

The advisor decision-making process is constantly changing, and the input can be known or unknown: the known is the experience with the input or stimulus being received and the unknown is the sense that a decision maker does not have relevant knowledge of an issue. When advisors have knowledge of an issue, they tend to rely on intuitive thinking and more weighting given to advisor experience and risks assessment. When advisors have limited knowledge of input, they tend to rely on advisor consensus, risk assessment, and advisor availability. As discussed, advisor experience can lead to overconfident behavior, herding, and status quo bias. When conformity and herding form, advisor's decisions on client risk can conform into a moderate bias for client-risk tolerance and allocation strategies. In addition, the tendency for advisors to conform to industry or group norms can be associated with herd mentality and can develop into overconfident behavior, which manifests itself into predicting future financial outcomes, general assumptions on client types, and client objectives.

When advisor behavior translates into action, bias can form from the advisors' experiences, conformity, understanding, and availability. As explained by participants and developed in this study, if advisors are younger, they can be more susceptible to

conformity and availability, which can lead to general System 1 thinking. Younger advisors' biases could include herding, framing, and the affect heuristics. When advisors are older, they rely on experience and their own understating of investor types and investor risk, which can lead to overconfidence, confirmation, and status quo biases. While advisors may indeed be susceptible to many more biases explained in this research, understanding where certain biases emerge from could be more prevalent can have practitioner implications. These implications emerge from advisor awareness, and if biases are generally understood by the advisor, they can be communicated with clients. Awareness and a behavioral understanding could challenge advisors and firms into developing learning forums and defensive strategies to build bias immunity.

Implications

As the financial advisor profession continues to grow and become more complex, advisor decision making must continue to accelerate in understanding behavioral biases that may exist within advisor judgments. These predictable errors in judgment may affect client long-term financial outcomes and may hinder current client trust levels. As with many expert fields, the refinement of understanding decisions without immediate feedback can introduce these predictable errors in judgement, and behavioral biases can emerge within the decision process (Thaler & Sunstein, 2009). This study shows that many of the same behavioral biases observed in other expert fields can also appear in professional judgements of financial advisors. As Kahneman (2011) explained, unlike some experts with immediate feedback, such as anesthesiologists or professional soccer players, where expert decisions is known almost instantly, the decision feedback of financial advisors may not be revealed for many decades. Not only may financial

advisors not know the results of their recommendations or decisions for an extended duration, but in many cases, the people involved in the original decision may not even be available to be held accountable. When financial experts do not have the appropriate feedback to develop and refine their recommendations, it could be problematic for them to get better and create better recommendations. Longer duration in decision feedback can also create misguided understanding of goal accomplishment, and unlike a professional basketball or football player, many financial decisions and recommendations will not have a second season. The ability to retire will usually be dependent on how much is saved over a lifetime, and how that money is invested during a lifetime.

Conclusion

Participants in this study showed that advisors are susceptible to many of the same investment behavioral biases as any other investor (Tharp, 2020). However, this study also indicates that many participants could not clearly articulate their behavioral value to the clients. The participant awareness and understanding of different types of behavioral risk and how each risk could affect different investor types was not communicated at a saturated rate. Although many participants indicated that they were aware of the concepts, most did not articulate the types of biases prevalent in different types of environments or seen in different clients' risk types. This awareness of behavioral science could lead to better advisor recommendations, and understanding and communicating to clients the presence of a behavioral value could result in measurable positive client outcomes. As advisors start to implement behavioral discussions with clients, over time the integration of those discussions can create less complexity within the financial community. Client value, as discussed in this research, is created from

educating, understanding, and building the trust of the investment community and clients. When advisors can share a story and that story resonates with a client, some aspects of trust are established, and the educational piece of the relationship can begin. Without establishing trust, understanding the behavior and emotions of a client can be problematic, and without the awareness of the advisors' own behavioral biases, they cannot engage in genuine stories and communications that can be meaningful with clients.

Practice Recommendations

One key finding was that advisors in this study indicated that client risk changes with different investor types and different client financial experiences. However, even though client life events happen, and some may even be captured by frequent advisor–client communication, no formal tracking of client sentiment is captured within the relationship unless the advisor is told or probes for the information. Event and behavioral client input should be captured by different touch points that could be through the client access portals. Upon the client's consent and understanding, the adoption of computer-generated client data should include information on the client login patterns, and patterns should be linked to current market volatility conditions. This client data should send feedback on how often clients' log in to look at their portfolio balances and what conditions the market and economic cycle is in. Client data should also be pushed the into a score assessment that can quickly calculate risk scores periodically by user interest. These digital touch points should be embedded in client contact management systems and have automatic advisor alerts. Although parts of these ideas might be in different advisor

platforms, they remain unknown, if low-cost ideas on behavioral aspects relating to client touch points and customer relationship management (CRM) tools have been identified.

Future Research

Future research should include a quantitative study centered on why financial advisors choose moderate-risk tolerance selection and whether moderate-risk selection is different among client segmentation, interfaces, or platforms. The findings from this study indicate that there is some type of conformity bias that involves risk determination among advisors. The moderate-risk tolerance selection and allocation was found to be a repetitive theme in this study. In the aggregate, the selection of moderate-risk tolerance is quite understandable, and the combination of client understanding, the compromise effect, and liability concerns all seem like logical rationalization and explanations. However, consideration should warrant a sample study that shows client-risk tolerance scores do not change with the client's age. This view of a changing risk tolerance measurement should align with various thoughts on age-based funds or on life cycle, target-based funds based on client attributes. Most of these life-cycle funds end at retirement, and because most experienced advisors, as well as most of participants in this research, work with clients who are in retirement, it might be appropriate to have some metrics on this period of life related to risk tolerance. This means, if advisor–client risk tolerance selection and change in asset allocation over time are tested, they should warrant some degree of change over time, but based on participant responses, it seems that advisor inertia or the tenancy to not make changes might not be consistent with these strategic target fund premises. Could certain advisor adherences to risk tolerances selection or model allocations simply be a product of bringing the client into an

acceptable placement along the efficient frontier, or could age or life-cycle funds be flawed in accepted assumptions for retirement clients? The consideration for measuring the effect of moderate-risk bias could have considerable impacts to client-risk tolerance and ultimately a better client outcome.

Many behavioral biases found in this study have supported and validated past empirical findings. I believe these supported biases, can have practical implications, as advisors become aware of these same biases and direct attention toward avoidance and suppression. As the financial industry becomes more sophisticated and advisors become more aware of various biases and mental shortcuts, various practical implications can aid advisor–client communication and financial decision making. For example, if an advisor has practical strategies for client interaction in periods of volatility, the advisor can more effectively calm client emotions and resist the temptation of selling too early or relying on reactive thinking. However, employing rational strategies under stress is difficult, and this task is even harder when the advisor must keep generating sales and acquiring new client assets. As the investing landscape becomes increasingly more accessible for investors, this ease brings more susceptibility to errors in judgments and cognitive biases. Regulators and practitioners should be aware of advisor and client biases that exist within the various long-term financial decisions.

Another future study could include longitudinal research of the effects of biases and heuristics on financial advice over a 5- to 10-year period. The longitudinal research would include following advisors in real time, collecting decision information, and assessing the cause and effect of their investment decisions. Information would include risk tolerance, asset allocation, product evaluation, fee models, and current market

conditions when decisions are made and clearly identifying the process and the outcome that resulted from a particular investment decision. Observing the causal relationships and the behavioral changes over time could help practitioners develop a practical understanding of how biases emerge.

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APPENDICES

APPENDIX A
INFORMED CONSENT



CALIFORNIA BAPTIST UNIVERSITY

Informed Consent

Project Title: Financial advisor Decisions and Behavioral Bias

Principal Investigator: Jeremy Garduno

Informed consent is presumed captured by the participant by engaging in the interview.

Purpose:

- The purpose of this study is to investigate and understand how behavioral biases can negatively affect the decision making process of Financial Advisor and Portfolio Managers.
- Participation shall include an in-person interview for approximately 30-45 minutes.
- This interview shall be audio recorded only with your permission.
- The semi-structured interview shall include some predefined questions as a topic of discussion.

Potential Risks:

- Participation, while anonymous, some firms may require preapproval if you choose to have your firm noted in the research.

Rights and Confidentiality:

- Your participation is voluntary, and you can refuse to answer any questions or not be recorded.
- All information shall be kept confidential.
- All responses and recordings shall be encoded to ensure your anonymity.
- Your participation will have no identifying information that would link your name to your firm or any affiliate firms.

Possible Benefits:

- Results of this study may be published in a scholarly journal or presented at professional meetings.

Questions regarding any aspect of this research study may be directed to the principal investigator Jeremy Garduno (909) 815-6671 or JeremyC.Garduno@calbaptist.edu.

Questions regarding the protection of human subjects as participants in this research may be addressed to [**https://www.cbuonline.edu**](https://www.cbuonline.edu)

APPENDIX B

EMAIL INVITATION TO PARTICIPATE IN STUDY

Emailed from JeremyC.Garduno@calbaptist.edu

Dear Participate:

You are invited to participate in an academic research study entitled “Advisor Behavioral Bias in Client Relationships.” The purpose of this study is to investigate and understand how certain behavioral biases can negatively affect the decision making process of practicing Financial Advisor and Portfolio Managers. You have been selected as a possible participant because of your extensive financial background and financial expertise in serving clients.

At your convivence, I would like to schedule a 30-45 minute in-person interview or web conference that will discuss certain behavioral biases that may affect Financial Advisor in the decision making process. The discussion shall be audio recorded, and the interview questions are included in this email as an attachment. Any questions or information you do not wish to answer or disclose shall be excluded upon your request. All recorded information shall be encoded and transcribed to ensure your anonymity. All audio recordings shall be destroyed once analyzed and transcribed, and any participant identifying information will be deleted to protect confidentiality.

Please be aware no compensation of any kind will be awarded to participants of this study. Your decision to participate is voluntary, and your participation and responses are anonymous. Please let me know if you wish to have your firm name noted in the research; however, some firms may require preapproval for this type of identification. Please note your participation in the interview will serve as your consent to this research. Any descriptive information that may identify you or your firm shall not be shared unless otherwise directed.

Thank you for your consideration and willingness to learn with me,

Sincerely Yours,

Jeremy Garduno CFP

JeremyC.Garduno@Calbaptist.edu

APPENDIX C

ADVISOR INTERVIEW QUESTIONS

- 1. What behavioral biases do you believe affect Advisor investment decision making the most (i.e., herding, confirmation, overconfidence, availability, loss aversion)?**
- 2. Do you believe Advisor's chase trends in products and services offered to their clients? What type of trends do you currently see affecting Advisor today?**
- 3. Do you believe Advisor invest in products and services familiar to them? Why?**
- 4. Do you believe Advisor have screening methods for new products and services (i.e., Annuities, stocks, ETFs, MF)? If so, how and why is that method determined?**
- 5. What are your thoughts on determining client risk tolerance? Do you have a current method of determining risk? If so, why is this method used? In a perfect world, how would you determine risk tolerance?**
- 6. Do you believe current regulation creates a moderate investment bias for investment professionals to classify clients?**
- 7. What is the best way to explain risk and reward to a client (i.e., charts, graphs, numerical representations)?**

- 8. In a percentage, what do you believe has more of an impact on client returns, the investments and services used, or client behavior? Why?**
- 9. Do you believe it should be necessary for Advisor to have a unified standard for calling themselves Financial Advisor (i.e., CFP, CFA, CIMA)? Why or why not?**
- 10. Do you currently use or plan to implement behavioral finance strategies in your practice? If so, in what form?**
- 11. Should behavioral finance topics be added to the current licensing or popular designations requirements? Why or why not?**
- 12. What two regulations do you think do more harm than good? Does the disclosure “not a bank, not insured and may lose” have any effect on client perception, and what would be a better way to convey that message?**

Questions regarding any aspect of this research study may be directed to the principal investigator Jeremy Garduno JeremyC.Garduno@calbaptist.edu.

Questions regarding the protection of human subjects as participants in this research may be addressed to <https://www.cbuonline.edu>