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MANAGEMENT / MBA

FINAL MASTER THESIS

ESSAY

INCORPORATING BEHAVIORAL FINANCE THEORY INTO PRACTICE: A CASE OF BRAZILIAN PRIVATE BANKS

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RESUMO

Este trabalho tem como objetivo analisar a incorporação dos princípios de finanças comportamentais nos Private Banking brasileiros. Para fazer esta análise foram estudadas as ideias dos principais autores da teoria de finanças comportamentais, as quais foram utilizadas como base para a elaboração de uma entrevista enviada a gerentes atuando no segmento de Private Banking. O trabalho pretende discutir um tema ainda relativamente recente, mas de crescente relevância para os profissionais que atuam no mercado financeiro. Cada vez mais os gerentes terão que educar seus clientes para o conceito de finanças comportamentais, os bancos vão entender que manter uma relação de confiança com seus clientes é um ponto chave e essencial e vão se interessar por um relacionamento que seja melhor para o cliente.

Palavras chave: Financial advisors. Finanças Comportamentais. Princípios. Private Banking.

ABSTRACT

This essay aims to analyze the incorporation of behavioral finance principles in Brazilian Private Banks. This analysis was made by reviewing the literature on behavioral finance, which was used as ground to design an interview script for Private bankers about their practices. This essay intends to discuss a still relatively recent topic however with increasing relevance for financial market professionals. Increasingly, managers will have to educate their clients to the behavioral finance issues. Banks may understand that maintaining a trustful relationship with their clients is essential and a key point, as they must invest in type of relationship that is best for the customer.

Key words: Financial advisors. Behavioral Finance. Principles. Private Banking.

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INTRODUCTION

The motivation for writing this essay came from the interest of continuing a first developed research from a post-graduation work with the same theme: Behavioral Finance on Brazilian Private Banks (Durazzo, 2016). Also, from the professional interest of someone that worked 5 years and a half on Private Bank in Brazil and aims to continue her career on this area.

Behavioral Finance is a relatively recent researched topic if compared with older finance theories. For those professionals that work directly with Private clients, individuals with high income, it is an extreme important topic that should be studied and put in practice on a daily basis.

Researchers on this subject argue that banks must be interested in building better relationships with their clients, and therefore, must adopt behavioral finance principles on their goals, objectives and for building long-term relationships.

The work is structured in three parts: theoretical, practical and results analysis. The theoretical part consists on a literature review of behavioral finance principles from the main authors such as Michael Pompian, Daniel Kahneman, Amos Tversky, and John Longo.

Based on the literature review, an interview script was designed to address the research problem of this essay. The goal was to interview 12 Private Bankers in Brazil. Third part is an analysis of the interviews performed.

RESEARCH OBJECTIVES

In light of the previous considerations, this essay aims to study how Brazilian Private Banks adopt behavioral finance principles in their practice-

The research problem is to answer the following question: “on what way Brazilian Private Banks should adapt to implement behavioral finance principles in order to build long term relationships with clients?”

From the main objective and research problem, specific objectives were established to help answering those questions:

- How to incorporate behavioral biases to determine the best practical allocation?
- How to adapt Private banker's goals according to behavioral finance principles?

CONTRIBUTIONS

The expected results of this case study are:

a) Identify how Private bankers in Brazil understand and apply the behavioral finance principles in building relationships with their clients

b) Identify what are the main issues in applying those principles and possible solutions, next steps

c) Identify the possible ways to adapt Private bankers' goals according to those principles

d) Identify some possible guidelines for the best practical allocation

1. LITERATURE REVIEW

1.1 THEORY

Traditional finance theory defines and assume some premises of investors' behaviors. One of those assumptions is that investors are rational and aim to maximize utility by making use of all available information. Another premise is that people have unlimited capacity of information processing, which allow them to constantly update their beliefs based on recently acquired information (Garcia, 2013).

Although, people as normal human beings, probably do not behave on a perfectly rational manner. This is why behavioral finance theory gained more relevance on the past years, in understanding humans' behavior: as being normal (Pompian, 2012).

Behavioral finance theory can be understood as the integration of economic principles with the psychological influences of human behavior on the investment's decision-taking process (Mitroi, 2014). As a fact, even though financial markets use more and more data, calculus, methodologies, statistics, the agents of this market are human beings.

According to Statman (2014), behavioral finance has four foundation blocks alternative to the traditional finance, or so-called Standard Finance. The four foundation blocks of Standard Finance argues that: people are rational; markets are efficient; people should design portfolios by the rules of mean-variance portfolio theory and; expected returns of investments are described by standard asset pricing theory, where differences in expected returns are determined only by differences in risk. On the other hand, behavioral finance offers an alternative block: people are normal; markets are not efficient, even if they are difficult to beat; people design portfolios by the rules of behavioral portfolio theory; expect returns of investments are described by behavioral asset pricing theory, where differences in expected returns are determined by other variables rather than differences in risk.

Studies have evidenced that the financial behavior of individuals, including those with high financial knowledge, rely much more on psychological factors than on knowledge acquired and personal abilities (Garcia, 2013).

Although recent, behavioral finance gained acknowledgment as a professional and academic discipline. Nobel Prize winner of Economic Sciences in 2002, Professor Daniel Kahneman, is one of the main references on the subject. He was able to integrate psychological knowledge with economical sciences, especially on what concerns people's judgement and decision-making process facing uncertainties (Pompian, 2012).

Kahneman observed that when facing uncertainties, individuals' decisions became very distant from the ones predicted by traditional finance theory (Pompian, 2012). Along with professor Amos Tversky they developed an alternative theory to the rational agent model, which is known as *Prospect Theory*. This theory relates to individual decision making under risk and how they evaluate gains and losses. One of the assumptions is that people are risk-averse in the domain of gains and risk-seeking in the domain of losses. They realize more the pain of a financial loss than the pleasure of a financial gain (Kahneman, Tversky, 1979).

Behavioral finance studies the cognitive, social and emotional effects on individuals' decision-making and that the characteristics of this process are not stable, unchangeable. There are different behavioral biases that explain individuals' behavior and its consequences on decision-making process. Behavioral finance literature can relate to twenty biases. Eleven of those biases were selected to be discussed in the next chapter based on their relevance for the present study.

1.2 BEHAVIORAL BIASES

Behavioral finance concerns with biases that might cause irrational financial decisions due to bad cognitive reasoning or influenced by emotions and/or feelings (Pompian, 2012). Behavioral biases are essentially defined the same way as systematic errors in judgments (Pompian, 2012, p.44).

Once those biases have consequences for individuals' decision-making, it is very important for financial advisors to be able to identify them correctly and the possible outcomes. By being able to identify them, *advisors* might be able to help their clients avoid mistakes that could result in financial losses and help them make better decisions on the long run to achieve their expected portfolio results (Pompian, 2012).

1.2.1 Cognitives Biases

There are two types of behavioral biases: cognitives and emotional. For each type, there's a different advice for the client and for that reason, it is very important that advisors know how to differentiate and recognize them. Cognitive biases are considered basic statistics, information processing, illogical or irrational reasoning and, memory errors that makes investor's decision far from reality (Pompian, 2012). Emotional biases will be explained on topic 1.2.2.

Cognitive biases can be divided in 2 types: belief-perseverance and information-processing. Belief-perseverance biases affect mostly people who have difficulties on modifying their beliefs, even when facing contrary information that creates a kind of discomfort. Cognitive dissonance, conservatism, confirmation, representativeness and illusion of control are examples of belief-perseverance biases (Pompian, 2017).

Information-processing on the other hand, affect people that comit "thinking errors" when processing information. Anchoring bias, which will be explained on topic 1.2.18, is the easiest example of this type. Mental accounting, framing, availability, self-attribution, outcome and recency are examples of information-processing biases (Pompian, 2017).

Michael Pompian (2012) describes 13 types of cognitive biases and 7 emotional biases. As previously explained, 8 cognitive biases and 3 emotional were selected and will be explained on the next chapter.

1.2.1.1 Cognitive Dissonance

Cognitive Dissonance theory was first developed by psychologist Leon Festinger in 1957. This phenomenon can be explained by the mental discomfort generated once recent acquired information conflicts with pre-existing knowledge; this discomfort is called Cognitive Dissonance (McLeod, 2008).

People with this behavioral bias can have three types of behaviors that must be corrected to avoid negative implications for themselves: modify beliefs, modify their own actions and modify their perceptions or relevant actions and attitudes (Pompian, 2012, p. 60).

Modify relevants beliefs of a client that, as a consequence of this bias, end up changing its beliefs to some that might look irrational, is an advice that the financial advisor can take to correct this bias. One way to convince clients to modify those actions, for example clients that smoke knowing that is bad for their health, is by creating fear/ansiety so they avoid repeating this behavior (Pompian, 2012). Regarding the example of the smoking client, the advice would be to highlight the negative consequences of smoking and how danger it is, so that the client keep this is mind and think twice before smoking again.

Trying to correct the behavior of a client that modify its perceptions by creating on his mind some kind of argument, reasoning for acting the way it did, it is not an easy task. The advisor can help the client identify and think about any action that conflicts with his perceptions (Pompian, 2012, p. 61).

1.2.1.2 Conservatism

Conservatism bias can be described as a mental process where people are attached to their previous views at the expense of recognizing newly acquired information (Pompian, 2012, p. 63). People with this bias react sometimes as an irrational individual when facing new evidence.

Once Conservatism is a cognitive bias, advising the client by showing relevant and consistent information is a way to help him to adjust to the new situation. As clients tend to underestimate previous information, advisors should help them understand the newly acquired information so they can act in a more rational manner regarding that new information. Clients with this bias should make themselves two questions that could help them correct and control this behavior: “How this new information impacts my previsions? Does impact negatively, does it risk my first prevision?” (Pompian, 2012, p.70).

1.2.1.3 Confirmation

Confirmation bias can be described as people’s tendency to develop certain selective perception that ends up emphasizing ideas that confirm their initial beliefs and neglect views that contradict them (Mahoney, 2016).

In other words, this bias refers to the individuals’ ability to convince themselves of what they want to believe in the first place (Pompian, 2012). For example, a client that bought shares from Apple, because he believes that it is a strong and good company might end up emphasizing positive news about the company and neglect the *advisor* recommendation of reducing the exposure on this asset, which aims to protect the client for the high level of risk and correct this bias.

A first step to correct this bias is by identifying it correctly and once done, look for information that might contradict or confirm the investment decision so that is as assertive as possible (Pompian, 2012).

1.2.1.4 Representativeness

The rule of thumb stating that when making judgments, people rely on the degree, to which their observations represent familiar characteristics, is what defines Representativeness bias (Bachmann, Giorgi, Hens, 2018, p. 10). This bias describes people’s propensity of not taking into account the size of a sample, so, they believe a small sample may represent something as good as a large sample. Which might lead to creating incorrect understandings and interactions (Bodie, Kane, & Marcus, 2015).

People that have insufficient information about an investment product but make their decision based only on their rule of thumb is an example of someone that has this type of bias. Antoher example is clients that choose their assets by observing their current performance only.

The best approach for advisors to address this bias behavior is to analyse a bigger sample of investment options with the client, showing their current and historical performance and providing statistical evidence on risk and return (Bachmann, Giorgi, Hens, 2018).

1.2.1.5 Mental accounting

Mental accounting can be described as a framing manner (framing bias is better explained on topic 1.2.1.9) where people mentally separate certain decisions.

According to Thaler (1985), mental accounting is defined as the set of operations and strategies individuals use to organize, formulate, and evaluate their decisions (Bachmann, Giorgi, Hens, 2018, p. 25). We can think on the effects of mental accounting bias by using the example of gamblers that have a higher predisposition to accept new bets if they have an advantage position in a certain moment in time. The rationale behind it is that the gambler "frames" the new bet on his "earnings account", as he is using the money earned until now and not his own money; so, he can afford to take that risk (Bodie et al 2015, p. 344). This is a very common bias and almost everyone is susceptible to it.

Statman (2008) describes *Behavioral portfolio theory* somehow like the mental accounting bias, where investors divide their money into mental accounts, not looking at their portfolios as a whole but by layers. Consequently, money become associated with particular goals where attitudes towards risk varies across layers.

When trying to correct this bias, advisors must alert clients that by using several mental accounts for their assets they may create inefficiencies in their portfolio, once the correlations between the returns of those assets cannot be neglected (Bachmann, Giorgi, Hens, 2018, p. 26).

Clients with type of bias might end up separating assets in "mental accounts" in a way that doesn't maximize portfolio return. A*dvisor* must remind their clients that the best practical portfolio allocation aims to maximize the return minimizing the risk. It is essential to reach a balanced portfolio diversification in terms of risk-return and this cannot be achieved with clients that have mental accounting bias, as they will tend to have a high concentration of a specific asset class in his portfolio, due to the “mental separation” of money (Pompian, 2012).

1.2.1.5 Anchoring and adjustment

Briefly, the anchoring and adjustment bias is a heuristic that influences the way people form their opinions, using intuition about ocurrences and probabilities. It can be explained by people’s tendency of making estimates starting with an initial value, or "anchor," which will then be adjusted up or down (Kahneman & Tversky, 1973) according to new information that is provided. A simple example is when a person is asked to estimate the weight of a whale giving the option to be below or above a reference number and then to estimate an exact value (not within a range); the person who has this bias will certainly answer a number close to the referenced one.

Awareness is a key factor in attempting to correct this bias. When buying or selling shares, investor should ask himself whether he is analyzing the situation on a rational manner or by holding on to an anchor number (Pompian, 2012).

1.2.1.7 Framing

Framing bias is explained by investors’ tendency to respond differently to different situations depending on the context in which an option is presented and, on the way, choices are framed (Bodie *et al* 2015). An example where this bias can be perceived is by presenting the payoff framed as gains or as losses (Bachman *et al* 2018). If an option is presented as a gain “you have 70% probability of winning 10% return”, or a loss “you have 30% probability of losing 20%”, investor would probably accept the first option and reject the second because of the way it was proposed.

A first step to correct this bias is for the advisor along with the client, understand his risk tolerance and formulate the questions in a clear and correct, neutral and uniform manner, so there are no different contexts and no biased questions. Advisors should try to ask the right questions, and not ones that might elicit biased answers, and make sure client’s answer is understood. Another way to help neutralize this bias is through client’s education, emphasizing portfolio diversification (Pompian, 2012, p. 247).

1.2.1.8 Availability

Availability bias can be described as the human behavior tendency to attribute more importance to things that come easily to mind as being more representative that they really are when estimating the probability of an event (Kahneman & Tversky, 1973). For example, people that are afraid to fly because the risk of death with an aircraft accident, however the number of people who dies because of car accidents is greater and they continue to drive every day. The number of news on the radio, newspapers and TV affects those people each time there is a aircraft crash.

One way of trying to circumvent this type of bias is when assembling the assets portfolio; research all of the assets, bringing evidences of return and risk, and not only those who already have greater knowledge and familiarity. Investors more susceptible to this type of bias must take care not to be influenced by what comes out in the media and prefer to analyse the most up-to-date information to prevent against this bias (Pompian, 2012).

1.2.2 Emotional Biases

Emotional biases are those that arise spontaneously because of attitudes, feelings or intuitions and by consequence determine the client's judgment, when he is taking an investment decision, divert from reality and from rational investment decisions (Pompian, 2012, p. 47).

Once those biases emerge from emotional factors it becomes more difficult to correct them rather than cognitive biases (Pompian, 2012) as it requires a certain level of emotional self-awareness that investors might not have.

1.2.2.1 Loss aversion

Loss aversion bias was developed by Daniel Kahneman and Amos Tversky in 1979 as part of *Prospect Theory*, from the observation that people generally feel a greater impulse in avoiding losses rather than acquiring gains (Pompian, 2012, p. 191), once the pain of a loss is psychologically more powerful that the pleasure of a gain. People are willing to take more risks (for example behaving dishonestly) to avoid a loss than to obtain a gain. Loss aversion has critical implications for investment decisions because when investors overweight losses relative to gains therefore it leads to flawed investment decisions.

There are four main negative implications linked to loss aversion bias. Investors susceptible to this bias might end up keeping on their portfolio assets that are devaluating for a long time, which is not recommended. Advisors must always advise customers when the recommendation is to leave an asset that for some reason is not showing profitable within the portfolio. Another implication for investors is that some might sell winning positions too soon by the fear of losing profit, which could limit the portfolio's upside potential (Pompian, 2012, p. 211).

By holding losing positions, investors might accumulate too much risk on their portfolios. Advisors must try to educate their clients regarding investment's risk and the related concepts to help investors understand the full picture and how important it is to protect the overall portfolio (Pompian, 2012, p. 215). Also, loss aversion can cause investors to end up with unbalanced portfolios. When identifying situations like this, is the Advisor's responsibility to educate the client about the benefits of balanced investment allocation and portfolio diversification (Pompian, 2012).

This bias should be avoided by investors when making financial decisions, once it ends up instigating precisely the opposite of what the investor actually wants: increase risks as a result of a greater return and not to mitigate their losses (Pompian, 2012, p. 211).

1.2.2.2 Overconfidence

Overconfidence bias can be explained by people's behavior of thinking they are smarter than they are. Consequently, they overestimate their beliefs as well as their capacities (Bodie *et al* 2015). Therefore, overconfident investors might underestimate the risk of their portfolio, becoming blind on their decisions and keeping unwell diversified portfolios. Due to that, this bias is considered one of the most harmful for the investor (Pompian, 2012).

One way to prevent this bias on investors that believe they have more knowledge about the market and consequently end up operating with high frequency is to ask them to review all their operations done in the last 2 years and compare the performance obtained in the period with and without these transactions. When facing low performance in their portfolio, these investors may end up being aware of the consequences of this type of behaviour (Pompian, 2012).

Investors that became overconfident of their investment decisions have the tendency of not considering the probability and possibility of losses in their portfolios. Education is key for bias-related clients, by showing them real cases of overconfidence losses and trying to reinforce, through data analysis, how volatile the markets are and the investments' risk (Pompian, 2012).

1.2.2.3 Regret aversion

Individuals who present this bias seek to avoid the emotional pain of regret associated with poor decision-making. According to psychologists that study this behavior, people who make investment decisions that have proved to be bad, feel even more regret when those decisions are not "conventional" (Bodie *et al* 2015). People who are regret averse try to avoid

Regret aversion clients tend to become very conservative; as a result, their advisors must try to show how important it is to have a balanced portfolio with some high-risk assets to achieve a higher long-term performance (Pompian, 2012).

Clients affected by this bias that already had a financial loss tend to keep devaluated assets in their portfolio for the fear of making a definitive loss, which they would regret. As regret aversion is an emotional bias, investors must be advised not to regret the losses from their previous decisions that did not turned out as expected, and the advisor must try to demonstrate how under the information available at that moment, the decisions were right. This might help them mitigate their pain of losses, which may help in the upcoming decisions (Pompian, 2012).

1.3. BEHAVIORAL FINANCE IN PRACTICE

Behavioral finance has gained more relevance among financial advisors, taking a more prominent place in the media, since the bursting of the technology stock bubble in 2000 (Pompian, 2008). A study developed by Michael Pompian in 2007 surveyed 290 sofisticated[1] financial advisors in 30 countries to understand their interest and use of behavioral finance with their clients. From this sample, 93% believed that clients make irrational investment decisions and 96% were using behavioral finance principles to improve their relationship with clients (Pompian, 2008).

Although behavioral finance has gained relevance and some advisors have already started to use those principles there are still some challenges ahead. As described in the previous section, there are mainly 20 different biases that investors might have. However, the question is, how can we identify them properly and how can they be corrected.

First issue is that there is no "standard" market methodology to identify the different types of biases and a way to apply to the client relationships. An *advisor* that has knowledge on behavioral finance might be able to identify a customer's bias more easily, but still, there is no standard methodology to apply. A second issue is that even if the advisor can identify the customer bias, he may not be able to effectively deal with the identified bias when managing the portfolio asset allocation of the client (Longo, Pompian, 2005).

According to Longo and Pompian (2005), there is no standard methodology for bias identification and incorporation. However, advisors may use three questions in this process. After identifying the type of bias observed in the client, advisor should first

[1] By sophisticated the author mean financial advisors with at least one professional designation such as CFP, CFA or CPA.

ask himself and understand at what time he should try to moderate the observed bias. Second, ask himself at what time he should try to create asset allocations that adapt to customer bias. Finally, once identifying whether the action should be moderating or adaptive, choose the quantitative parameters to put this recommendation in practice.

The first parameter proposed by Longo and Pompian (2005) is that the level of adaptation or moderation depends on client's income level. Thus, the higher the customer's income level the more the advisor should adapt to the biases and the lower the income level, the more the advisor should try to moderate it (Longo, Pompian, 2005). This rationale can be understood using a practical example. Let's assume the advisor has 2 clients, both with shares from X Company with an amount of €50.000 and that Company X goes bankrupt. A €50.000 loss for a customer who has €2 millions wealth is much lower, has less impact, compared to a €50.000 loss for a customer who has only €200,000 of wealth.

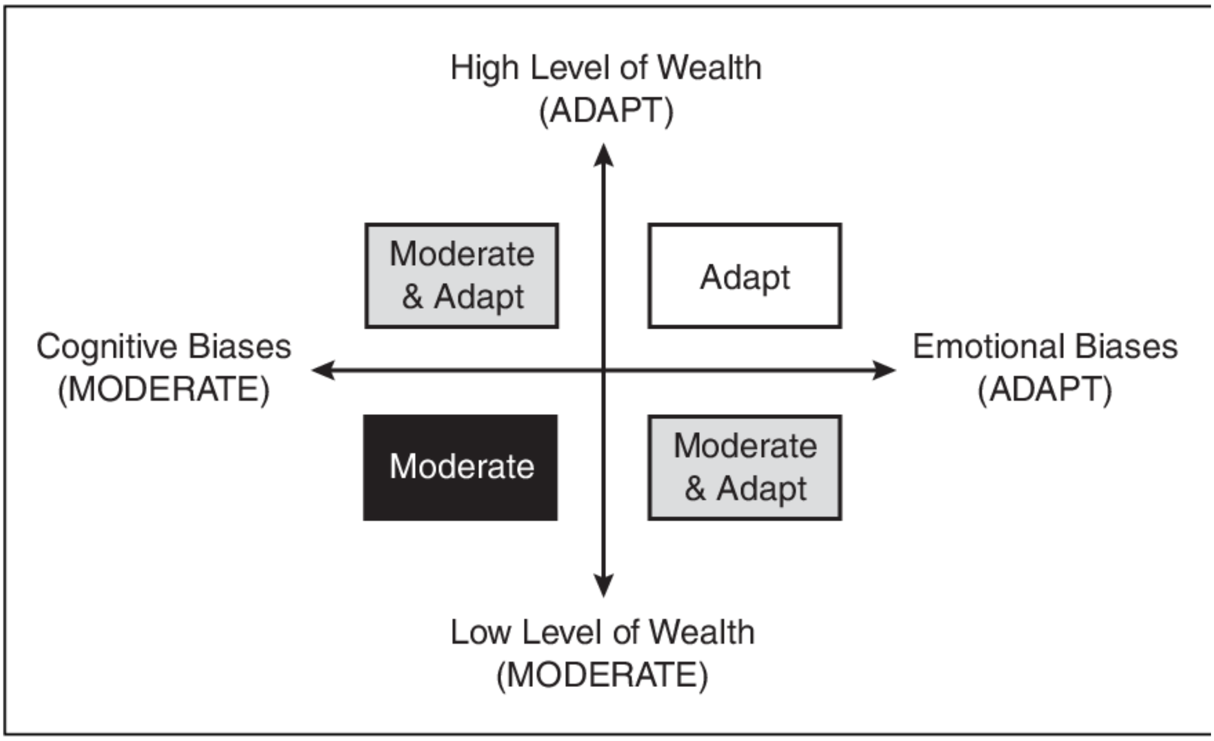

Figure 1. Type of bias and level of wealth. Source: Pompian, 2005.

The figure above illustrates the recommended advice according to the type of bias and client's level of wealth.

Second parameter suggests that the decision to moderate or adapt depends on the type of bias that the client presents, whether it is cognitive or emotional. Regarding clients that present some kind of emotional bias the action taken should aim adapting and for those who present some kind of cognitive bias the advisor should try to moderate it. The explanation for the rationale of this parameter is that cognitive biases are usually a consequence of illogical or irrational reasoning that can possibly be corrected with advice and customer education on the investment decision process, while emotional biases are usually consequence of impulsive feelings or intuition, which are harder to address (Longo, Pompian, 2005).

Pompian (2008) also proposes another approach to bias identification called Behavioral Alpha, consisting on a multi-step diagnostic process that classifies clients into four Behavioral Investor Types (BITs). Those types classify clients by being active or passive and their risk tolerance (low, medium, high).

Passive Preservers

Passive Preservers are clients with passive traits and low risk tolerance level. The primary bias of these clients is emotional. Mainly investors who put high emphasys on financial security and preserving wealth instead of taking risks to grow and improve returns. Those investors need good and “big picture” financial advice. According to Pompian (2008) once you build their trust, Passive Preservers are the advisor’s best clients because they value their opinios and professional expertise.

Friendly Followers

Friendly Followers clients have passive traits and low to medium risk tolerance level. The primary bias of these clients is cognitive. They are mainly passive investors who usually do not have their own ideas regarding investments and often follow what friends and colleagues are doing with their investments. Due to that, those investors have a propensity to overestimate their risk tolerance. According to Pompian (2008) those are investors that must be handled with care. Education regarding the benefits of portfolio diversification tends to be the best advice and must be done in a clear and unambiguous manner.

Independent Individualists

These are clients with active traits and medium to high-risk tolerance level. The primary bias of these clients is cognitive. They tend to be strong-willed and independent thinkers, which could be an issue when they made an investment by their own risk once they maintain their initial view, despite of the changes of circumstances. Although they can be difficult to accept advice, they usually have enough discipline to listen if it is presented in a way that respects their independency. Education is then essential to change their behavior. Educational discussions on meetings could be a good approach for these type of investors (Pompian, 2008).

Active Accumulators

These are clients characterized by active traits and high-risk tolerance level. This is the most aggressive behavioral investor type. Their primary bias is emotional. They tend to be more strong-willed and confident than *Independent Individualists.* They are quick decisions-makers who are risk-seekers and are comfortable with volatility. Nevertheless, are the hardest clients to offer advice and sometimes the best action from the advisor point of view is to monitor their investments trying to avoid excess spending. The best approach for advisors with these investors is to take control of the situation and prove they have the ability to make wise, objective, long-term decisions and can communicate these results in an effective way (Pompian, 2008).

The first phase of the diagnostic is done during the first interview, identifying the Investment Traits of the client as Active or Passive (see annex 1 for the diagnosis test). In a second phase, advisor should apply a risk tolerance questionnaire to identify if client falls into any of the four BIT previously identified and described by Pompian, 2008. By understanding the client's profile before any asset allocation proposal will help to build stronger relationships between the advisor and their clients as they are better equipped to deal with any irrational behavior when it arises (Pompian, 2017).

Some banks are already incorporating behavioral finance into their day to day. TD Bank (2019) is an example of a Wealth Management that brings those principles to their client's investment reality. There's a whole section on their website dedicated to exploring client's wealth personality along with their advisors, insights about the subject, industry report.

Credit Suisse is another bank that have been incorporating behavioral finance theory into practice by having publications on their Wealth Management section. Among these papers there is one developed by Thorsten Hens and Ann Meier (2016) from University of Zurich on "Behavioral Finance: the psychology of investing" in order that clients may understand psychological aspects of decision making and explore ways to mitigate risks and losses.

Eventually, because of being a more recent, less structured financial theory and their use in practice is still giving the first steps, managers may be reluctant or afraid to try applying it in practice. However, more and more managers will adopt some of the approaches, as they need to maintain and develop a relationship of trust with their customers. Thus, financial advisors must understand and adopt the principles of behavioral finance in relation to their clients so they can improve the level of communication and assertiveness in meeting the client's long-term goals.

2 METHODOLOGY

Taking into consideration the objectives and research questions proposed for this study, the research design has a qualitative and descriptive approach. According to Saunders, Lewis and Thornhill (2016), qualitative research is usually associated with the interpretivism research philosophy since researchers must make sense of the subjective and socially constructed meanings expressed about the phenomenom under analysis.

For this study, research strategy chosen will be a Case Study. According to Dubois and Gadde (2002), Eisenhardt and Graebner (2007), Ridder *et al* (2014), Yin (2014), referred by Saunders *et al* (2016), this strategy has the ability to generate insights from intensive and in-depth research into the study of a phenomenon in its real-life context, leading to rich, empirical descriptions and the development of theory.

2.1 SAMPLE AND DATA COLLECTION METHOD

The selection of the interviewees in this study are based on a purposive homogeneous non-probability sampling. According to Saunders *et al* (2016), for this sampling method the researcher must use his judgement to select the subjects that will best enable him to answer the research questions and objectives proposed. For that reason, it was used a small sample of highly experienced financial advisors to obtain their views concerning the adoption of behavior finance theory in their jobs. Being a homogeneous sample, it focuses on a subgroup where the sample members are similar on what concerns occupation or level in a company's hierarchy. Once members have similar characteristics, this allows the researcher to explore them more deeply and small discrepancies that become apparent.

Taking that into consideration and the time constraint of eight months to write the thesis, the interview script was sent to seventeen bankers and nine of them accepted to be interviewed.

As this study has a descriptive research design, structured interviews were used as a mean to identify general patterns. Structured interviews use questionnaires or scripts that are based on a predetermined and "standard" set of questions. Due to geographical reasons, interviews were by Skype, phone or e-mail. Structured interviews are helpful when using a deductive approach to test a theory and the standardized nature of the data collected can make it easier to test hypothesis (Saunders, Lewis & Thornhill, 2016).

2.2 DATA ANALYSIS

Data collected from the interviews were analysed through a deductive approach. This study started with the research literature of major bias identified by behavioral finance theory and the research strategy was designed to test the theory. The analysis of the notes taken during the interviews focused on the evaluation of the propositions or hypothesis in relation to the existing theory (Saunders, Lewis & Thornhill, 2016).

Interviews by Skype were immediately transcripted. Those responses received by e-mail were first analysed to see if there was any doubt or point that was not clear to require additional comments from the interviewee and then gather with the others to do a transcript summary.

According to Yin (2014), referred by Saunders *et al* (2016), when using a deductive approach (from theory to practice), you may also use the theoretical propositions as a way to devise a framework to help organize and direct the analysis. A descriptive framework, as is the case in this research, rely more on the researcher experience as well as on what he may expect to occur.

3 THE CASE OF BRAZILIAN PRIVATE BANKS

3.1 INTERVIEW GUIDELINE

After reviewing the literature and analyzing previous research results, an interview guideline with 19 questions and a summary of a case to understand the position of the interviewees in the case in question. Each question in the guideline aimed to test the issues that were part of this study and will be described explaining the reasons for each question.

First question was to identify interviewees' job position. Although they could be Private Bankers, Team Leaders, they all are financial advisors. For this study purpose, all will be referred as *advisors.*

Question 1: What is your job position?

For advisors to implement and incorporate behavioral finance principles they must first understand the theory and what it is about; if they were not aware it would be hard to incorporate theory into practice. This question was applied on the previous questionnaire from the previous research and will be applied again but as an open question to see how managers understand this theory.

Question 2: How would you better describe Behavioral Finance?

As previously stated on the literature review, the first proposition to help advisors identify the best practical allocation is to determine when they should moderate or adapt to client's biases (Longo, Pompian, 2005). As was observed in previous studies, the majority of interviewees do not know how to identify cognitive and emotional biases (less than 50% of respondents got the right answer) and due to that, they do not know when to moderate and when to adapt. Although, the questionnaire showed that the majority of respondents are able to recognize emotional biases. Below two questions were formulated to identify if advisors can make the distinction of cognitive and emotional biases.

Question 3: Suppose your client refuse to invest on a specific asset because their relatives lost a lot of money with this same asset in the past, even knowing about the

benefits of this asset today. Behavior described is a consequence of some impulse or intuition. What kind of advice would you give to this client?

Question 4: Suppose your client wants to invest on an aggressive fund because it had presented an outstanding performance on the past 2 months, but not taking into consideration that the fund had incurred in losses 5 months ago. Behavior described is a consequence of irrational thinking, which might result on mislead decisions and consequently, losses. What kind of advice would you give to this client?

The second proposition is that the decision to moderate or adapt to the client's behavioral biases depends on his level of wealth (Longo, Pompian, 2005). On the previous research, interviewees were given only the level of wealth to respond how they would moderate or adapt. That question had less than 50% of respondents giving the right answer. Although, behind that difference in adapting and moderating regarding the level of wealth there's also an analysis of how that decision can endanger the client's standard of living and in which percentage (Longo, Pompian, 2005).

Question 5: Suppose you have 2 clients on your portfolio, one with 30 million euros and another with 2 million euros, both living off the investment income only. They both want to invest the same amount of €100.000 on the share of company X which is not part of the recommended portfolio. Now, assume a lost of this amount can endanger the standard of living of the cliente with € 2 million wealth, but will not have an impact on the standard of living of the cliente with €30 million wealth. In face of this situation, which should be the advice to each client?

Previous research has demonstrated that the majority of advisors can't easily identify behavioral biases on their day to day (Durazzo, 2016). Some of them identified behavioral traits but could not say what kind of bias was that which leads to the hypothesis that the majority of managers do not have a deep knowledge of behavioral finance theory and the existent biases. To understand how this focus group respond to that, the following questions were formulated.

Question 6: Do you identify behavioral biases when managing your own personal investments? If yes, which biases can you identify?

Question 7: What actions do you take to prevent those biases from disrupting your investments?

Based on the conclusion took from previous research, that most advisors do not have yet adequate knowledge of behavioral finance theory, this could lead to inadequate adices when managing client's portfolios (Durazzo, 2016). Consequently, Private Banks should train their managers and raise their awareness and knowledge of behavioral finance theory so they are able to adopt the theory's principles and provide a better quality of service. To identify possible actions, raise awareness and help managers, following question was proposed:

Question 8: Do you think that a higher level of understanding on this subject could help you identify and advise your clients better? Why? On which manner?

One possible hypothesis to be tested with advisors is, if the capital markets regulatory instution could help Private Banks on this incorporation of behavioral finance into practice.

Question 9: Do you believe ANBIMA could/should find ways to adequate to this new theory, once financial market practices are regulated by them, to help financial institutions incorporate those principles?

On the previous research made, there was a question asking about the quality and efficacy of the Suitability questionnaire. Results demonstrated that Suitability questionnaires could be better applied in order to help advisors identify and incorporate behavioral finance principles when advising their clients (Durazzo, 2016). With the aim to identify advisors' opinion and views regarding possible improvements, the below question was formulated:

Question 10: Do you believe Suitability questionnaires applied are sufficient to deeply understand and identify client's profile and biases? If not, what would you change? Would you include other type of diagnostic tools? Which one? What impact would this have?

Another key point explained by behavioral finance is the human side of decision making, which explains that clients are not perfectly rational but instead normal. As they are normal, their needs and interests change through their lifetime. On the previous research, question "How often do you revise your client's Suitability profile?" was made to test if advisors understood this theory principle. Only 20% of the sample choose the answer that confirms this key point explained by behavioral finance theory. This question will be made again, but as an open question and adapted

Question 11: What makes you revise your client's Suitability profile, besides the periodicity imposed by the bank? With what frequency?

On the previous research two questions were formulated to identify managers behavior when facing clients with an example of cognitive and emotional biases. A very commonly observed bias is the loss aversion, which is an example of emotional bias. On the previous research, 87% of the sample choose the answer that confirms the theory. Advisors were asked the following question:

Question 12: Due to the actual market scenario, the Bank is recommending its clients to eliminate or reduce exposure to a specific fund. You pass this call to your portfolio of clients and one of them said he won't do it because he doesn't want to lose money. How would you advise this client?

Framing is another very common observed bias, which is an example of a cognitive bias. To understand how well managers can perceive and advise clients susceptible to this bias, the following question was formulated:

Question 13: Suppose your client comes to you saying that he wants to invest on a fund because it will deliver 8% gross return on a 6 months period if the dollar increases 30% on this period. How would you advise this client?

As Private Bankers, financial advisors that work at Private Banks, have goals to achieve, they work daily to perform its best. To understand if when trying to achieve their goals, managers are looking into clients' long-term goals and interests the following questions were formulated:

Question 14: Assume that you have a goal to sell a new closed fund, with short commercialization period for the highest number of clients in your portfolio. You realize that many of them don't have the required profile for this investment. What would be your attitude among those clients and knowing that you have a goal of revenues to achieve?

Question 15: Do you personally believe Private Bankers goals are aligned with behavioral finance principles? Do you believe those goals should be changed and reviewed?

Question 16: If you had a goal that evaluates the long-term relationships in your portfolio of clients would that change some of your recommendations today that are being made considering your goals? How would it change?

As Gounaris and Prout (2009) proposes, there are some lessons and best practices that advisors should practice for the future and for restoring customers' trust. To identify how those practices could be applied, the following questions were used:

Question 17: How do you redefine what is wealth for and with your clients?

Question 18: Do you customize your communications with your clients often? If yes, how do you do it?

Question 19: How much importance do you give to having a relationship of trust with your clients and how do you build it?

To finalize, a case study from Michael Pompian and John Longo (2005), that aims to test guidelines for determining Best Practical Allocation, was adapted. Assume that you have 3 clients:

1.Mrs Silva who is single, 69 years old that do not work anymore with a modest lifestyle. Her income comes, exclusively, from the investment portfolio of €1.000.000,00. She doesn't want to lose money because she recalls that her family members lost money in the crash of 1929. She exhibits three types of behavior biases:

- Loss aversion (the tendency to feel the pain of losses more than the pleasure of gains)
- Anchoring and adjustment (the tendency of making estimates starting with an initial value, or "anchor," which is then adjusted)
- Cognitive dissonance (the mental discomfort generated by recent information conflicting with her past knowledge)

2.Mr Oliveira is also single, a 52 years old Marketing executive who earns €200.000,00 per year. He sometimes spends more than he earns but have saved around €1.200.000,00. His main investment goal is to donate € 2.400.000,00 to the university he studied. He exhibits the following biases:

- Loss aversion - as previously defined
- Overconfidence (the tendency to overestimate its own investment knowledge capabilities)
- Self-control (the tendency to spend today instead of saving for the future)

3. The Sousa family is composed by a couple with some financial knowledge, aged 35 and 37, with 2 children aged 3 and 5 years old. They don't plan to have more children. The Sousa's are financially sound, but they were not in the market during the bull market of 1990's like many of their neighbors. The couple's total income per year is €110.000,00. They have saved until now €140.000,00, which they believe will be their safety reserve to send their children to college and retire with comfort. As a couple they exhibit the following biases:

- Loss aversion - as previously described
- Regret aversion (the tendency to feel very disappointed for taking an incorrect decision)
- Availability (the tendency to choose by what is easily recalled to their minds)

Assume that year is 2001; that capital markets are off their highs for stocks and lows for bonds, but not at the extremes of the recent market cycle. Assume now that a portfolio optimizer tool was performed for the 3 clients and the results were the following:

Mrs Silva: 75% bonds, 15% stocks, 10% cash

Mr Oliveira: 85% stocks, 10% bonds, 5% cash

The Sousa family: 70% stocks, 25% bonds, 5% cash

With that scenario in mind, what would be your answers for the following questions:

a) What effects do client's described biases have on the asset allocation decision?

b) Would you moderate or adapt to these biases?

c)What would be the best allocation for each investor?

4 ANALYSIS AND RESULTS

Due to time constraints, interviews were made with 7 Private Bankers only, being 6 from banks and one from a Family Office, and 2 Team Leaders, one with clients up to BRL 10MM (which corresponds to a bit more than EUR 2MM) and another with Ultra High clients (above BRL 50MM, which corresponds to a bit more than EUR 10MM).

As this study is qualitative, based on a descriptive research design and deductive approach, each question was analysed to understand commonalities and dissimilarities of the answers of the interviewees, that were conform and disconform to the behavioral finance principles and identify repeated general patterns.

All interviewees were aware of the existence of Behavioral Finance Theory and their answers confirm the theory principle of psychological influences, including emotions of human behavior on the investment's decision-taking process. In addition, two bankers relate also these emotions, somehow to the market scenario. This evidence shows an improvement from previous research where 87% replied they were aware of behavioral finance theory (Durazzo, 2016). However, they were not asked to describe what is this theory, which could also have led to a lower level of awareness.

For the two questions related to the understanding of when to moderate and adapt to biases, results were similar. For the question regarding the emotional bias, 7 out of 9 interviewees confirm the theory, giving the correct advice and only two advisors didn't identify the bias and its advice correctly. About the cognitive bias question, only one banker didn't explain very well and identify the bias described correctly, which is the same person that didn't identify the emotional bias as well. 8 out of 9 interviewees got this question right, confirming the theory that explains when to moderate and adapt to client's biases.

The question aiming to test the second proposition regarding the level of wealth had almost all interviewees confirming the theory and giving the right advice to the client. Only one banker did not make the differentiation of level of wealth, giving the same advice to both clients; it is important to reinforce that this banker takes care of clients with a very high level of income (an average of EUR 10MM) so this could explain his answer. On the other hand, a Team Leader of a segment until EUR 2,5MM made a very interesting reflection on how to advise the client with a lower level of income.

All advisors said they identify biases when managing their personal investments, which confirms the theory that everyone is susceptible. Although only 55% of the sample identify some of the existing biases. As they know everyone is susceptible, each one explained what they do to prevent and gave different answers. Two advisors said they think on the long term so the emotional side do not disturb their investment decisions.

All managers agree that a higher level of understanding on this subject could help them identify biases and advise their clients better. One banker said that might help on advising and educating clients but that not everything is liable to circumvent, which according to the theory is true, once integrates psychological influences. Another one even said that she had used the theory on a practical case with a client; which helped her on that situation.

One hypothesis was to identify bankers' opinions if ANBIMA could/should find ways to adequate to this theory. Two advisors don't agree on this hypothesis, saying that it should come from the banks itself, and not as a regulatory manner. Another one defends that once behavioral finance relates to psychological influences maybe shouldn't impact ANBIMA rules. The other seven of them agrees it could/should. Some don't know how to adapt and others defend it already started making changes and improving.

All bankers agreed that the Suitability Questionnaires are not sufficient to understand and identify client's profile and biases. Three of them talked about some type of simulation with the clients, something more dynamic to understand more deeply the client's behavior on each situation. It is worth noting that one Private Bank was testing a diagnostic/otimizer tool to complement the suitability questionnaire in helping on advising and identifying client's biases.

The question regarding Suitability review periodicity had better results than previous research (Durazzo, 2016). 7 out of 9 interviewees replied that market events, changes on client's life are reasons for reviewing the suitability and not only a periodicity imposed by the bank. One advisor replied that reviews it once a year, and another one said once a year or when client asks for; in both cases, the understanding that client's life and behavior change thoughout the years was not identified.

The question regarding the loss aversion, one the most common emotional bias, lead to the hypothesis that all interviewees confirms the theory, that is hard to correct this type of bias so bankers must adapt. In this specific case what was aimed to test was if advisors understand that bias is emotional and reinforce the reason for the recommendation given. From the answers given not all identified, or at least relates, the emotional side of the bias, but all gave the correct advice according to the theory.

All but one advisor, that didn't reply the question, understood the cognitive aspect of the question regarding framing bias, which confirms the theory. On different manners they would all try to educate the client, explaining the rationale, the reasons for an investment to be better or not, if is in line with market scenario and with client's profile.

Next question was formulated to understand if bankers look into client's long-term goals and interests when they have goals to achieve. One banker gave an answer completely focused on the goal and another one said how we would try to adapt the goal with the institution in order to still achieve. One said how a situation like that is a dilemma but above all he would not sell if it doesn't suit client's profile, if it would somehow damage the relationship. The most interesting answer came from the youngest interviewed who had just become a Certified Financial Planner (CFP®) and told me how she studied this for the certification. She talked about how important it is to be diligent when advising clients and how on this situation she would think more on the client rather than achieving the goal.

Advisors were asked if they personally believe their goals are aligned with behavioral finance principles and if they should be changed and/or reviewed. Only one banker said they are already aligned and two others said they have been changed already. The other 66% of the sample believe bankers goals can be changed and reviewed to reflect those principles. An advisor that works at a Family Office said he do not believe on a banking structure bankers' goals can be aligned with behavioral finance, once in the end of day there's a conflict of interests to sell products that aufer better revenue for the bank, but on a Family Office structure yes. He talked about how he believes the Private; Wealth Management business should change their structures to be more alike Family Offices and investment platforms.

Connecting with previous question, the next one aimed to identify how and if managers would change their recommendations if their goals were changed to evaluate long-term relationships. 7 out of 9 advisors said they wouldn't change their recommendations once they already do this even though is not one of their goals. Some said that preserving the relationship with the client is fundamental and worths more than achieving the goals established by the bank. One of the bankers that said would change her recommendations if this was a goal, defends that client could benefit from that change; although the others believe this is already a goal they try to fulfil everyday.

Next three questions relate to lessons and best practices managers could put in practice and how they could be applied. Question regarding the redefinition of wealth had a similar pattern of responses, that advisors must understand client's needs as a whole and not only financial. All interviewees said they vary or customize their communications with clients by different forms. One advisor gave an interesting insight of using SalesForce and CRM tools to better understand and adapt the offer according to each client.

All advisors agree that trust is sometimes more valuable than information for clients; they describe it as essential. 6 out of 9 advisors agrees that transparency is key to build trust while the other 3 reinforced the use of information. Although bankers gave different answers on how they build and maintain trust they all agree is not only a good practice but also essential.

Only 55% of interviewees replied to the case study and only 40% replied to the 3 itens correctly and confirming what theory predicts. 60% didn't make the differentiation between level of wealth and type of biases described for each client; some replied having in mind just one of the bias client's exhibit, not all described. One of the possible reasons for the answers and results achieved is that interviewers were not considering the big picture and all the details given for their analysis and advises.

By analyzing the results, we can see that for all questions that theory could be confirmed, at least seven out of nine advisors confirmed it. Which demonstrates a higher level of understanding and awareness of this subject. Not all advisors are aware of the specificities of the theory principles, like biases name or type identification (4

BITs), but in general, we can see an improvement from previous research, which is positive for this business in Brazil.

As the theory states, humans are not perfectly rational, so it was expected that personal answers given would be different and on the last questions regarding possible best practices. It is important to reinforce that advisors are from different business (banks, family office and investment platforms) and institutions so, questions regarding bankers' goals would difer.

5 CONCLUSIONS

This essay aimed to understand on what way Brazilian Private Banks should adapt to implement behavioral finance principles. After making a review of the theory, of what has already been done on this field and by analyzing the interviews, some conclusions and possible guidelines were taken.

As discussed on previous chapter, some Private Banks had increased their level of awareness regarding behavioral finance and also are already implementing on their day to day with high income clients; through a dedicated section for this subject until reports with experts on the subject, banks are starting to incorporate everyday more those principles into their practice. Best practices like those can be seen as guidelines for those who haven't reached this point yet and used as inspiration for changes.

As analyzed from the interviews, we can conclude that this discussion has also increased in Brazil. Some banks are redefining their goals, bankers are more informed on the subject, the CFP® exam certification has incorporated this subject on the contents included, tools are being designed to help advisors identify client's personality traits and behaviors.

Yet there is no standard methodology for helping advisors identify behavioral biases, there are some suggested guidelines and parameters to take into consideration. Pompian (2005) uses the two previously explained parameters, level of adaptation and moderation depends of type of bias and client's income level, to help advisors identify when to moderate and adapt to client biases. He also uses the Behavioral Alpha approach of bias identification, first using the diagnosis test for Active and Passive Investing Traits and then tries to classify clients into one of the four BITs. Those are 2 ways of helping advisors who have difficulties on identifying type of bias and the advice according to it.

Another issue besides the lack of standard methodology is the fact that bankers have goals to achieve. As stated by a Family Office banker, banks have a model of distribution focused on revenue, where in the end of day bankers must sell products that aufer better revenues for the bank. In his opinion, this situation promoted a conflict of interests that Family Offices and investment platform structures like the case of *XP*

Investimentos in Brazil don't have; once their goal is to manage portfolios according to the client, with a wider investment options available.

Although from the interviewed sample only 2 out of 9 advisors replied a goal-oriented question thinking more on the goal itself, the other 7 advisors replied being client-oriented on what's best for client. Maybe this structure and mentality of banks can be changed and improved but we know it's a long way until then and also, we can see that advisors from banks can incorporate those principles and be client-oriented even if sometimes the institutions aren't as they could/should be. In addition, one of the advisors that replied on a more goal-oriented manner talked about how an option would be aligning with his manager other ways to adapt the goals in order to be achieved. Which could be a way to make managers reflect and discuss with a higher instance if goals should be changed to incorporate those principles.

Comparing results from previous research we can see an improvement on knowledge about the subject, level of awareness and principles incorporation. The 9 advisors interviewed are aware of this theory and described on their own words confirming what theory predicts; are aware that everyone is susceptible to the behavioral bias but try to act to prevent it from disrupting their investment decisions; the majority replied correctly to bias identification and type of advice (moderate x adapt) question.

The interviews were very interesting and brought insights and suggestions that could be puted in practice, among the ones discussed above. Besides awareness and possible methodologies that could be used, some advisors talked about diagnostic tools that could be developed and how information available can be used to help advisors understand client's needs in order to provide better advices. Others talked about using already available tools like SalesForce and CRM that can help customizing the offers, improve the Suitability questionnaires by using some type of simulation or something more dynamic to complement it.

In conclusion, Private Banks in Brazil has raised their level of awareness among its advisors, who have been adopting behavioral finance principles into their practice whenever possible. There are some actions that should be taken by the banks itself to help bankers on principles adoption. Some of those measures are the realignment of bankers' goals, increasing the level of understanding on the subject not only by the advisors but by clients as well, incorporate best practices already used by other banks in other locations besides Brazil, develop optimizer/diagnostic tools and improve the ones already used. Although the business and its professionals have improved a lot on incorporating behavioral finance principles into their practice to build better relationships with their clients, there’s still a curve of improvement to be worked on.

BIBLIOGRAPHY

Bachmann, K., Giorgi, E. D., & Hens, T. (2018). *Behavioral Finance for Private Banking: From the Art of Advice to the Science of Advice*. New Jersey: John Wiley & Sons

Behavioral Finance – TD Wealth. 2019. *TD Wealth Behavioural Finance.* Available from: https://www.td.com/ca/en/investing/wealth/behavioural-finance/ [27 September 2019].

Bodie, Z., Kane, A., and Marcus, A. (2015). *Investimentos*. São Paulo: AMGH Editora.

Bracker, K. (2013). Introducing Behavioral Finance: A Student Quiz. *Journal of Financial Education*, 39 (3/4): 69-91.

Budescu, D. V., and Bruderman, M. (1995). The relationship between the illusion of control and the desirability bias. *Journal of Behavioral Decision Making*, *8*(2), 109-125.

Damke, B., Eid Júnior, W., and Rochman, R. (2015). A Survey on the Brazilian Assets, its performance and the investing behavioral biases of its Investment Fund Managers. Research Paper, EAESP – Fundação Getulio Vargas. Available from: https://bibliotecadigital.fgv.br/dspace/bitstream/handle/10438/18856/GVcef_Damke%3b%20Eid%20Junior%3b%20Rochman.pdf?sequence=1&isAllowed=y [27 September 2019]

Dubois, A. and Gadde, L-E. (2002). Systematic combining: An abductive approach to case research, *Journal of Business Research*, *55* (7): 553-560.

Durazzo, B. B (2016). *A aplicação dos princípios de finanças comportamentais nos Private Banking brasileiros.* Master Thesis, Fundação Getúlio Vargas.

Eisenhardt, K. (1989). Building theories from case study research, *Academy of Management Review*, *14* (4): 532-550.

Eisenhardt, K., and Graebner, M. (2007). Theory building from cases: Opportunities and challenges. *Academy of management journal*, *50* (1): 25-32.

Garcia, M. (2013). Financial education and behavioral finance: new insights into the role of information in financial decisions. *Journal of Economic Surveys*, *27* (2): 297-315.

Gounaris, K., and Prout, M. (2009). Repairing relationships and restoring trust: Behavioral finance and the economic crisis. *Journal of Financial Service Professionals,* 63(4): 75-84.

Hens, T., and Meier, A. (2016). Behavioral finance: the psychology of investing. White Paper, University of Zurich and Credit Suisse, AG., Available from: https://www.researchgate.net/publication/283488173_Behavioral_Finance_The_Psychology_of_Investing [27 September 2019].

Huma, Z. and Ayub, R. (2018). An Emerging Need of Introducing Behavioral Finance in Pakistan: Evidence from Investor's Sentiments and Actions. *Journal of Independent Studies & Research: Management & Social Sciences & Economics*, 16 (1): 15-33

Kahneman, D., and Tversky, A. (Eds.) (2000). *Choices, values, and frames.* Cambridge: Cambridge University Press.

Kahneman, D., and Tversky, A. (1973). Judgment under uncertainty: Heuristics and Biases. *Oregon Research Institute Bulletin, volume 13, no. 1*. Available from: https://hanswisbrun.nl/wp-content/uploads/2015/07/AD0767426.pdf [19 August 2019].

Kahneman, D., and Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk. *Econometrica*, *47* (2): 263-292.

Mahoney, M. (1977). Publication prejudices: An experimental study of confirmatory bias in the peer review system. *Cognitive therapy and research*, *1* (2): 161-175.

McLeod, S. (2008). Cognitive dissonance. *Simply psychology*, *31* (1): 2-7.

Mitroi, A. (2014). Behavioral finance: biased individual investment decision making; like the company but dislike the investment. *Theoretical and Applied Economics*, *21* (1): 63-74.

Pompian, M., and Longo, J. (2005). Incorporating Behavioral Finance into Your Practice. *Journal of Financial Planning*, *18* (3): 58–63.

Pompian, M. (2008). Using behavioral investor types to build better relationships with your clients. *Journal of Financial Planning*, *21*(10): 64-76.

Pompian, M. (2012). *Behavioral finance and investor types: managing behavior to make better investment decisions*, New Jersey: John Wiley & Sons.

Pompian, M. (2012). *Behavioral Finance and Wealth Management: How to Build Investment Strategies That Account for Investor Biases* (2nd Ed.), New Jersey: John Wiley & Sons.

Pompian, M. (2017). Risk Tolerance and Behavioral Finance. *Investment Management Consultants Association Inc.* Available from: https://www.sunpointeinvestments.com/wp-content/uploads/2019/07/ed7486_1072594d302d4368a8dd253aea46d7b3.pdf [27 September 2019].

Ridder, H., Hoon, C., and McCandless Baluch, A. (2014). Entering a dialogue: Positioning case study findings towards theory. *British Journal of Management,* 25 (2): 373-387.

Saunders, M., Lewis, P., and Thornhill, A. (2016). *Research methods for Business Students* (7th Ed.), Harlow Essex: Pearson Education Limited.

Schaeck, K. (2005). Behavioral finance, behavioral bias, and market anomalies: Implications for bank managers. *Corporate Finance Review*, *9* (4): 5-18.

Stewart, P. (2006). Behavioral Finance - Not To Be Ignored: Advisors need to understand what's involved. *Trusts and Estates - Atlanta*, 145 (6), 46.

Statman, M. (2008). What is behavioral finance?. In F. Fabozzi (Ed.), *Handbook of Finance, Investment Management and Financial Management (Handbook of Finance (Volume 2)*: 79-84.

Statman, M. (2014). Behavioral finance: Finance with normal people. *Borsa Istanbul Review*, *14*(2): 65-73.

Thaler, R. (1985). Mental accounting and consumer choice. *Marketing Science*, 4: 199–214.

Yin, R. (2014) *Case Study Research: Design and Method* (5th Ed.). London: Sage.

Yoshinaga, C., and Ramalho, T. (2014). Behavioral Finance in Brazil: applying the prospect theory to potential investors. *Revista Brasileira de Gestão de Negócios-RBGN, 16*(53): 594-615.

ANNEXES

ANNEX 1 – TESTS FOR ACTIVE AND PASSIVE INVESTING TRAITS

Extracted from article "Using Behavioral Investor Types to Build Better Relationships with your Clients" by author Michael Pompian (2008).

1. Have you earned the majority of your wealth in your lifetime?
   a) Yes
   b) No
2. Have you risked your own capital in the creation of your wealth?
   a) Yes
   b) No
3. Which is stronger: your tolerance for risk to build wealth or the desire to preserve wealth?
   a) Yes
   b) No
4. Would you prefer to maintain a degree of control over your investments or to delegate that responsibility to someone else?
   a) Maintain control
   b) Delegate
5. Do you have faith in your abilities as an investor?
   a) Yes
   b) No
6. If you had to pick one of two portfolios, which would it be?
   a) 80 percent stocks/20 percent bonds
   b) 40 percent stocks/60 percent bonds
7. Is your wealth goal intended to continue your current lifestyle or are you motivated to build wealth at the expense of current lifestyle?
   a) Build wealth
   b) Continute current lifestyle
8. In your work or personal life, are you generally a self-starter in that you seek out what needs to be done and then do it, or do you prefer to take direction from someone else?

   a) Self-starter
   b) Take direction

9. Are you “income motivated” or are you willing to put your capital at risk to build wealth?
   a) Put capital at risk
   b) Income motivated
10. Do you believe in the concept of leverage or do you prefer to limit your amount of debt?
   a) Believe in leverage
   b) Limit debt

ANNEX 2 – INTERVIEW GUIDELINE

1. What is your job position?
2. How would you better describe Behavioral Finance Theory?
3. Suppose your client refuse to invest on a specific asset because their relatives lost a lot of money with this same asset in the past, even knowing about the benefits of this asset today. Behavior described is a consequence of some impulse or intuition. What kind of advice would you give to this client?
4. Suppose your client wants to invest on an aggressive fund because it had presented an outstanding performance on the past 2 months, but not taking into consideration that the fund had incurred in losses 5 months ago. Behavior described is a consequence of irrational thinking, which might result on mislead decisions and consequently, losses. What kind of advice would you give to this client?
5. Suppose you have 2 clients on your portfolio, one with 30 million euros and another with 2 million euros, both living off the investment income only. They both want to invest the same amount of €100.000 on the share of company X which is not part of the recommended portfolio. Now, assume a lost of this amount can endanger the standard of living of the cliente with € 2 million wealth, but will not have an impact on the standard of living of the cliente with €30 million wealth. In face of this situation, which should be the advice to each client?
6. Do you identify behavioral biases when managing your own personal investments? If yes, which biases can you identify?
7. What actions do you take to prevent those biases from disrupting your investments?
8. Do you think that a higher level of understanding on this subject could help you identify and advise your clients better? Why? On which manner?
9. Do you believe ANBIMA could/should find ways to adequate to this new theory, once financial market practices are regulated by them, to help financial institutions incorporate those principles?

10. Do you believe Suitability questionnaires applied are sufficient to deeply understand and identify client's profile and biases? If not, what would you change? Would you include other type of diagnostic tools? Which one? What impact would this have?
11. What makes you revise your client's Suitability profile, besides the periodicity imposed by the bank? With what frequency?
12. Due to the actual market scenario, the Bank is recommending its clients to eliminate or reduce exposure to a specific fund. You pass this call to your portfolio of clients and one of them said he won't do it because he doesn't want to lose money. How would you advise this client?
13. Suppose your client comes to you saying that he wants to invest on a fund because it will deliver 8% gross return on a 6 months period if the dollar increases 30% on this period. How would you advise this client?
14. Assume that you have a goal to sell a new closed fund, with short commercialization period for the highest number of clients in your portfolio. You realize that many of them don't have the required profile for this investment. What would be your attitude among those clients and knowing that you have a goal of revenues to achieve?
15. Do you personally believe Private Bankers goals are aligned with behavioral finance principles? Do you believe those goals should be changed and reviewed?
16. If you had a goal that evaluates the long-term relationships in your portfolio of clients would that change some of your recommendations today that are being made considering your goals? How would it change?
17. How do you redefine what's wealth for and with your clients?
18. Do you customize your communications with your clients often? If yes, how do you do it?
19. How much importance do you give to having a relationship of trust with your clients and how do you build it?
20. Consider below case to answer the following questions.

    Assume that you have 3 clients:

    1.Mrs Silva who is single, 69 years old that do not work anymore with a modest lifestyle. Her income comes, exclusively, from the investment portfolio of

€1.000.000,00. She doesn't want to lose money because she recalls that her family members lost money in the crash of 1929. She exhibits three types of behavior biases:

- Loss aversion (the tendency to feel the pain of losses more than the pleasure of gains)
- Anchoring and adjustment (the tendency of making estimates starting with an initial value, or "anchor," which is then adjusted)
- Cognitive dissonance (the mental discomfort generated by recent information conflicting with her past knowledge)

2.Mr Oliveira is also single, a 52 years old Marketing executive who earns €200.000,00 per year. He sometimes spends more than he earns but have saved around €1.200.000,00. His main investment goal is to donate € 2.400.000,00 to the university he studied. He exhibits the following biases:

- Loss aversion - as previously defined
- Overconfidence (the tendency to overestimate its own investment knowledge capabilities)
- Self-control (the tendency to spend today instead of saving for the future)

3. The Sousa family is composed by a couple with some financial knowledge, aged 35 and 37, with 2 children aged 3 and 5 years old. They don't plan to have more children. The Sousa's are financially sound, but they were not in the market during the bull market of 1990's like many of their neighbors. The couple's total income per year is €110.000,00. They have saved until now €140.000,00, which they believe will be their safety reserve to send their children to college and retire with comfort. As a couple they exhibit the following biases:

- Loss aversion - as previously described
- Regret aversion (the tendency to feel very disappointed for taking an incorrect decision)
- Availability (the tendency to choose by what is easily recalled to their minds)

Assume that year is 2001; that capital markets are off their highs for stocks and lows for bonds, but not at the extremes of the recent market cycle. Assume now that a portfolio optimizer tool was performed for the 3 clients and the results were the following:

Mrs Silva: 75% bonds, 15% stocks, 10% cash

Mr Oliveira: 85% stocks, 10% bonds, 5% cash

The Sousa family: 70% stocks, 25% bonds, 5% cash

With that scenario in mind, what would be your answers for the following questions:

a) What effects do client's described biases have on the asset allocation decision?

b) Would you moderate or adapt to these biases?

c)What would be the best allocation for each investor?