

**Title: The factors that influence investors behaviours while making
investment decisions at the Industrial Development Corporation**

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ABSTRACT.

Behavioural finance is the study of psychology and cognitive biases and how these impact on the decision-making of the investor. These biases affect the decisions that the investor makes. The research was conducted to understand whether the investors at the IDC are impacted by the same biases that impact investors who invest in the stock market. Most of the research was conducted on investors investing in the stock market and not in corporate companies. Investors at the IDC invest in corporate entities. The five biases that were investigated are heuristics, regret aversion, anchoring, overconfidence and financial cognitive dissonance.

A qualitative research study was conducted using semi-structured interviews to interviews investors at the IDC. A total of Twelve interviews were conducted with investors who had been working at the IDC for over five years. These investors were from various industries at the IDC, which are agro-processing, automotive, basic and speciality chemicals, capital equipment heavy manufacturing, media and motion pictures and textiles.

The findings revealed that the investors at the IDC experienced the same biases as investors in the stock market. The results also showed the advantages and disadvantages of investors having biases. The study's limitation was that the research was only conducted at the IDC.

KEYWORDS.

Behavioural finance, biases, investment,

DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

Signed: Name

Date

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CHAPTER 1: PROBLEM DEFINITION AND PURPOSE

1.1 Introduction

For many years the field of investment finance has been promoting the “efficient market hypothesis” theory. The efficient market hypothesis “proposes that markets are efficient; all people investing in the market have all the information they need to make” a decision and that individuals are unbiased (Basu, 1977,p.663). The “efficient market hypothesis” was first presented by Eugene Fama in his 1970 dissertation. “A market in which prices always fully reflect available information is called efficient” (Fama, 1970, p.383). According to Fama (1970, p.383), “investors invest in the market under the assumption that the securities in the market are showing all information available”. The securities, therefore, adjust their prices immediately based on the most recent information available. According to Fama (1970) the efficient market model is based on the expected return for the investor. Fama’s theory was based on the fact that all investors have access to information available in public about a security investment if investors have private information about an investment that private information will take time to be reflected in investment and therefore all investors will make the same returns. Due to this efficiency investors are therefore unlikely to beat the market (Malkiel, 2003).

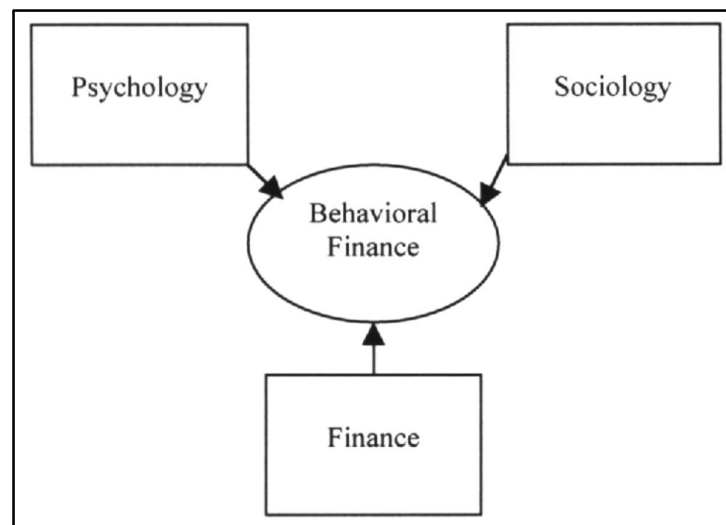
According to Malkiel (2003), the efficient market can be described as a random walk, which means that an untrained investor can randomly select an investment and will be able to make the same returns as an expert investor. The reason is that prices of an investment portfolio are reflecting the current news and future news and therefore, given the same risks, investors will make the same return (Malkiel, 2003).

However, at the turn of the 1980s, researches realised that markets are not efficient, due to the financial bubbles that have been experienced in the past. This inefficiency has led to the study of behavioural finance. Behavioural finance relates to the cognitive psychology of investors, and when markets are inefficient (Ritter, 2003). “Cognitive relates to how people think” (Ritter, 2003,p.429). This has led to a great deal of research around the thinking of an investor. What processes do they go through to make an investment decision? There are systematic errors and biases when investors are making decisions. They are overconfident and heuristic in their

decisions (Ritter, 2003). “The origin of the term heuristic is the Greek word for “serving to find out or discover” (Hackman, 2012,p.34). These are some of the behavioural biases that investors experience when they are making decisions.

Behavioural finance plays a critical role at the individual and organisation level (Zaleskiewicz, 2006). “In terms of investor irrationality it can be said that many scientific works on cognitive psychology have proved that investors, who are too confident in their knowledge and abilities, make systematic errors when thinking and making decisions, they give too much weight to their recent experience, etc.; distortions may also cause investors’ preferences.”(Jurevičienė, Bikas, Keliuotytė-Staniulėnienė, Novickytė, & Dubinskas, 2014 p.434). Behavioural finance relates to the “psychological and sociological factors” that influence an investor’s decision making (Ricciardi & Simon, 2000).

Figure 1: The disciplines of Behavioural Finance (Ricciardi & Simon, 2000, p27)



This figure illustrates the different disciplines that influence behavioural finance

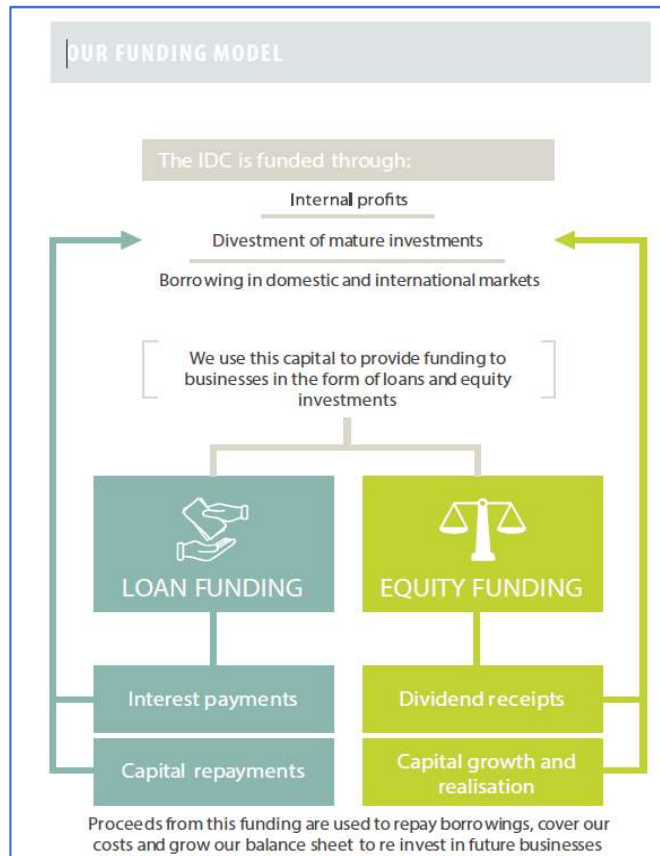
The research aims to gain an understanding of the behavioural biases that influence investors in corporate finance at the Industrial Development Corporation (IDC).

The IDC is a state-owned enterprise (SOE) established in 1940 by the Government of South Africa (Industrial Development Corporation, 2019). It is a development fund institution which has a footprint that covers the whole of South Africa and the rest of the African continent. The IDC's mandate is to industrialise the country and the rest of the continent. The IDC is under the supervision of the Department of Economic Development. Its primary objectives are "to contribute to the generation of balanced, sustainable economic growth in Africa, and to the economic empowerment of the South African population, thereby promoting the economic prosperity of all citizens" (Industrial Development Corporation, 2018, about us section). The IDC industry focus is aligned with the National Development Plan (NDP) 2030.

Over the 75 years of its existence, the IDC has funded the establishment of industries that are now the cornerstone of the manufacturing sector (Industrial Development Corporation, 2019). The IDC operates in the following activities: "provision of development finance, project development, research and policy inputs, fund management, non-financial business support and capacity building" (Industrial Development Corporation, 2019, background section).

The IDC funding is generated through loans from international development agencies, facilities from commercial banks and by issuing bonds in the capital market (Industrial Development Corporation, 2019). The IDC is a self-sustaining SOE as it does not receive any money from the government. Due to the IDC not being able to access cheap money, the IDC rates to clients are usually higher than commercial banks. However, the IDC funds companies that have a higher risk as most of the companies have limited or no collateral. The IDC is termed the lender of last resort as most clients would first have gone to the commercial banks and not received approval for funding. Due to its development mandate, the IDC will offer patient capital and longer-term funding.

Figure2: IDC funding model (integrated report 2019, p8)



1.2 Definition of problem and purpose

The South African economy has experienced challenges over the past ten years. These include high unemployment, high crime rates and in uneven electricity supply amongst others. This has affected on the economic growth of the country. According to the Reserve Bank, the targeted growth of 2.5% in the long term will probably not be achieved due to these challenges (Kganyago, 2019). In 2018 South Africa grew by only 0.8 %. The electricity supply challenge impacts on business productivity. The Reserve Bank has calculated that the electricity issue will affect the growth rate by 1.1 and result in job losses of 48 000. These jobs are related to low-income earners

and small business owners. The IDC funds mainly in the industrial development in small to medium enterprises (SME's) which are affected heavily by these problems.

The recent downgrades from the Standard & Poor's and Fitch rating agencies also affect IDC as they borrow money from the market. Moody's is the only agency that does not have South Africa at junk status with a rating of Baa3 (Country economy, 2019). This is one level above junk status. The IDC cannot have a higher rating than the country. Therefore, if South Africa is downgraded, so is the IDC. The ratings have an impact on the cost of borrowing money in the market. The more negative the rating, the higher the cost of borrowing. This increases the cost of doing business in South Africa and also affects on the returns that the IDC is able to receive.

South Africa is known for labour strikes. As shown by the industrial action report, which is issued by the Department of Labour, the number of strikes increased from 122 in 2016 to 132 in 2017 (Department of Labour, 2017). Most of the strikes were protected strikes. Seven million hours were lost due to strikes was and an estimated R251 million in wages (Department of Labour, 2017). The primary cause of strikes is the demand for an increase in wages, bonus and other benefits. The highest employee participation in strikes is in the manufacturing and mining industries/sectors at 48% and 71%(Department of Labour, 2017). These are industries that the IDC is heavily invested in as the IDC's mandate is to industrialise South Africa. The mining sector provides raw material to many industries; therefore, a strike in the mining sector also affects manufacturing companies that are funded by the IDC. The strikes negatively affect the returns to be received by the IDC, as the businesses does not generate revenue when employees are on strike.

Table 1: IDC sectors and value of funding for the 2019 financial year (IDC 2019 Integrated report P1)

Strategic business units	Percentage of Funding	Value of funding approved
Metals and mining value chain	48%	R6.24 billion
Chemicals and pharmaceuticals value chain	20%	R2.6 billion
Clothing, textiles, leather and footwear	4%	R520 million
Other manufacturing and related industries	6%	R780 million
Agro-processing and agriculture value chain	5%	R650 million
Industrial infrastructure	9%	R1.17 billion
New industries	2%	R260 million
Tourism, media and ICT	6%	R780 million
Total	100%	R13 billion

Given the challenging economy that IDC operates in, the research aims to understand the behaviour and to thinking of investors at the IDC. This is critical to the success of the IDC as their thinking will influence the direction and future of the IDC.

1.3 Research Questions

"Behavioural finance relates to the psyche of investors and its role in financial decision making" (Kapoor & Prosad, 2017p.50). Investors are human beings and have emotions (Kapoor & Prosad, 2017) these emotions affect the investment decisions they make. The impact can be positive or negative on the business. A deal maker is an individual who completes due diligence on potential clients to assess whether to invest or not. The Industrial Development Corporation has many deal makers (investors) who propose transactions to the credit committee. The investors are not investing in the financial markets but are investing in companies. Literature has mainly focused on investors who invest in financial markets.

The research aims to gain an understanding of the behavioural biases that influence investors in corporate investments. The research aims to extrapolate from the IDC's experience (the IDC being development fund institution) to the experience of the broader market. This research will add to the body of knowledge in corporate finance.

Research Questions:

1. What behavioural finance biases are currently influencing investor behaviour?
2. What are the advantages or disadvantages that these biases have on the investor?

Research Objectives:

1. To understand the behavioural finance biases that are currently influencing investor behaviour.
2. To understand whether there are advantages or disadvantages for investors to have these biases.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The literature study starts by first seeking to understanding how an individual makes decisions. How does the mind of a decision-maker operate? Hence, we are looking at theory on judgement and the cognitive abilities of an individual to make a decision (Jackson, Kleitman, Stankov, & Howie, 2016).

Then the literature review focuses on the origins of behavioural finance. The literature review will then focus on the theoretical work of (Tversky & Kahneman, 1973) in the field of behavioural biases, a field which they had a great impact.

The literature review then goes into detail explaining each bias identified by (Corzo, Prat, & Vaquero, 2014; Tversky & Kahneman, 1973) which are heuristics, overconfidence, anchoring, regret aversion and financial dissonance. These biases were the most cited as influencing investor behaviour.

2.2 Individual decision-making

“Decision making is the process by which we form judgements and make choices to achieve our goals”(Jackson et al., 2016, p.392). Five variables describe the individual’s decision-making process. “These are:

- competence,
- optimality,
- recklessness,
- hesitancy and
- decisiveness” (Jackson et al., 2016, p.392).

A competent decision about the goal is made when an individual acts appropriately with regards to the goal (Jackson et al., 2016). Making correct decisions consistently, in the long run, makes an individual competent. Optimality is about selecting the best possible course of action (Jackson et al., 2016). Recklessness is the tendency of individuals consistently using inaccurate information to make a decision and pretend that the information is correct (Jackson et al., 2016). Decisiveness relates to individuals, based on their judgement to decide on the goal.

Individuals have different cognitive abilities and are, therefore, different in how they perform different tasks (Jackson et al., 2016). Competent individuals will show high cognitive abilities, associated with good decision-making. Confidence increases the accuracy in which one makes decisions. Confidence increases certainty and decisiveness about the decision.

According to (Eberhardt, Bruine de Bruin, and Strough, 2019) cognitive decision-making improves the older you get. (Eberhardt et al., 2019) argued that the older you are, the more knowledge you have and the better your/the decision-making will be. (Hartshorne and Germine, 2016) argue that different cognitive abilities reach a ceiling and start to decline at different age levels. Therefore, they support the argument of (Eberhardt et al., 2019) that older people improving their cognitive abilities in decision making. Hartshorne and Germine, (2016) argue that some cognitive abilities can only be enhanced in adulthood. According to Hartshorne and Germine, (2016), people are exposed to different kinds of knowledge as they get older (for example learning new words) and can apply this new knowledge in their decision-making

2.3 Behavioural finance

According to (Corzo, Prat, & Vaquero, 2014, p.343) “behavioural finance allows for the explanation of financial phenomena on nonrational behaviour among investors”. “Behavioural finance: the role of psychological factors in financial decisions” (Muradoglu & Harvey, 2012, p.68). There are many psychological factors that affect an investor when they are deciding. Some of the most common factors that affect investors are heuristics, loss aversion, overconfidence, anchoring and financial cognitive dissonance (Filbeck et al., 2017). Overconfidence is the overstatement of one’s ability. Investors are likely to overestimate their skills and capabilities (Corzo et al., 2014). Due to the individual consistently making a good investment, this can lead the individual to be overconfident. Overconfident individuals demonstrate unwarranted faith in their abilities (Filbeck et al., 2017). Regret aversion relates to the feeling of regret when inventors’ investments are making losses, or they have

lost a potential gain on an investment (Corzo et al., 2014). Investors tend to avoid losses even if there is a potential for achieving a gain (Filbeck et al., 2017).

Tversky and Kahneman (1973) are the founding authors for heuristics and cognitive biases in decision making. They argue that people use heuristics on a daily basis to make decisions. Most of these decisions are based on uncertainty. According to Tversky and Kahneman (1973), people are usually not aware of how their minds came to a certain answer. These answers are usually embedded in a person's mind, and people are not able to understand how they came about. They identified three main heuristics: representativeness which uses similarities to make a judgement. Availability uses the recent information available to decide. Anchoring relates to people fixing their answers to the information provided (Tversky and Kahneman, 1973).

Behavioural finance is a study of psychology and how this impacts the cognitive biases of decision-makers (Hirshleifer, 2014). Psychology relates to the study of the human mind. According to Hirshleifer, (2014) heuristics relate to how the person's mind operates consciously and unconsciously. They use these heuristics to make decisions. People are usually overconfident when making decisions. Overconfidence increased when there is uncertainty (Hirshleifer, 2014).

According to Muradoglu and Harvey, (2012), individuals who work in the finance environment use historical numbers that are at a specific point in time to make a forecast. The accuracy of the forecast depends on the investors' belief in the current and future situation. Finance professionals are more prone to biases in their decision-making. The professionals use their experience to conduct financial tasks. Muradoglu and Harvey, (2012) discuss the importance of behavioural finance in finance. If investors understood and are aware of their behavioural biases, they are likely to make informed decisions. Muradoglu and Harvey, (2012) also argues that finance has been adapted from other fields, and therefore, finance should adopt psychology.

There are many biases that an individual experiences daily. The five biases that were selected were the most cited biases that influence investors' decision making. These five biases are commonplace than the other biases. However, this research will only focus on five biases, namely:

1. Heuristics: this is one of the initial financial biases which were identified by Tversky and Kahneman and therefore deserved to be investigated.
2. Regret aversion: this bias was selected to understand the impact of regret on investors.
3. Anchoring: this is one of the initial financial biases which were identified by Tversky and Kahneman and therefore deserved to be investigated.
4. Overconfidence: this bias was selected to understand the impact of overconfidence on investors.
5. Financial cognitive dissonance: the research is in financial space, and this bias affects people who are mainly in investments

2.3.1 Heuristics

"The origin of the term heuristic is the Greek word for "serving to find out or discover" (Hackman, 2012, p.34). In many professions, people are faced with uncertainty, where not all possibilities to the solution can be identified, yet decisions still need to be made (Hafenbrädl, Waeger, Marewski, and Gigerenzer, 2016). When people are faced with uncertainty daily, they will use "fast-and-frugal" heuristics to make decisions. (Hafenbrädl et al., 2016). These strategies sometimes ignore available information (Hafenbrädl et al., 2016). According to (Hafenbrädl et al., 2016), heuristics help us understand the decision-making process of individuals. Therefore if they are in known environment, decision-makers can use heuristics to make accurate and effective decisions (Hafenbrädl et al., 2016). These heuristics can be adopted and used intuitively. "By relying on a heuristic that fits a particular environment, people can make efficient decisions in little time and based on little information (hence 'fast-and-frugal')" (Hafenbrädl et al., 2016,p217).

According to (Hafenbrädl et al. (2016), the two most important properties required for an individual to make fast and frugal heuristics are the individual's capabilities as

a decision-maker and the decision environment. Hafenbradl et al. argue that decisions made under uncertainties do not require high effort or intricate plans. According to research, managers use heuristics to make simple decisions (Hackman, 2012). The successful use of heuristics relates to the environment in which the decision is made. "The origin of the term heuristic is the Greek word for "serving to find out or discover"(Hackman, 2012, p.34). Research has revealed that there reaches a point where having too much information can negatively impact the decision. The basic principle is that people need to decide the acceptable conditions of uncertainty. They, therefore use heuristics which are simple and do not require a great deal of thought. However, the successful use of heuristics is based on understanding the environment. For example, there is a need to decide about investing in a certain project, yet there is not enough information on the project. The individuals will use prior knowledge of similar projects to decide.

According to Kang and Park, (2019), representation biases relate to an individual deciding without considering whether the prior probability will be consistent in the future. Individuals ignore the sample size but believe that what is appropriate in a given sample can be applied to the whole population, which leads to the representation biases. People using representation will predict the future with their limited sample of events; these events can be sometimes random events. As per (Kang & Park, 2019) people use availability heuristics to bring information to mind. Kang and Park support Tversky & Kahneman in terms of anchoring biases that people cannot make adjustments from the initial introduction of the anchor. As per Kang and Park (2019), findings that people using availability, may take a decision based on the easiness to recall information. The first information that came to mind was used to decide. Professionals are as likely to be influenced by biases as are the general public.

According to Abatecola, Caputo, and Cristofaro (2018), managers take decisions on a daily bases. However, managers have limited cognitive abilities; therefore, they are not able to process and image all possibilities of their decisions. Abatecola et al. supports the evidence of Kang and Park (2019) with regards to representation and availability biases that people use recent events to make decisions. People use confirmation biases by selecting only the data they want to include in the decision;

therefore, confirming their conclusions. As per (Kang and Park, 2019) there is cognitive distortion in terms of managers making decisions.

According to Kahneman (2003), people use systems thinking to make decisions. "The operations of System 1 are typically fast, automatic, effortless, associative, implicit (not available to introspection), and often emotionally charged; they are also governed by habit and are therefore difficult to control or modify. The operations of System 2 are slower, serial, effortful, more likely to be consciously monitored and deliberately controlled; they are also relatively flexible and potentially rule governed." (Kahneman, 2003,p698).

The theories of financial markets are based on the premise "that investors are rational and that the market is efficient" (Thaler, 2016,p1589). However, recent research has proven that investors are not rational(Shah, Ahmad, & Mahmood, 2017). According to (Shah et al., 2017) people do not use logic when purchasing investments but "would buy investments that their friends bought, sell winning stocks and keep losing stock"(Shah et al., 2017, p.86). As stated by (Shah et al., 2017), psychological feelings and heuristics affect the decision-making of investors. Investors use "rule of thumb" instead of well thought out methodologies to make decisions (Shah et al., 2017).

2.3.2 Regret Aversion

There is a much of research that has concluded that individuals fear loss more than a gain of the same amount (Walasek and Stewart, 2015). Regret aversion relates to the feeling of regret when investors' investments are making losses, or they have lost a potential gain on the investment (Corzo et al., 2014). Investors tend to avoid losses as opposed to achieving again (Filbeck et al., 2017). The investor may choose to do nothing to avoid the risk of a loss (Corzo et al., 2014). According to Sautua (2017), investors may face inertia by choosing to maintain their current status and not make a decision. This inertia is created by the investors' regret aversion due to the investor not knowing the outcome of the decision due to uncertainty. Investors make such decisions to avoid regret.

Regret is a feeling of self-blame when the outcome is different from what the person intended it to be (Pahlke, Strasser, & Vieider, 2015). People often imagine the outcome and try to see how it could have been different (Park, Ramesh, & Cao, 2016). "Regret theory is based on the intuition that a decision-maker (DM) choosing between two prospects (state-contingent payoffs), is concerned not only about the outcome he receives but also about the outcome he would have received had he chosen differently" (Diecidue & Somasundaram, 2017). The decision-maker experiences regret when the outcome is not the same as what he expected when the decision was made. According to Levy (2017), decisions made by decision-makers are not always efficient as they are sometimes influenced by emotions. Levy, (2017), decision-makers often use more than one model to decide.

As per Pahlke et al. (2015), individuals will take less risk when they are responsible for another person's loss. Individuals will take less risk than the risk of their investors who might have a higher risk appetite. As stated by Guiso, Sapienza, & Zingales (2018), individuals who are risk-averse sell their stock too quickly in a time of a financial crisis. Fear can impact risk aversion even if the environment they are operating in does not change. People are driven by emotions, and this affects their risk appetite, and they end up making fewer returns on their portfolios.

According to (Guillemette, Blanchett, and Finke, 2019) the feeling of loss aversion is minimised, the longer the investment is. Short term investments where individuals keep on checking their performance causes loss aversion in decision-makers (Guillemette et al., 2019). However, (Lazar, Levkowitz, Oren, & Sonsino, 2017) argue that the amount of loss has an impact on the loss aversion of a decision-maker. The decision-maker is willing to accept a small loss (Lazar et al., 2017).

"Regret aversion indicates the managerial desire to avoid consequences wherein the manager appears to have made ex-post suboptimal decisions even though those decisions are ex-ante optimal based on the information available at that time." (Wong, 2015, p.49). Managers who are in this state usually issue less debt and do not leverage their companies to reduce risk aversion. Managers in such situations avoid making extreme financial decisions. Niu, Guo, Wang, and Xu (2014) support Wong in terms of firms that are risk-averse. Firms that are risk-averse have less

production and therefore do not optimally invest in their business, which is similar to managers that do not optimally use their balance sheet to grow the company.

In an experiment (Thaler, 2016) found that when individuals are given an option of a potential gain or loss (i.e. a sure loss of R750 or 75% to lose an R1000 and 25% to lose nothing), most people chose the second option as there is a chance that they will not lose anything. The experiment was done more than once, and most people still preferred to lose nothing. This test supports the loss theory of (Tversky & Kahneman, 1973) that people will avoid the feeling of a loss.

2.3.3 Anchoring

“Anchoring is a cognitive bias that describes the common human tendency to rely too heavily on the first piece of information offered (the “anchor”) when making decisions” (Shin & Park, 2018, p.225). Once an anchor is set, it is hard for individuals to make objective judgments. Most people usually make accurate estimates when an anchor has not been introduced. As per Lieder, Griffiths, Huys, & Goodman (2018) when we don’t apply our minds to the situation, we often use irrelevant information to make decisions. The decision-maker tries to make adjustments from the anchor, but usually, the adjustment is not sufficient and ends up close to the anchor. People use anchors due to limited time and compared to the cost of getting the information. However, (Lieder et al., 2018) the time factor is important to the nature of the decision. If the decision is going to cost the company a great deal of money by not making the correct decision. Decision-makers then put in the effort to get the correct information. If the loss is minimal, the decision-maker can use an anchor.

As stated by Cen, Hilary, and Wei (2013), analyst tend to anchor their forecasts toward the industry norm. Analysts were reluctant to forecast away from the norm due to the perfection of another analyst, even if the analysis had good supporting evidence for deviating from the industry norm, they did not. Errors in the forecast could have been a result of the analyst having an anchoring bias.

According to Givi and Galak (2019), people assume that the present will be like the future. Therefore, they have an anchoring bias towards situations that are currently

happening in their lives. This anchor causes people not to make appropriate decisions and thereby not be prepared for the future. Givi and Galak, (2019) give an example of a financial analyst who assumes things will remain the same, and then the market crashes or people assume that it will remain sunny even though the forecast says there is a high probability of rain the following day. Lorko, Servátka, and Zhang (2019) supports the argument of Givi and Galak (2019) that if no feedback is provided about the anchor, most managers continue to make the same mistakes. According to Lorko et al., (2019) project managers are susceptible to value anchors, such as (“can you deliver it in a week? “or” the client needs it in a month”), the project manager will plan according to the anchor even though it might not be feasible. If these anchors are too low, they will cause projects not to be completed at all and sometimes cancelled (Lorko et al., 2019). As stated by Meub and Proeger (2016) money incentives only reduce simple anchors. When it comes to complex tasks where there is a great deal of uncertainty, even providing an incentive to move away from the anchor does not change the anchoring bias (Meub and Proeger, 2016)

2.3.4 Overconfidence

According to Ringuest and Graves (2017), overconfidence is one of the most prevalent researchers' behavioural biases. However, Ringuest and Graves (2017) confirm that the scale of overconfidence has not been researched enough. As per Kourtidis, Šević, & Chatzoglou (2015), individuals who are overconfident increased their trading and also increased the chances of making incorrect decisions. However, individuals who are overconfident performed better than those who were not confident of their abilities. The overconfidence is based on the individuals' knowledge of the stock market and experience.

According to Schroeder, Caruso, and Epley (2016), people tend to overestimate their contributions when working in groups. This overestimation increases as the group size increased. People tend to only focus on what they have contributed and ignore other people's contributions (Schroeder et al., 2016). Some members of the group would even go so far as claiming 100% even though it is not logically possible(Schroeder et al., 2016). People tend to be overconfident in environments that are stable (Dessí & Zhao, 2018). Managers who assume that the macro environment is stable and will not change in the future are often complacent and

unwilling to invest in projects. This causes companies to lose investment opportunities and are unable to grow.

According to (Merkle, 2017,p.68), “Financial overconfidence leads to increased trading activity, higher risk-taking, and less diversification”. People tended to overestimate the performance of their portfolios, believing that they could outperform the market. There are three distinct variations of overconfidence. First, overestimation is people being overconfident about their abilities. This supports the argument of (Schroeder et al. 2016) on overestimation. The second is over placement which is closely linked to overestimate as this relates to a group setting where individuals assume that they are “better than average” (Merkle, 2017, p.69). The third is overprecision, and this is where people assume they can predict values with a certain probability (Merkle, 2017). As per Pikulina, Renneboog, and Tobler (2017) individuals are overconfident about their abilities, but when it is compared to their competence, there is a difference. Individuals tend to overestimate their abilities (Pikulina et al., 2017): As per (Pikulina et al., 2017, p.176)“the participants in the highest overconfidence quartile choose inappropriately high investment levels and, likewise, the underconfident individuals choose inappropriately low investments.” According to Pikulina et al. (2017), underconfidence is as bad as overconfidence as both lead to sub-optimal returns. Individuals who have average confidence are the ones who make appropriate investments and make a higher return on investment.

According to (Forman & Horton, 2019), we should not only look at over trading as a sign of overconfidence; however, we should also consider the position size of the trading that the individual is making. As stated by (Forman & Horton, 2019), the position size is determined by the amount of money the trader has. As reported by (Forman & Horton, 2019), traders are overconfident in their positions and invest a large sum of money which results in larger trading losses. This overconfidence is based on their past transactions. Due to the traders not accessing their position properly, they end up with trade timing issues. The timing of the trades affects their returns which also affects the trading volumes (Forman & Horton, 2019). According to Trejos, Deemen, Rodríguez, & Gómez (2019) investors experience a disposition effect where they keep losing shares in the hope that they will not experience the loss and sell winning shares to increase the confidence of investors that they are making a return on investment. This is not rational as one would assume that the

investor will want to sell the shares that are making losses to avoid future losses (Trejos et al., 2019).

As stated by Zacharakis and Shepherd, (2001), venture capital managers are overconfident in their decision making on whether a venture will succeed. This overconfidence causes the managers not to look at additional information to support their decision (Zacharakis & Shepherd, 2001). Managers often use “availability bias” when making decisions. They prefer information to be presented familiarly for them to make quick decisions. The managers' decisions should be interrogated by the team members and other senior people to force the manager to consider all the different angles that might affect the decision.

2.3.5 Financial cognitive dissonance

As per Chang, Solomon, & Westerfield (2016), people do not feel comfortable when they have made a loss, and this leads to cognitive dissonance. Cognitive dissonance creates psychological stress for the individual, and therefore the decision-maker is forced to reduce or remove the stress. According to Kim & Bay (2017), cognitive dissonance arises when the person realises that the decision they have made is incorrect. The individuals will try to gather information in support of their incorrect decision.

As stated by Suzuki (2019), decision-makers often experience post-decision dissonance. This feeling comes when the results of the decision are contrary to what was expected or negative. The decision-maker will now try to find information that will justify their decision to reduce this negative feeling. Chen (2011) says decision-makers feel anxious when there is an undesirable outcome due to their decision. The magnitude of the post-decision dissonance can cause an individual to try and change the decision to choose an alternative that was not previously chosen. Pirie and Chan (2018) support Chen's argument that the emotions experienced by the decision-maker will cause the decision-maker to change their initial decision. Decision-makers feel that their incorrect decision is contrary to their self-image. The fear of missing out often leads decision-makers to make incorrect decisions. When a decision is made, there is uncertainty, and they can usually not follow a logical approach in making the decision. Investors are under pressure to make the right decision and

have good performing portfolios and do not want to be left behind when opportunities arise.

As stated by (Lester & Yang, 2009), there are four ways in which an individual can reduce their cognitive dissonance:

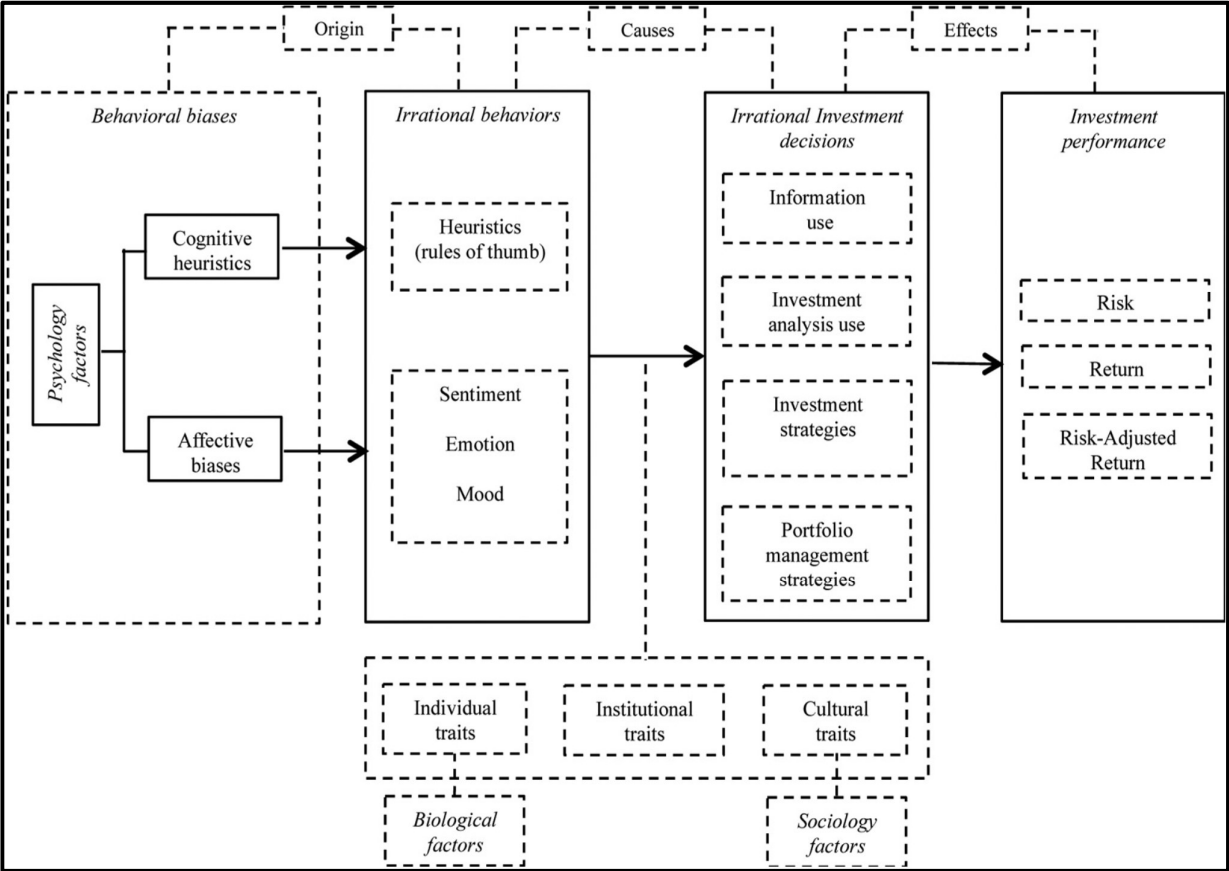
1. "We can change our behaviour relevant to one of the cognitions"(Lester & Yang, 2009,p.659). For example, a person who drinks alcohol may realize that drinking alcohol increases the chance of liver cancer. The person may decide to stop drinking.
2. "We can change an environmental cognitive element" (Lester & Yang, 2009,p.659). The person who wants to stop drinking will stop going to the pub or to an environment where alcohol is served.
3. "We can add a new cognitive element" (Lester & Yang, 2009,p.659). The individual can read up about liver cancer that is caused by drinking alcohol.
4. "We can avoid dissonant information" (Lester & Yang, 2009,p.659). The individual can avoid all information about alcohol causing cancer and continue drinking alcohol.

According to Lester & Yang (2009), there is no guarantee that following the above process will reduce cognitive dissonance as most people do not like change.

2.4 Behavioural bias framework

This conceptual framework below by Ahmad, Ibrahim, & Tuyon (2017) illustrates the origins of behavioural biases and their effects. The psychological factors are the basis of behavioural biases. These psychological factors can be split into two categories which are cognitive heuristics and affective biases. According to (Ahmad et al., 2017,p.584) "Affective biases refer to biases induced by affective states, namely, emotion, sentiment and mood of an individual in the course of decision-making."These behavioural biases need to be investigated so that mitigants can be found for investors who are exposed to these biases.

Figure 2: The conceptual framework: irrational behaviour's origin, causes and effects. (Ahmad et al., 2017,p.594)



2.5 Conclusion

As per the literature review above, it is clear that investors experience behavioural biases when they make investment decisions. These biases affect how investors make decisions.

CHAPTER 3: RESEARCH QUESTIONS

3.1 Introduction

This chapter discusses the research questions based on the literature review. The research questions will be answered by the research study.

3.2 Research question

This research aims to answer the following questions. The questions are in line with the literature review above.

Research question 1: What behavioural finance biases are currently influencing investor behaviour?

Investors make decisions under uncertainty and therefore have to use some biased factors to make decisions. As per the literature review above these biases can influence the decisions made by the investor. Therefore, my research will aim to understand which of these biases are currently influencing investors at the IDC.

Research question 2: What are the advantages or disadvantages that these biases have on the investor?

As per the literature review having these biases helps the investors cope. These are part of the investors' decision-making tools. There is no definite proof of whether they are a benefit or hindrance. These tools are used in a different context, and sometimes they work and sometimes they do not work. Therefore, the research aims to understand whether the tools are an advantage or disadvantage.

3.3 Research Objectives

1. To understand the behavioural finance biases that are currently influencing investor behaviour.
2. To understand whether there are advantages or disadvantages for investors to have these biases.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 Introduction

This chapter discusses the methodology used to answer the research questions in chapter three. This study uses a qualitative research approach to study the investor behaviour of investment managers at the IDC. Data were collected through semi-structured interviews, as this was appropriate to give insight into the thinking of investment managers. The literature review is the foundation of the research design. From the literature review, behavioural biases were identified. The data collected were structured based on the themes of the analytical framework discussed in the literature review.

4.2 Research Design

The research was conducted through a qualitative study. A cross-sectional study was conducted over two months. Interpretivism and qualitative methods were used. “An interpretivism paradigm and qualitative methods often seek experiences, understandings and perceptions of individuals for their data to uncover reality rather than rely on statistics” (Thanh, Thi, and Thanh, 2015, p.24). Interpretivism seeks to understand the individuals and their perspectives. This method was appropriate methodology to use in trying to understand the behaviours of individuals who make investment decisions. The methodology allows the researcher to understand the insights of the participants (Thanh et al., 2015) as most of the research focused on traders on the stock exchange. This research is exploratory to obtain insights into the thinking of investors in a development finance institution that invests in corporate companies.

A deductive qualitative study will be used. As per Saunders and Lewis (2012), a deductive study involves testing theory by using the theory that already exists. In this research, there will be testing of the theory on biases and applying the theory to the individuals at the IDC.

The qualitative research methodology is more contextual and tries to understand rules and behaviours (Tracy, 2013). According to Bailey (2014), the method used in

qualitative research is a semi-structured interview. According to (Bailey ,2014,p.169), “the objective of qualitative research is to answer the why and how questions”. As per Zikmund, Babin, Carr, & Griffin (2010), qualitative research is more about quality and not quantity. Qualitative research relies on the researcher to extract value from the words of an interview (Zikmund et al., 2010).

As per (Saunders and Lewis, 2012,p.115), exploratory study is “research that aims to seek new insights, ask new questions and assess the topic in a new light” . Most of the research done in behavioural finance has been conducted through surveys. These surveys were targeted at people who invest in the stock market. New insights will be discovered as the research is targeted at a development fund institution investor who invests incorporates. According to Zikmund et al. (2010), there are many benefits to having face-to-face interviews for data collection. This method allows the researcher to ask a probing question when the response is not adequate. Semi-structured interviews allow the researcher to get specific answers that relate to the research question.

The purpose of the study is to try to test whether investors at the IDC have a behavioural bias as per the literature review.

4.3 Population

The population for this study is employees at the IDC who have been involved in investing in companies. The IDC should have employed these employees for a minimum of five years. The employees should have been responsible for making transactions to the credit committee as transaction leaders.

4.4 Sampling

The sampling technique that was used was purposive sampling technique (Saunders and Lewis, 2012). This sampling technique allows the researcher to use their judgement to select the sample (Saunders and Lewis, 2012). This technique was used to ensure that most information-rich individuals will be selected for interviews and that these individuals would be able to give insight into the research. Non-probability sample was used to select the sample. Non-probability sampling is a

technique of whether researchers use their judgement to select the sample (Zikmund et al., 2010).

The sample was taken from eight different sectors of the IDC, which are: automotive, capital and equipment, basic chemicals, media and motion pictures, heavy manufacturing, agro-processing and textiles. The number of respondents are shown in Table 2 below:

Table 2: Industry and Number of respondents

Industry	Number of Respondents
Agro-processing	1
Automotive	2
Basic and speciality chemicals	2
Capital equipment	1
Heavy manufacturing	1
Industrial Infrastructure	2
Media and motion pictures	1
Textiles	2
Total	12

The number of respondents was based on the respondents that were available. Some respondents cancelled meetings. The decision to interview twelve respondents was based on the point where saturation occurred.

4.5 Unit of Analysis

Individual investors that are involved in the decision-making of making an investment who had been working at the IDC for a minimum of five years, were selected. After five years' experience at the IDC, most of the respondents would be in senior positions and be able to guide transactions. This selection is important to the research, and they will be able to have gained enough experience and have moved from different roles that are involved in taking a transaction to the committee.

4.6 Interview Schedule

Twelve semi-structured interviews were conducted, which were based on an interview schedule. In a semi-structured interview (Annexure 3), the interviewer had some discretion in terms of how the questions were asked (Vanthournout, Noyens, & Gijbels, 2014). This method allows the interviewer to have a more in-depth understanding of the topic (Vanthournout et al., 2014). The interviewer guided the conversation, which resulted in consistency amongst respondents. The interviews were conducted at the IDC offices. The interviews took approximately 30 minutes, and 12 employees were interviewed.

Below is a sample of the questions that were asked in the interview. For the full list, refer to Annexure 3:

Table 3: Sample of questions

Behaviour	Questions
Heuristics	How do you ensure that all the information presented to you is considered in your decision making?
	How do you use your industry knowledge to assess the viability of a deal?
Overconfidence	Are you more excited about a R1 million deal vs a R100 million deal?

	To what extent do you use your experience in relation to the information available in the market to assess (an?) investment? Please provide an example.
Regret aversion	How do you feel if your transaction is impaired?
	Has your transaction ever been audited by an internal audit? If yes, please provide an example. How did that make you feel?
Anchoring	How would you describe the performance of your industry?
Financial cognitive dissonance	Are you anxious or excited when taking a transaction to the credit committee? If so, why?

4.7 Pre-Test of interview

Two employees were interviewed to test the interview guideline and the interviewers' technique. During the pre-test, it was found that some of the questions were repetitive and therefore, were not asked during the interviews — for example, the question about using marketing information and industry knowledge. The response gave the same answer.

4.8 Data collection

Data were collected using semi-structured interviews. Data were collected through face-to-face interviews over two weeks in September. An interview guideline was used to ensure consistency. Twelve interviews were conducted on employees who have been employed for more than five years at the IDC. The face-to-face interviews were done at the IDC offices. In the interview, the researcher posed questions relating to the dealmakers' behaviours while considering a transaction for investment. The focus behaviours that were targeted were loss aversion, heuristics, overconfidence, anchoring and financial cognitive dissonance. The researcher aimed to get an understanding of these behaviours and how they affect the day-to-

day work of a deal maker. The interviews were audio-recorded and backed up on Google Drive. A transcriber was used to transcribe the interviews, and the transcriber ensured that the transcriptions were accurate as per the interview. This was the initial editing process to ensure that the data were converted into a format that could be used for analysis and transcriptions were also backed up on Google drive.

The researcher contacted the participants via telephone to request participation in the research. The respondents were willing to participate in the research. The researcher scheduled interviews at the convenience of the respondents.

4.9 Data Analysis

According to Zikmund et al. (2010, p.70), data analysis can be defined as “The application of reasoning to understand the data that have been gathered.” The audio recordings from the interviews were transcribed and loaded into Atlas.ti. Each interview was analysed. A thematic analysis by Braun & Clarke (2006) was used to analyse the data collected. According to Creswell (2014), data collected need to be analysed and sorted into categories. The initial codes were done deductively based on the literature review. While coding the interviews, new codes emerged. Once the data were sorted, certain themes emerged from the interviews. The data collected was then be coded according to those themes identified. Four themes were identified in the analysis. The researcher analysed the themes that emerged from the research and gave insight into their meaning.

Respondents were identified as respondents 1 to 12 in the discussion as the respondent wanted to remain anonymous.

Table 4: Phases of Thematic Analysis (Braun & Clarke, 2006,p.35)

Phase	Description of the Process
1. Familiarising yourself with your data	Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas
2. Generating initial codes	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code
3. Searching for themes	Collating codes into potential themes, gathering all data relevant to each potential theme

4. Reviewing themes	Checking if the themes work in relation to the coded extracts (level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis
5. Defining and naming themes	Ongoing analysis to refine the specific of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme
6. Producing the report	The final opportunity for analysis. Selection of vivid, compelling extract examples, the final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis

4.10 Data validity and reliability

As per Creswell (2014), to obtain validity and reliability, detailed, thick descriptions of findings should be used. This process will provide a more detailed elements of the experience of the researcher. Qualitative research is very subjective. Therefore, the interview questions will be used as a guide, but the interviewees can bring their own perspective and enrich the research study.

4.11 Limitations

The limitation of the research is that it focuses on one institution, which is the IDC. Another limitation is the fact that most of the IDC's investments are in South Africa. Therefore, no global view could be extracted from what the impact of the research would be. The research is based only on a certain period which can influence the results. The investors would have South African experience, and therefore the culture of South Africa would influence their behaviour in how they fund investments

4.12 Ethical consideration

4.12.1 Interviewer biases

Qualitative research is known for being biased, and this can create a problem for the validity of the study (Roulston & Shelton, 2015). (Zikmund et al., 2010) suggest that researchers should try to find the truth and not be personally attached to the study. There are many biases that can affect a researcher, such as an interviewer bias and response bias; the researchers will try to ensure that they are not affected by these biases. Standard questions were used for all interviews. The funnel technique was used in order not to lead interviewees in a certain direction. Interviewees were allowed to answer the questions without interference from the interviewer.

4.12.2 Confidentiality

As the study used a recording instrument to obtain the data from the participants. Consent was obtained from the participants for us to record the discussion. The names and personal information were not obtained during the interview. The information was kept with no names of the participants. The use of coding did not include the names of the participants, during the analysis and the reporting. Data obtained from the participants were stored in electronic form on a computer, where I am the only person who has access. A transcriber was obtained to transcribe the information. A Non-disclosure agreement was signed with the transcriber.

CHAPTER 5: RESULTS

5.1 Introduction

In this chapter, the results are laid out as per the research questions in Chapter 3. The chapter highlights the findings from the data collected from the semi-structured interviews that were conducted. The respondents were 12 senior investment managers from different industries. The interview questions were mapped against the research questions to have consistency between research and literature review.

5.2 Description of Sample

A list of the interview, together with the reason why they have been chosen, is included in Table 5. The sampling technique that was used was purposive sampling technique. The people being interviewed chose to remain anonymous, and therefore their names are not disclosed. Even though their reasons for participation and experience are disclosed, there are many individuals with similar experience in the same industries. Therefore, it will still be difficult for someone to point out the specific person who completed the interview. The sample consisted of six males and six females.

The respondents have vast experience in the investment field, having worked at the IDC for more than five years. Most of the respondents completed reports and presentations for the credit committee, averaging about seven transactions per annum. They have experience in deal sourcing, deal structuring, conducting due diligence in different disciplines such as marketing technical and financial and had an opportunity to present to the board investment committee which considers transactions above R250 million.

Half of the respondents said they chose to work for the IDC due to the opportunity it gave them. For the engineers, it gave them an opportunity to be able to understand financial statements and accounting, for them to be able to structure deals and provide different funding instruments. The accountants, wanted an easier way to enter the investment market. IDC training programmes provide a good basis for investment finance that can be applied to any investment company. The other half

of the respondents chose IDC due to its development mandate. They said that it was a fulfilling job because it enabled one to make a difference in someone's life; they referred to the impact that the funding has on the economy and creating jobs — empowering people who might not have had an opportunity at a commercial bank.

Figure 4 Gender split of the research sample

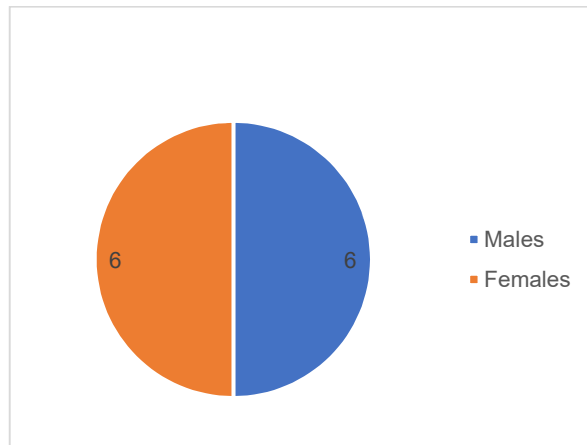


Table 5: Number of Respondents and reason for selection

Industry	Number of Respondents	Reason for Choosing a person
Agro-processing	1	The respondent had been working for the IDC for ten years. Her experience in deal-making as well as the knowledge of the IDCs mandate. The candidate had worked for a commercial institution and would, therefore, provide a different perspective to the research. Ten years of experience and
Automotive	2	The first respondent had done many of complex financial deals, and her experience in the automotive industry would bring a different dynamic to the research. The second respondent is an engineer, who

Industry	Number of Respondents	Reason for Choosing a person
		focuses only on strategic transactions that require a long-term view. Therefore their knowledge of the IDC and the challenges currently experienced by the IDC will bring a different perspective,
Basic and speciality chemicals	2	The first respondent has been working in the chemical sector before coming to the IDC. She has led teams for investments for several years and has also gone to the highest committees at the IDC. The second respondent also an engineer but has worked in projects and also looked after IDCs major subsidiaries. Therefore, she brought a different angle to the discussion. She has worked on many complex transactions.
Capital equipment	1	Has experience in structuring complex transactions and has worked in different departments at the IDC.
Heavy manufacturing	1	Has vast experience in the different industries that are financed by the IDC. Industry specialist in the construction sector and wood industries. The individual brings a wealth of knowledge to the research.
Industrial Infrastructure	2	The first respondent is a senior expert in the energy sector, having worked on renewable energy projects, which had high values and are still bringing money to the IDC. The respondent also has experience in the logistics sector. The second respondent also has experience in renewable energy. He also has experience in

Industry	Number of Respondents	Reason for Choosing a person
		the technology sectors and investments in the rest of Africa.
Media and motion pictures	1	The individual has vast experience in different industries (and was also involved in renewable energy projects.
Textiles	2	Both respondents have experience in the textiles sector. This industry is a challenging industry to work in at the IDC due to most clients being distressed. Wanted to gain knowledge from them on their experience.
Total	12	

5.3 Presentation of results

The literature review revealed that there are certain biases that the individual experiences when deciding. The research questionnaire was formed to test the following biases at the IDC:

1. Heuristics
2. Overconfidence
3. Regret aversion
4. Anchoring
5. Financial cognitive dissonance

The results of the represented will answer the research questions outlined in Chapter 3. The study did not give personal details of the respondents because most respondents did not want to be identified in the report. The interviews provided good data for analysis.

5.3.1 Research question 1: What behavioural finance biases are currently influencing investor behaviour?

The research aims to understand which biases influence decision-makers at the IDC. The questions were formulated to identify the biases.

5.3.1.1 Do you know the Eyethu process?

Eyethu is the investment process that all investors at the IDC should be following when reviewing an investment for funding.

Of the twelve respondents, only two of knew the Eyethu process. Most of the respondents had heard about the process but did not know the actual process. Some of the respondents had never seen the Eyethu process. The respondents said that due to the long experience at the IDC, they felt they did not need to go back and review what the process offered. They said they could apply the process without looking at the actual document. Some of the respondents believed that the initial training received from the IDC was sufficient for them to know the process and therefore, there was no need to go back and check for updates. Some of the respondents felt that the document was outdated and needed to be changed.

Respondent 2 *“So if you’re going only rely on Eyethu you might be using something that’s no longer relevant or outdated.”*

Most of the respondents are using prior knowledge of the process and are not keeping up to date with the changes that have been made to the Eyethu process. The Eyethu process is usually updated with any new changes in the process that the IDC implements. The respondents that used the process found it useful and relevant to their decision-making; they use the process as a guide to ensure that they comply with IDC requirements. They understood the process because the IDC had changed its process for project development, and they needed to understand the change and comply because when they go to the credit committee, they need to show that they complied.

Respondent 3: *“So, I think for me, it is just to make sure that I high-level know what the documents, what documents we collected as a whole.”*

Respondent 4: *“I think if you should ask anybody in the organisation now, even those who have designed the process they would not know whether they are coming or going.”*

Respondent 9: *“I know there is an Eyethu process, but, I won’t be able to tell you from A to Z.”*

5.3.1.2 Are you excited by taking a R1 million deal vs a R100 million deal?

Most of the respondents wanted to do the R100 million deal. The respondents said “they are measured in numbers”, and the R100 million will help achieve their targets. Their bonus and increases are determined on value approved. The respondents said the person coming for funding for a R100 million deal already has the information needed by the IDC. The R1 million deal usually does not have the information required. The same amount of effort goes into approving a R1 million deal as R100 million deal. The respondents, however, said that completing ten R1 million deals vs ten R100 million you will not get the same recognition and yet it takes the same effort. The IDC does not discriminate between the clients based on value. They treat the clients the same.

However, some respondents felt that one makes more impact by approving a R1 million deal, as this client can become a bigger player in the future you complete. In the smaller deals, the respondents felt like they are making a difference in someone's life. The client comes to the IDC with no business acumen, and you get to walk the journey with the client. The client does not have the information in the required format, and that is the reason why the respondents find it challenging to make the investments. Due to the small size and the effort required, it is challenging for the respondents to be excited about doing these types of deals.

Respondent 1: *“Naturally for a dealmaker, the more, the better because we work; we have performance packets.”*

Respondent 8: *“The only reason why I think the R1 million deals are not sufficient, and I’m less excited about [them] is because the pressure that we get is for meeting the numbers.”*

Respondent 11: *“So, my only excitement in terms of a bigger deal which speeds up information is more freely available, and your turnaround time then is quicker than your smaller deal.”*

5.3.1.3 Do you use your experience to assess investment more than the information available in the market?

Most respondents use their experience in accessing investment viability. The respondents feel that experience makes it easier for the investor to identify critical issues earlier in the investments. For example, there are industry norms in terms of how much a field should yield, or what margin is required for a certain product. This knowledge you gain through experience. There is a lot of sector / industry-specific information that the investor uses to analyse the investments. This experience is what makes them professionals as this is embedded in their minds when they are assessing investments.

Respondent 1: *“So, experience comes in the fact that I’ve alluded earlier on to say, okay, you are able to get to the critical issues quickly.”*

Respondent 2: *“how come yours is different from the norm. So, you have to rely on the industry. You have to because otherwise, you are going to go blind, blindly into a transaction.”*

Respondent 3: *“So, it’s information that we become familiar with overtime because we work in the industry, you know.”*

Some of the respondents use market data to assess an investment. Due to the nature of the industries that the respondents work in, they felt that they needed to keep abreast of what is happening in the market. In the one industry, things are changing so rapidly that what was relevant in the past two years is no longer relevant. Some respondents even buy market research documents to understand the changes in

their industries. Some industries have live data of what is happening, which the respondents can view and assess before deciding. The respondents said you have to understand the drivers of the market. As some clients still perform even though the economy is declining. The market has an impact on their investment decision.

Respondent 1: *“you’ve got specialists, you’ve got reports that are available and if the client comes and says to you this is what’s been happening now you obviously have to consider that.”*

Respondent 10: *“I mean there’s market-relevant information but also what we do just beyond that is it we have to go on purchase market reports to actually to verify some of the information we use for deals;”*

Respondent 11: *“So, you would use them in conjunction to maybe say this is what I know and then but you will always fact test it against the latest market information available.”*

5.3.1.4 Are you optimistic about your industry?

Some of the respondents were optimistic about the future of their industries. In the infrastructure sector, the sector is likely to improve due to the importance of infrastructure in the economy. For the economy to grow, there needs to be proper infrastructure in place, and since this is not in place, there is an opportunity for growth. Due to the nature of industries like agriculture, there is an opportunity for growth as people have to eat. Even during economic decline, people cannot stop eating; therefore, there is an optimistic outlook for the food industry. There are also many innovations around farming which increase output and outlook. Other industries are increasing due to the export opportunities and are not reliant on the domestic market to make income.

Respondent 1: *“Ja, very much so in the sense that if you look at our key focus areas being your energy/power, water, ICT and logistics those will be our key focus areas. I’m very optimistic because of overall its infrastructure that we look at and if you*

understand infrastructure as a key enabler to industrial development you would understand why I'm very optimistic about it."

Respondent 2 *"People eat, people eat. You can't not eat. You cannot. If things go bad you stop buying clothes; you stop buying goods, you know like computers and whatever. It's like okay, I won't replace my TV or whatever. When it comes to food, you have to eat."*

There are many challenges that are currently facing industries. The decline in the economy is affecting companies' performance and leads to impairments. The respondents were not optimistic for the following reasons, some of their industries are mature, and there is no room for growth, other industries need policy changes and government to intervene for their industries to experience growth. The respondents said there are financial constraints from the fiscus, which is the main funder of infrastructure in the country. Investments in the infrastructure industry are usually backed by the government. Due to the lack of funding the industry has experienced challenges.

Respondent 1: *"The industry at the moment is very challenged. So, in general, the deals within the infrastructure space perform because you tend to have your cash flow certainty, and they tend to be backed by the State, so to speak."*

Respondent 4 *"It's very difficult in the current economic climate of South Africa to be optimistic about many of these industries for various reasons. We are, I fail to understand how a business can grow in a declined economy."* *"So, optimism is very difficult in the current economic climate that we are."*

5.3.1.5 Have your budgets ever correlated with the actual results of a client? Why do you think that is the case?

Most of the respondents said that their budgets do not correlate with the actual budgets of the clients. The people applying at the IDC would have been rejected by the banks and are, therefore, risky clients. All the budgets are subjective, and most clients don't meet them. Sometimes it is situations outside their control that is preventing the clients from meeting the budgets. When clients come to the IDC, they

are usually optimistic about their industries and it is reflected in their budgets. The respondents try to make conservative budgets, but even then, the client still does not meet the budgets.

The respondents confirm that all the forecasts are subjective based on what the respondents think the client will be able to achieve. The clients usually do not meet the targets, and then they experience challenges and come back for more funding. The respondents use their industry knowledge and experience to create this forecast.

Respondent 11 *“So, we actually fund a lot of risky applications which probably the bank has said no to. So, there’s a lot of things that happen out of your control. It could be due to management intentional, mismanagement of funds or fraud.”*

Respondent 12 *“No, whereas a client’s budgets are always optimistic. Ja, and most times the reality is the opposite actually you know. The performance most times is actually worse than what the client thinks and what we think as well.”*

5.3.1.6 How would you describe your risk appetite?

Some respondents said they had a high-risk appetite, given the transactions that they fund. If the IDC wants to create jobs and impact the economy, some respondents feel that they should take on more risks to achieve this goal. The respondents believed that they had presented some risky investments and that it is the nature of their industry to have risky investments. The risk appetite was in accordance with the respondents’ willingness to take a risk in their personal lives.

Respondent 10 *“I think the risk appetite in our unit is we[are] risk-takers. We present some very risky deals, and it’s the nature of the industry at the moment.”*

Respondent 11: *“If we want to create jobs and if we want to have the impact that we aim to have on the industry and on the economy, we’re going to then have to look at more risky projects. So, I think as a result of the type of work that we do and the vision that we have as IDC which then translates into myself has to then open up my risk appetite and then take on a little bit riskier projects.”*

Some respondents' risk appetite was low. They felt that they were at the IDC to mitigate risks, that all transactions they investigated, they mitigate the risks identified. They felt that you should not take a risk for the sake of taking a risk, but the risk should be mitigated. They are there to manage risk, and therefore they need to understand the risk to manage it. They had a low-risk appetite

Respondent 8: *“And what we do is risk management, and unfortunately, that means that we need to understand the risks, and we need to then just act accordingly.”*

Respondent 12: *“Ja, we are paid to mitigate risk, and when we fund a business, we need to make sure that all the risks, there could be risks, but the risk needs to be mitigated though; you know what I mean. Ja so, I don't fund a company with unmitigated risks.”*

5.3.1.7 How do you feel if your transaction is impaired?

The respondents feel regret when their transactions are impaired. Some of the respondents blame themselves for the impairment. They try to understand whether they could have done something different to avoid the impairment. The impairments affect their targets; therefore, a direct impact on their pockets. Some respondents feel sad because they know the people behind the impairment. They have a relationship due to being involved in the transaction, and they can imagine the impact on that person and the job losses. They take the impairment as a personal reflection of their work.

Some respondents concede that the impairments are sometimes outside their control. It is the nature of doing business to have some transactions impaired. Some industries are experiencing challenges due to the lack of economic growth, and this has resulted in increased impairments. However, one respondent was concerned about the level of impairment compared to the banks. The IDCs impairment is too high, and it becomes a challenge for the IDC to run its business

Respondent 1: *“Ja, sometimes I feel as I've contributed to the failure. I feel very disappointed because somehow it tells me that maybe I should have done better to*

at least identify it.” “Suddenly, you impairing again. I think those turn to be more difficult on myself to say, I mean could I have done something; could I have picked up the warning signs or something like that. So, I think it’s more disappointing than anything because I mean if I had approved the deal, I would like to see it through.”

Respondent 9: *“Well, sometimes, I feel like it’s a reflection on my work and maybe my decision-making.”*

5.3.1.8 Has your transaction ever been audited by an internal audit? If yes, please provide an example. How did that make you feel?

The respondents felt that the internal audit process was part of doing transactions. The internal audit does sample checks on large transactions. They did not feel intimidated by the process. Most of the respondents were comfortable with the process, and they followed IDC processes while doing transactions, and therefore, internal audit was unlikely to find something irregular. Some of the respondents would like the internal audit to provide them with feedback on what they found in the process as they can use the information in the future.

Respondent 1: *“But I mean I take comfort in the fact that I always try to do my deals above board. I don’t enter into any special relationships either with the clients or any stakeholders within the project.”*

Respondent 4: *“You do your work to the best of your abilities within the parameters of what the IDC expects of you; policies and procedures. Then whoever wants to audit you, must come and audit you because you’ve done what you thought best in the guideline and the rules of the organisation.”*

5.3.1.9 How would you describe the performance of your industry?

Most of the respondents linked the performance of their industries to economic conditions in the country. Due to the challenges that are experienced by the country, most respondents felt that if the country's situation improves their industries will improve. Some of the respondent’s industries rely on government and policy and feel that the government needs to improve for their performance to improve. Government

has been reluctant to change policies due to financial constraints. Since the economy is challenged, they find that clients are also finding it challenging to grow. Some challenges in other industries are based on changing customer preferences. In agro-progressing, the sugar tax is affecting the sugar industry.

Respondent 1: *“The industry at the moment is very challenged.”*

Respondent 4: *“It is a very challenging performance. We have a lot of impairments. Their markets are challenged.”*

Some industries are doing well as they are being innovative and moving with technology. Industries that do not rely on government are generally doing well, such as the automotive where the industry has an export market to sell its products. Some industries, like the media industry, have seen an increase due to big-budget movies being filmed in South Africa.

Respondent 3: *“Automotive, there they’re doing well only because of other markets. So, export markets are what drives them the most.”*

Respondent 5: *“So, one thing that’s been on the rise is your big budget films that are coming to South Africa, and you know that to me it is just an indication of a positive trend.”*

5.3.1.10 Do you think it is likely to improve or decline? Please elaborate.

Most respondents feel that their industry performance will not improve. They feel that the needs to be structural changes in the economy for any of their industries to improve. The respondents feel that the industries are linked to the country’s economic progress. Therefore, if the economy improves, their industries will improve. The respondents also see the challenges that are faced by their clients due to the impact of the economy.

Respondent 4: *“It’s very difficult in the current economic climate of South Africa to be optimistic about many of these industries for various reasons.”*

Respondent 12: *“No, I’m not optimistic. I mean being in the clothing and textile sector ja, I feel the government is not doing enough to protect the sector you know in terms of illegal imports which hurt the industry a lot.”*

Some of the respondents were optimistic about their industries. The respondents said there are pockets of excellence, and they felt that their industries were already showing signs of improvement. The respondents saw infrastructure as an enabler. If you do not have the infrastructure, you cannot grow the economy. The amount of infrastructure needed for water and information technology can change many industries. If you have the right infrastructure, all other sectors benefit from that infrastructure. That is why the respondent is optimistic about the future.

Respondent 1: *“infrastructure as a key enabler to industrial development, you would understand why I’m very optimistic about it.”*

Respondent 5: *“So, one thing that’s been on the rise is your big budget films that are coming to South Africa, and you know that to me it is just an indication of a positive trend.”*

5.3.1.11 Do you consider yourself an expert in the investment field? Please elaborate on why you think so.

Most of the respondents did not consider themselves experts in their field. Most of them called themselves professionals. They felt that the investment field is so vast, that they cannot call themselves experts. They felt that they were still learning. They felt that being in the same industry for many years does not qualify you to be an expert. They are striving to be the best in their field without being arrogant. They considered themselves knowledgeable and technically skilled. One of the respondents felt that you could only be an expert if you become a teacher of a subject. Then you will be tested to what you know about the subject.

Respondent 1: *"I wouldn't necessarily want to be called an expert, but I think I am a professional in the space. I understand my industry to the best of my knowledge but ja, if one wants to call me an expert maybe give me another few years before I get there."*

Respondent 4: *"So, ja it's difficult to say because the investment field is very broad and you only really become the expert in that little bit of field that you have exposure to."*

5.3.2 Research question 2: What are the advantages or disadvantages that these biases have on the investor?

5.3.2.1 Do you rely on your industry knowledge to assess the viability of a deal?

Most respondents felt they needed industry knowledge to assess a deal. They felt that you could make judgement errors as some industries have set benchmarks that every deal should follow. Therefore, being able to look at a deal and apply those benchmarks applicable to a deal is important. They become familiar with the information required and can apply it quickly to transactions. It becomes background information. However, even with the background information, you still have to apply your mind as every deal is different and brings its own perspective.

Respondent 9: *“Oh yes, definitely you have to. You have to use industry knowledge.”*

Respondent 10: *“Definitely, I think some of these industry sectors like the chemicals and mining you can’t do without industry knowledge in those sectors.”*

Some industries change all the time and information that was relevant a few years ago is no longer relevant as industries are always innovating. Their industries are always moving, and therefore they have to be continuously learning to make correct decisions. Therefore, in these industries, you have to compare your knowledge with the latest information that is available in the market to make the right investment decisions.

Respondent 11: *“So, you kind of stay abreast of the information but you have to always just keep up-to-date and have constant communication with everybody just to make sure because then the most relevant information.”*

5.3.2.2 Do you consider yourself a rational investor? Why do you think so?

The respondents felt that they were rational when making investment decisions. They felt that being too emotional could jeopardise your decision-making. They felt that you have to look at the business objectively and make sure you get corroborated evidence to decide. You cannot simply take the client's word for what is required. They said you have to be objective and analyse what does the client needs and not what the client is asking for. That is, you have to be objective and independent. They said they were incentivised to make a rational decision and mitigate the IDC against risk. Therefore, being objective is essential. The respondents said what is best for you should also be the best for the IDC. You should always remain professional.

Respondent 1: *"It's about what's good for the business as well you know; is what's good for the business. So, you've got to be very objective."*

Respondent 11: *"Everything is corroborated, and so, I would say yes, I am 100% rational."*

5.3.2.3 Are you anxious when taking a transaction to the credit committee? If so, why?

Most respondents were anxious about taking the transaction to their credit committee. They could not predict the questions that were going to be asked. Some of the respondents felt that they were not able to answer all the questions posed by the committee, and yet sometimes they did not have all the answers. The respondents felt they had to predict the mood of the committee. Sometimes the committee looks for things that they do not know about, and this made them anxious. There is an environment in which questions are asked and how questions are asked affected them. Some respondents were trying to make sure that they looked good in front of the committee.

Respondent 3: *"So, I think I'm only anxious because of our committee is. I think the deal itself you may be happy with being able to talk to it and why you think it should be done. But I think the manner in which the questions are asked at IDC, in particular, is, provides; it's attacking."*

Respondent 11: *“So, I think it’s just, it’s the reason why you’re anxious is not that you’ve done something wrong or you feel you knowingly going and knowing that you haven’t done everything.”*

A few respondents said they were not anxious about taking their transactions to the committee. They felt like the report had been looked at by many people and by the time they went to the committee all the questions that could have been asked, would have answered. Therefore, if you are well prepared, you should not be anxious.

Respondent 8: *“No, no. The reason why is because by the time it goes to the credit committee, normally you had to justify to 15 different people already.”*

5.3.2.4 How do you ensure that all the information presented to you is considered in your decision-making?

The respondents said there were templates that the IDC used for submission to the credit committee. Some industry requirements are standard, and if that information is not received, then they cannot complete submissions to the credit committee. The submission is about identifying risks and ensuring that all risks are mitigated. Therefore, you need supporting evidence for you to ensure that the risks are mitigated.

For you to decide, the client needs to provide you with the necessary information. All the information requested from the client is relevant for decision-making. You cannot assess the business without the required information from the client. Some respondents said that, some clients provide you with irrelevant information. Through your experience, you can determine what information is relevant for decision-making.

Respondents 9: *“Also, by identifying all the risks we look at that information given to us. So, there is, I guess you can’t make a decision without using the information given to you.”*

5.3.2.5 How do you ensure that your manager does not influence your transaction?

Most of the respondents said it was difficult not to have the manager influence the transaction. The manager is part of the process of making submissions to the credit committee and plays an important part in decision-making. However, the respondent said the relationship with the manager was a two-way street where they needed to influence the manager to get a better understanding of the transaction and that the manager also influenced them to see transactions in a different light. Some respondents said a team effort is required and the manager does not have veto powers to influence transactions for his interest. Most respondents said they try to get buy-in from the manager and eliminate any doubts about the transaction.

Respondent 8: *“So, even in instances where I realise that there might be you know something might not be supported, I try and build a case; strong case. So, that when there are sort of doubts about that case then you still you know it’s base on, it’s as good as I could get it you know. It’s a motivation as I could get it.”*

Respondent 11: *“all of the information that’s requested in the standard template in addition to the information that we do request is required for us to consider in our budgets which then leads to the investment process.”*

5.3.3 Codes and Themes

These are the most cited codes by the respondents. These codes emerged from the interviews based on the semi-structured questions that were asked of the respondents

Table 6: List of codes

Code	Number of times
Being Rational	15
Bigger the better	11
Completeness of Information	8
Feeling of indifference	9
Feeling regret	18
Feeling of anxiety	15
Industry experience	13
Industry knowledge	23
Job fulfilment	14
Knowledge of the market	16
Knowledge of process	29
Manager buy-in	7
Negative about industry	19
Optimistic about future	14
Overconfidence in abilities	17
Overoptimistic about budgets	15
Being professional	14
Risk appetite	15

The figure below lists the four themes that emerged from the interviews with the respondents. Each theme also lists the codes that are associated with it.

Figure 5: Themes

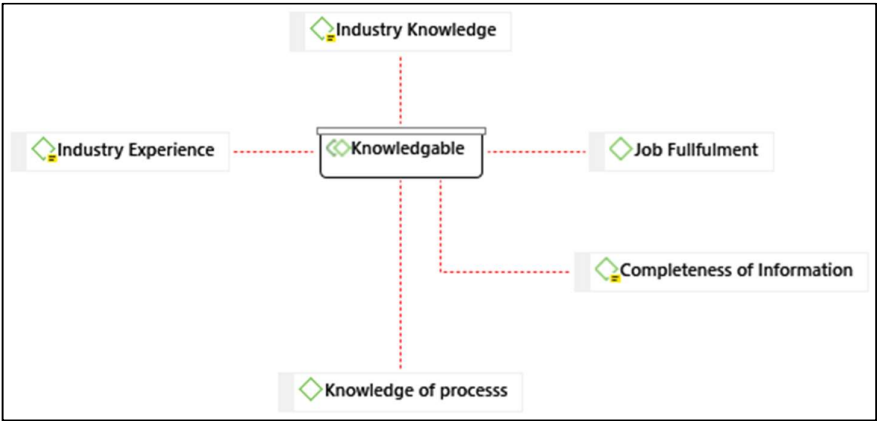


5.3.3.1 Knowledgeable

The respondents said that they did not look at the process map daily, but because they have been doing the same job for several years, they were comfortable with the process. Most of the respondents used other sources to complete their information for decision-making as their industries changed a great deal from year to year. The respondents conceded that not all information provided is relevant and therefore, they have to use their experience to assess what information is relevant for decision-making. Due to the way that information needs to be presented for decision-making, most respondents can request the set information from the client.

Because some of the industries are continuously evolving and innovating, the respondents need to be continually updating their knowledge to make sound decisions. The respondents get the information from the research centre and sometimes have to buy publications to make decisions. Their experience helps them to see changes and be able to apply them for the decision-making process. Most of the respondents worked in the same industries for many years and therefore obtained industry knowledge and standard operating processes in that industry.

Figure 6 Knowledgeable

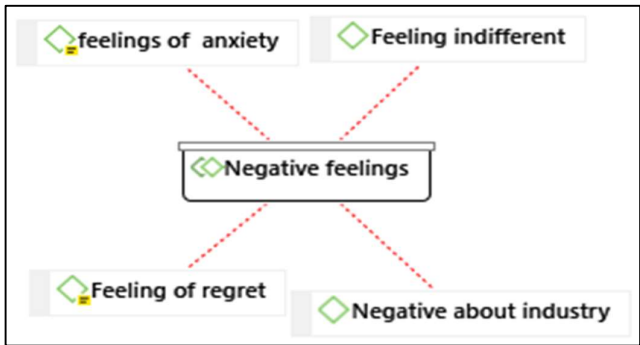


5.3.3.2 Negative feelings

Many of the respondents experienced negative feelings due to the declining economy which affects the clients negatively. Most of the clients are coming back for funding due to lack of demand for their products and therefore, cannot make enough revenue to pay back the loans. Most of the respondents have to deal with these clients as they were the ones who initially took the transaction to the committee. Therefore, there is the additional burden of trying to restructure the transactions.

Most of the respondents are anxious about going to the credit committee due to the amount of scrutiny that they have to go through to get a transaction approved. The high impairment rate also contributes to the stress as respondents have to account as to why the transactions are now being impaired. This impairment brings feelings of regret, as many respondents feel they are to blame for the failure.

Figure 7: Negative feelings

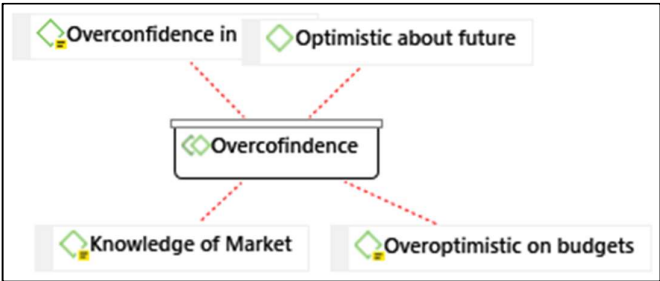


5.3.3.3 Overconfidence

Many respondents are confident about their abilities. Due to being in the same industries, many respondents can explain the benefits and challenges of operating in that specific market. Their knowledge of the market helps them identify risks and mitigate them. However, even though the industries are not performing well, most of the respondents were optimistic about their budgets. The clients may never have met any of the budget targets, yet most of the respondents still use the same methods to approve transactions.

Most of the respondents believed they were professional in their fields due to the number of years that they had been working in the investment field. They did not consider themselves as experts because the investment field is very broad and includes many skills, which they did not possess.

Figure 8: Overconfidence



5.3.3.4 Risk Appetite

Most respondents said they had a high-risk appetite. They said that due to the nature of work, they have to take more risks. The respondents feel they are there to mitigate risk and not just take a risk for its own sake. They know how they take risks in their personal lives, and can compare this with how they take risks on investments at the IDC.

Figure 9: Risk appetite



5.4 Conclusion

This chapter summarises the findings from the interviews with the respondents. The respondents were from different industries and brought different perspectives to the research questions. The main themes were aligned to the literature review and the findings will be discussed in chapter 6.

CHAPTER 6:DISCUSSION OF RESULTS

6.1 Introduction

This chapter discusses the research findings in line with the research questions. The analyses of the findings are based on the investigation through semi-structured interviews and in line with the literature review in Chapter 2.

6.2 Discussion of research question 1

Research question 1: What behavioural finance biases are currently influencing investor behaviour?

The research question was aimed at elucidating which biases are currently influencing the decision-making of respondents at the IDC. These biases were identified in the literature review, and the findings are discussed below:

6.2.1 Knowledgeable

The data from the interview with the respondents show that the respondents have knowledge in financing transactions in corporations. The respondents have been working at the IDC for many years and are now familiar with what a company needs in terms of financing when they come to the IDC.

6.2.1.1 Job fulfilment

The respondents obtain job fulfilment by being able to assist companies with their funding. The funding usually has a multiplier effect in terms of creating jobs, an increasing revenue and supporting developmental impact in the areas where the businesses operate. The respondents would have seen the business during due diligence and can assess the difference, which gives them job fulfilment.

6.2.1.2 Knowledge of process

The data from the interview show that the respondents do not know what the actual IDC process is. The Eyethu process is a process flow of all processes that need to be followed for a transaction to be approved. This process flow is continuously improved in line with new policies that are approved by the IDC. Because the respondents have been working at the IDC for many years, they did not see the need to check the revised process continuously. The respondents used prior knowledge of the process when deciding. According to Hafenbrädl et al., (2016), the two most important properties required for an individual to make fast and frugal heuristics are the individual's capabilities as a decision-maker and the decision environment. The environment at the IDC is conducive for the decision-makers not to be continuously looking at the revised process. The main inputs to the report are standard, which are background, financial, marketing, technical and legal. There are also reviews of the submission by many parties before a final decision is made. Therefore, the lack of implementation of the new process is also a problem since the people who are reviewing are also not familiar with the new process.

According to research, managers use heuristics to make simple decisions (Hackman, 2012). Because the respondents have made these decisions for several years, it has become second nature and therefore there is no need to rely on the process.

Respondent 12: "Look, not that often, but I mean like we are doing this job for a while now. So, I am familiar with the processes you know with the IDC."

This response is the sentiment felt by most respondents.

6.2.1.3 Industry knowledge

The data from the interviews show that most of the respondents have worked in the same industries for some years. They have acquired their industry knowledge by doing transactions in that industry. Due to some of the industries rapidly changing and being impacted by several issues, the respondents have increased their

knowledge in line with what the industry is doing. The respondents understand that there is always new information that needs to be considered when deciding, and therefore they have to update their knowledge continually to remain relevant. Some of the industries are complex, and it takes time before an individual can say they fully understand the drivers of that industry. When people are faced with uncertainty daily, they will use “fast-and-frugal” heuristics to make a decision (Hafenbrädl et al., 2016). Therefore, being in the same industry for many years helps the IDC to be able to make quick decisions as the respondents have seen the up and downside of their industries and are therefore able to make quick decisions. Hafenbrädl et al. argue that decisions made under uncertainties do not require high effort or intricate plans.

6.2.1.4 Industry experience

Many respondents have worked in the same industries for many years. The data confirms that industry experience is essential in decision-making. Although there is a fine balance between industry knowledge and industry experience, however, they play different roles in decision making. Experience allows the respondents to identify and mitigate the risks in a transaction. However, managers have limited cognitive abilities; therefore, they are not able to process and image all possible outcomes of their decisions (Abatecola et al., 2018). Therefore, using their experience in terms of number of transactions performed in those industries and the latest updated knowledge that they have they can make quick decisions.

6.2.1.5 Completeness of information

The respondents use their own judgement to determine whether the information received is sufficient for decision-making. Data shows that based on experience, the respondents know what questions to ask to get the required information for decision-making. Some industries have checklists, where all the information on the checklist needs to be received before any decision can be made. Research has revealed that there comes a point where having too much information can negatively impact the decision (Hackman, 2012). The respondents confirm that not all information received from a client is good for decision making. The respondents are making decisions under uncertainty as the environment is always changing, and they have to apply their minds to identify potential risks. However, managers have limited cognitive

abilities; therefore, they are not able to process and image all possibilities of their decisions (Abatecola et al., 2018). Therefore, the respondents rely on their industry knowledge and industry experience to make quick decisions.

6.2.1.6 Conclusion

This data are in line with the literature review that people making decisions under uncertainty will use heuristics to make quick decisions. As can be seen from the discussion above, the respondents use industry knowledge and industry experience to make quick decisions. They rely on their experience to identify risks and mitigate them and also rely on their experience on whether or not to look at the updated policies and procedures that the IDC has implemented. This experience makes their decision making “fast and frugal”.

6.2.2 Negative feelings

The respondents are affected by negative feelings. The country is experiencing a decline in the economy, and this affects most industries in South Africa. Due to the long decline, most respondents are experiencing negative feelings towards the country and also towards their clients.

6.2.2.1 Feeling regret

From the interview, it is clear that the respondents feel regret due to the decision that they have made for funding a particular company. The regret comes when the company does not perform as anticipated, and then the funding needs to be impaired. The respondents feel that they have somehow contributed to the failures of the companies because they did not identify some of the risks associated with the companies. They think it's a reflection of their quality of work. Regret is a feeling of self-blame when the outcome is different from what the person intended it to be (Pahlke et al., 2015). People often imagine the outcome and try to see how it could have been different (Park et al., 2016). This feeling is in line with what the respondents are saying that they try to see what they could have done differently, did whether they identified all the risks and tried to mitigate them.

According to Levy (2017), decisions made by decision-makers are not always efficient as they are sometimes impacted by emotions. The respondents described all negative feelings that they experience when their transactions are impaired, they are sad, disappointed, and they feel terrible. This feeling impacts their decision-making in the future. According to Pirie & Chan (2018), decision-makers feel that their incorrect decision is contrary to their self-image.

6.2.2.2 Feeling anxious

The data shows that the respondents feel anxious when they have to present their transactions to the credit committee. The feeling of anxiety is brought by the fact that they do not know what questions the committee will ask. Even though most of the respondents have been working at the IDC for more than five years, they still feel anxious. As stated by (Chen, 2011), decision-makers feel anxious when there is an undesirable outcome due to their decision. As most of the respondents don't know how the committee feels about their transaction, they will try and structure it in such a way that it looks favourable to the committee. As per Pirie & Chan (2018), investors are under pressure to make the right decision and have well-performing portfolios and do not risk being left behind when opportunities arise. This is similar to what is experienced by the respondents as the negative impact of impairments on their portfolio will affect their emotions.

6.2.2.3 Negative about industry

The general feelings are that most of the industries are impacted by the country's economy. Some of the industries need government intervention for them to become more competitive in this global economy such as taxes for the textiles and more stable electricity supply for capital equipment. Some industries are mature, and it is difficult to bring new entrants in the market. As per Guiso et al. (2018), fear can impact risk aversion even if the environment they are operating in does not change. Since the South African economy performance has not changed in the past few years, this has had an impact on the decision-making of the respondents as they have been working in the same industries for many years and have not seen any significant change.

6.2.2.4 Feelings of Indifference

The interview shows that the respondents are not worried about being audited by the internal audit. They see it as part of the processes that need to be followed by the IDC. Since it is a random selection, they feel it does not bother them.

6.2.2.5 Conclusion

The negative feelings that are experienced by the respondents are in line with the literature review. Regret aversion relates to the feeling of regret when investors' investments are making losses, or they have lost a potential gain on the investment (Corzo et al., 2014). This feeling is what the respondents feel when their transactions are impaired. It is a loss to their portfolio and will therefore; they will try to avoid the negative feelings that they experience due to the loss. As per Diecidue & Somasundaram (2017), the decision-maker experiences regret when the outcome is not the same as what he expected when the decision was made. The impairment is an outcome that the respondents want to avoid, which is directly related to the decision that was made by the respondents.

6.2.3 Overconfidence

The respondents are confident in their abilities. They have been working in the same industries for several years and know the industries. Most of the respondents are comfortable doing R100 million transactions and prefer them to smaller transactions as smaller transactions require the same amount of time as the larger transactions. There are incentives to prefer larger transactions to smaller transactions. As per Merkle (2017), people tended to overestimate the performance of their portfolios, believing that they could outperform the market.

6.2.3.1 Knowledge of the market

The respondents are confident in their knowledge of their market in which their clients operate. Some of the industries are rapidly changing, introducing new markets that were previously not there, due to technology or innovation advancements. Therefore, the respondents always have to keep abreast of this new market as they need to make investments in those new markets. The respondents get information from the research centre, and some respondents go-to consulting companies for a market study to be completed before an investment can be made. As per Kourtidis et al. (2015), the overconfidence is based on the individuals' knowledge of the stock market and experience. Therefore, the respondents are overconfident due to their experience of working in the same industries and funding the same transactions.

6.2.3.2 Overconfident about abilities

Based on the respondents' comments in the interview, it was evident that the respondents are overconfident about their abilities. The respondents believe that due to the number of years of experience in the same industry, they can identify suitable companies for funding. They are of the view that their experience helps them identify which information is necessary to investigate for funding. As per Kourtidis et al. (2015), the overconfidence is based on the individuals' knowledge of the stock market and experience. This feeling is similar to the respondents as they are also experienced in their knowledge of funding and being able to identify risks. According to Merkle (2017), overestimation is people being overconfident about their abilities.

The data show that the respondents believe that they are experienced and professionals in the investment field. People tend to be overconfident in environments that are stable (Dessí & Zhao, 2018). This is similar to the industries that the respondents are operating in, as there has not been any major economic growth; therefore, the clients are not drastically changing the way the use funding, as they are not sure where the economy is going.

6.2.3.3 Overoptimistic about budgets

Based on the interviews with the respondents, the data shows that the respondents are over-optimistic when completing budgets for funding. The respondents admit that the clients never meets their forecasted budgets, but they still use the same method of due diligence for investing. They believe they are more conservative as they usually adjust the client's budgets downwards, but even with these adjustments, the client never meets the budgets forecast. According to Merkle (2017), people tended to overestimate the performance of their portfolios, believing that they could outperform the market. This is the same as when the respondents' budgets are too optimistic and usually grow faster than the market that their clients are operating in. As per (Merkle, 2017,p68) "Financial overconfidence leads to increased trading activity, higher risk-taking, and less diversification." The data show that due to the experience in the same industry the respondents think they can identify most of the problems that are associated with the clients and that makes their selection of clients less diversified as they are investing in similar clients. Zacharakis & Shepherd (2001) suggest that managers' decisions should be interrogated by the team members and other senior people to force the manager to consider all the different angles that might affect the decision. This will help the respondents identify risks different than those that they have previously identified.

6.2.3.4 Optimistic about the future

Based on the interview with the respondents, the data show that some of the respondents are optimistic about the future of their industries. The respondents believe that the economy will improve and this improvement will help their industries excel.

6.2.3.5 Conclusion

As can be seen from the data, the respondents are overconfident about their abilities. They use their abilities to make investment decisions. The respondents are overconfident about their knowledge and experience in their industries. They use this overconfidence in their decision-making.

6.2.4 Risk appetite

Based on the data, most respondents have a medium to high-risk appetite. They consider themselves as risk-takers. The data show that respondents think IDC's clients are very risky and that IDC needs to invest in these to have a greater impact on the economy. They believe that they are there to mitigate risk. They do not take a risk just for risk's sake, but there is a purpose behind taking that risk. Some respondents' personal risk appetite affects the risk they are willing to take at the IDC. According to Pahlke et al. (2015), individuals will take less risk when they are responsible for another person's loss. Individuals will take less risk than the risk of their investors who might have a higher risk appetite.

6.2.4.1 Manager buy-in

Based on the data from the interviews, the respondents said they need their manager to buy into the investment they are proposing. The manager plays an integral part in the investment proposal, and they have to agree before you go to the committee. Zacharakis & Shepherd (2001) suggest that managers' decisions should be interrogated by the team members and other senior people to force the manager to consider all the different angles that might affect their decision. What the data suggest is that the respondents have to provide the manager with the relevant information in order for him to make the right decision.

6.2.5 Conclusion

The respondents are affected by risk when making decisions. The respondents mitigate the risks that they identify in an investment.

6.3 Discussion of research question 2

Research question 2: What are the advantages or disadvantages that these biases have on the investor?

The second research question was to understand whether there are any advantages or disadvantages for any investor who has these biases. Therefore, the research aims to understand whether the tools are beneficial or not.

6.3.1 Heuristics

6.3.1.1 Advantage

Based on the data from the interviews, the respondents use heuristics daily when they make decisions. The data show that they use their knowledge of the industry to assess the clients more rapidly. They also use their experience as most of the respondents have been working in the same industries for many years. According to (Hafenbrädl et al., 2016), heuristics help us understand the decision-making process of individuals. Therefore if they are in a known environment, decision-makers can use heuristics to make accurate and effective decisions (Hafenbrädl et al., 2016). These accurate decisions are an advantage to the decision-maker as it can be seen from the data that the respondents rely on their knowledge and experience. Their knowledge also saves them time, as they do not have to be looking continuously at new processes at the IDC as they have made these investments for some years. This heuristic is an advantage as the respondents can spend time doing other things and be confident that their knowledge is enough for them to identify risks.

The data shows that the respondents already know what information is required for investing. They understand the drivers and are, therefore, able to quickly scan the application and save time. "By relying on a heuristic that fits a particular environment, people can make efficient decisions in little time and based on little information (hence 'fast-and-frugal')" (Hafenbrädl et al., 2016,p217). They use heuristics to save time and become more efficient.

Respondent 1: “So, experience comes in the fact that I’ve alluded earlier on to say, okay, you are able to get to the critical issues quickly.”

6.3.1.2 Disadvantage

The disadvantage of using heuristics is that they can miss new information that is available. Due to uncertainty, the respondents might deviate from what they are already familiar with and miss the opportunity to see other information. These strategies sometimes ignore available information (Hafenbrädl et al., 2016), due to the narrow focus of trying to identify something familiar. The data shows that the respondents only focus on knowledge already acquired through experience and tend to ignore new information that might be relevant now. For example, a piece of land in the past could yield a certain amount of the crop, but now with innovation, this amount might be different.

6.3.2 Regret Aversion

6.3.2.1 Advantage

Based on the data from the interview, respondents feel sad when their investments are impaired. This negative feeling can change the way they look at investment in the future. They can apply the lessons learnt from each investment and improve their knowledge in the future. According to Guillemette, Blanchett, & Finke (2019), the feeling of loss aversion is minimised, the longer the term of the investment is. The investment at the IDC is long term in nature. Therefore, it takes time before a loss occurs. The respondents, therefore, have time to restructure or take some action before an investment is impaired.

6.3.2.2 Disadvantage

Based on the data from the interviews, the respondents blame themselves when investments are impaired. This is because the transaction did not pan out as intended. Regret is a feeling of self-blame when the outcome is different from what

the person intended it to be (Pahlke et al., 2015). They experience regret, and this affects the way they consider applications in the future. This is a disadvantage as the IDC needs more optimistic people who are going to see beyond the downward economic trend. People often imagine the outcome and try to see how it could have been different (Park et al., 2016). This is what goes through the respondent's mind: could they have anticipated that the client would fail? What could they have done differently to avoid the loss? The investor may choose to do nothing to avoid the risk of a loss (Corzo et al., 2014). This is a disadvantage as the respondents would reject investment in order to avoid a loss as impairment also affects their performance targets. Therefore, if the respondents can see that this investment might not be viable or is somewhat risky they will not invest.

6.3.3 Overconfidence

6.3.3.1 Advantage

The data shows that the respondents are overconfident about their abilities. The respondents are confident in their knowledge of the industry and can identify and mitigate risks in investments as they occur. Due to the number of years in the investment space, the data show that the respondents can look at an investment and quickly assess its viability. Individuals who are overconfident performed better than those who were not confident in about abilities (Kourtidis et al., 2015). This is clear as the respondents are comfortable with their knowledge and can easily apply it. Therefore, this is an advantage to the respondents as they can do their job better.

The data show that the respondents are confident in the quality of their work. They are not fazed by the internal audit process, as most of them know that they have made their investments above board. People tend to be overconfident in environments that are stable (Dessí & Zhao, 2018). As per data from the interviews, most respondents are in industries that are stable. Therefore, they are confident as they would have seen a number of investment performances and apply that knowledge to future investments.

6.3.3.2 Disadvantage

Based on the data from the interviews, we conclude that the respondents usually overestimated their budgets as most clients never meet the projections made by the respondents. However, even with this knowledge, the respondents are still confident when presenting clients for investments. As per Pikulina et al. (2017), individuals are overconfident in their abilities, but when you compare to their competence there is a difference. This is a disadvantage, as their competence in the respondents does not allow them to forecast more accurately. As per Merkle (2017), people tended to overestimate the performance of their portfolios, believing that they could outperform the market. This is what the respondents are doing as their forecast usually grows beyond the growth in the market as they usually believe that their clients will gain market share due to the new investment in the company.

6.3.4 Anchoring

6.3.4.1 Advantage

Based on the data from the interviews, the respondents use their experience as an anchor. As stated by Cen et al. (2013), analysts tend to anchor their forecast close to the industry norm. Due to the industry knowledge that the respondents have, they will tend to forecast their investments close to what the industry is currently doing. According to (Givi & Galak, 2019), people have assumed that the present will be like the future. Therefore, in an environment where things are not changing like most of the industries where the respondents are working, they can easily apply this past knowledge to their investments in order to save time.

6.3.4.2 Disadvantage

Based on the data, the respondents are relying on the current data but are not thinking about how the industry will change in the future and therefore, affect investments. The respondents are using research that is based on the past performance of an industry and funding clients who are complying with this norm. As stated by Cen, Hilary, & Wei (2013), analysts tend to anchor their forecast toward

the industry norm. The data show that the respondents also use their industry knowledge to assess the viability of investments. They are anchored to the industry norm as if clients do not comply with industry norms, no investment will occur. This is a disadvantage as industries change due to innovation and the norm might no longer be relevant but will still be applied by the respondents.

6.3.5 Financial cognitive dissonance

6.3.5.1 Advantage

The data shows that there are no advantages in cognitive dissonance. According to Pirie & Chan (2018), cognitive dissonance creates psychological stress for the individual, and therefore the decision-maker is forced to reduce or remove the stress. There is no benefit for an individual in feeling stress as this will reduce their performance.

6.3.5.2 Disadvantage

The data shows that the respondents experience negative feelings whenever their transactions are impaired. They associate negative stress with their performance. According to Kim & Bay (2017), cognitive dissonance arises when a person realises that the decision they have made is incorrect. This incorrect decision to invest in a company that is now impaired causes the respondents to experience cognitive dissonance. As stated by Chen (2011), decision-makers feel anxious when there is an undesirable outcome due to their decision. This impairment is usually outside their control.

6.4 Conclusion regarding the results

The results from the data showed that investors at the IDC have behavioural biases that were tested, which are heuristics, regret aversion, anchoring, overconfidence and cognitive dissonance. These biases influence the decision-making of investors.

CHAPTER 7: CONCLUSION AND RECOMMENDATIONS

7.1 Introduction

The research aimed to understand whether behavioural biases influence the decision-making of investors at the IDC. The research was informed by the fact that most of the research related to investors in the financial market and not corporate companies. Therefore, there is a need for research to provide knowledge about investors who invest in corporates. The research only focuses on five biases which are: heuristics, regret aversion, anchoring, overconfidence and financial cognitive dissonance. These biases were the most cited in the literature and therefore were relevant for the research study.

This chapter will discuss the findings of the research study, limitations of the research, implications for managers and suggested future research

7.2 Principal findings

The principal findings relate to behavioural biases that were confirmed by the data that were discussed in Chapter 6. The data found was in line with the literature review in Chapter 2

7.3 Research question 1: What behavioural finance biases are currently influencing investor behaviour?

The main findings of the research are as follows:

The investors at the IDC use heuristics when making decisions under uncertainty. They use their knowledge which they have gained by being in the same industry for several years. They also use their experience to quickly determine whether they should continue with the investment or not. Therefore, IDC's investors are influenced by the same heuristic biases that affect investors who invest in the market. When people are faced with uncertainty daily, they will use "fast-and-frugal" heuristics to make decision. (Hafenbrädl et al., 2016). Therefore, the research supports the literature.

The investors experience negative feelings when their transactions are impaired. The investors would like to avoid the feelings and experience regret aversion. The investors blame themselves for the impairments. Regret aversion relates to the feeling of regret when investors' investments are making losses, or they have lost a potential gain on the investment (Corzo et al., 2014). Therefore, the findings support the literature.

The investors anchor their knowledge on what is currently happening in their industry. This anchoring is reflected in how the investors choose the investments that they are making. According to (Givi & Galak, 2019), people have assumed that the present will be like the future. Therefore, anchoring their decision to present circumstances.

The investors are overconfident in their abilities. Since they have been investing so long, they believe they can identify companies qualifying for investments. They use this confidence in establishing their budgets. They are confident about their knowledge of the industries and what their experience provides in terms of decision-making.

Investors experience anxiety. This anxiety is related to cognitive dissonance as the investors have to prepare to present their case to the credit committee. This anxiety is brought about by the fact that the respondents want to look good at the credit committee. Therefore they experience stressful feelings while preparing for the committee.

7.4 Research question 2: What are the advantages or disadvantages do these biases have on the investor?

There are many advantages and disadvantages for managers to have behavioural biases.

- Heuristics help investors make quick decisions, and this is an advantage as they will use their time more efficiently.
- Investors are overconfident about their abilities. This overconfidence is an advantage as managers are comfortable with their investment knowledge and can apply this confidence in their decision-making.
- Regret aversion is a disadvantage as it is a negative feeling and investors do not want to have negative feelings.
- Anchoring is a disadvantage as the investors are anchored to the current industry norms which might change in the future.
- Financial cognitive dissonance is a disadvantage as the investors blame themselves for transactions that are impaired.

7.5 Implications for managers

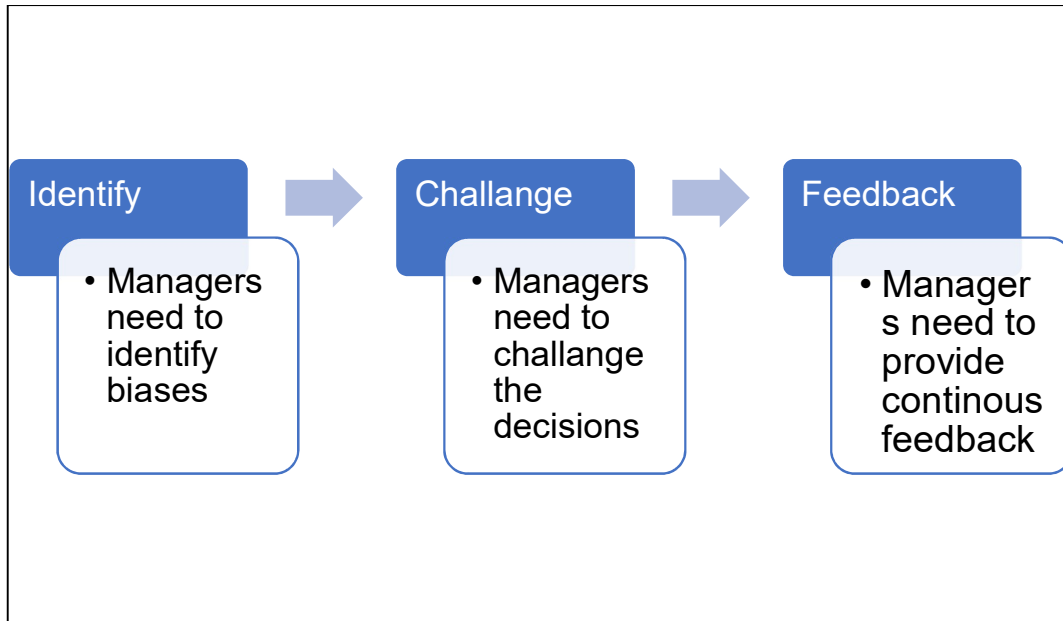
The behavioural biases are part of the investor's psychology. It is the way the investor thinks about situations when they have to decide. "Behavioural finance: the role of psychological factors in financial decisions" (Muradoglu & Harvey, 2012,p68). The manager needs to understand what creates these biases.

Firstly, the manager must acknowledge that the investors have biases. Only five biases were studied in the research. However, there are many biases. Once the managers have identified the behavioural biases, they need to be able to challenge the decisions made by the investors. Most decisions are made based on biases that the investor has. I am proposing that the manager follow this process in order to minimise biases from investments:

1. Identify the biases - is the investor too optimistic on their budgets, is the investor relying on past experience?
2. Challenge the decision by requiring supporting documents- these supporting documents should be assessed for relevance, and the manager should be trying to get new information.

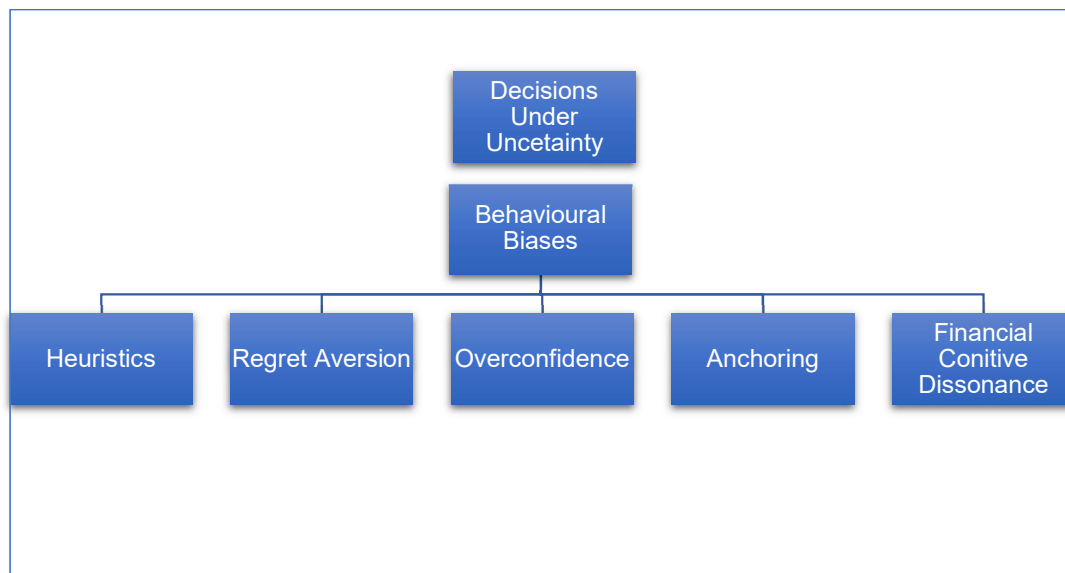
3. Provide feedback on the decision.
4. Ask the investor to look at a different angle.

Figure 10: Manager decision-making process



This is a reference framework, that managers can use to have a reference of the most cited biases that investors have.

Figure 11: Framework for biases



7.6 Limitation of Research

The research was a qualitative study investigating behavioural biases at the IDC. The limitations of the study are as follows:

- Due to the study being qualitative, the researchers' biases could influence the study. The researcher was not an expert at conducting interviews.
- The sample size that was interviewed was small. The sample cannot be used to imply that all investors who are working in a development fund institution will respond similarly to IDC investors.
- The fact that the study was conducted in one organisation the IDC.
- The fact there was a limited time to conduct the research. Therefore, the results are focused in one period.

7.7 Suggested for future research

A qualitative study was conducted for the study. Here are suggestions for future research:

- A quantitative study to be conducted between local and internal development fund institution investors
- A quantitative study on corporate funding investors who are in commercial banks, what are the biases that they experience while making an investment decision.
- How to help investors identify their own biases? Identify biases is the first step for an investor to be able to see their blind spots.
- Since this is based on the cognitive or thinking of a person, is there a way of changing that thinking? An experiment can be done to see if introducing different signals can change a behavioural bias.

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APPENDIX 1: INVITATION LETTER

Dear XXXXX

Thank you for taking my telephone call earlier today. As discussed, I am completing an MBA at the Gordon Institute of Business Science, and I am in the process of completing the research thesis component of the degree. I would greatly appreciate your participation in this research by agreeing to be interviewed. The interview will be a semi-structured in-depth interview and will last approximately 30 minutes. I plan to conduct the interviews during July and August. Please find attached a copy of the consent form that you will sign before the interview commences. The interview will be confidential, and you will remain anonymous.

The research questions are as follows:

- a. Do the behavioural finance biases influence investor behaviour?
- b. What are the advantages and disadvantages of this influence on the investor?

Please, can you confirm your agreement to take part, as per our telephone conversation and indicate your availability to be interviewed during September and October 2019?

I look forward to hearing from you.

Kind regards

Sandra Mwela

APPENDIX 2: CONSENT FORM

The factors that influence investors behaviours while making investment decisions

I am currently a student at the University of Pretoria's Gordon Institute of Business Science and completing my research in partial fulfilment of an MBA. I am conducting research factors that influence investors behaviours while making investment decisions. You are invited to participate in this research which seeks to learn about your behaviours while making investment decisions.

Our interview is expected to last about an hour, with your permission, the interview may be conducted in your office, depending on your availability and convenience.

Your participation is voluntary, and you can withdraw at any time without penalty. The audio recording of this interview is also voluntary, and you are welcome to choose not to be recorded. All data will be kept confidential, and any quotations will be made without identifiers. If you have any concerns, please contact my supervisor or I. Our details are provided below.

Researcher name: Sandra Mwela Research Supervisor: Dave Thayser

Email: 21043312@mygibs.co.za

Email: dave.thayser@icloud.com

Phone: +2782 680 7885 Phone: +2783 653 2509

Participant's name: _____

Signature of participant: _____ Date: _____

Researcher's name: Sandra Mwela

Signature of researcher: _____ Date: _____

APPENDIX 3: INTERVIEW GUIDE

Introduction:

1. How long have you been working at the IDC?
2. How would you describe your role at the IDC?
3. Why did you choose to work for a development fund institution?
4. What would you say is the IDC's vision? Do you think the IDC's living according to its values of passion, professionalism and partnerships?

Heuristics

5. Do you know the eyethu process?
6. How do you ensure that all the information presented to you is considered in your decision making?
7. How do you use your industry knowledge to assess the viability of a deal?
8. To what extent do you consider your manager's decisions/opinion/guidance in your transaction?

Overconfidence

9. Are you excited by taking a R1 million deal vs a R100 million deal?
10. To what extent do use your experience in relation to the information available in the market to assess (an?) investment? Please provide an example.
11. Are you optimistic about your industry? Why? Is that reflected in your budgets?
12. To what extent or how often are your budgets correlated with actual results of a client? Why do you think that is the case?
13. Do you consider yourself a rational investor? Why do you think so?
14. [Propose: What kind of investor do you consider yourself: rational or whatever other options are? Why do you think so?
15. How would you describe your risk appetite?

Regret aversion

16. How do you feel if your transaction is impaired?
17. Has your transaction ever been audited by an internal audit? If yes, please provide an example. How did that make you feel?
18. Has the impairment or audit experience changed the way you invest in transactions? If so, how did it change?

Anchoring

- 19. How would you describe the performance of your industry?
- 20. Do you think it is likely to improve or decline? Please elaborate.
- 21. When considering an investment, do you consider the information in the news currently or do you consider that past more important?

Financial cognitive dissonance

- 22. Do you consider yourself an expert in the investment field? Please elaborate on why you think so.
- 23. Are you anxious or excited when taking a transaction to the credit committee? If so, why?

APPENDIX 4: LIST OF ABBREVIATIONS

IDC- Industrial Development Corporation

SOE-State Owned Enterprise

NDP- National Development Plan

APPENDIX 5: LIST OF CODES

Code	Number of times
Being Rational	15
Bigger the better	11
Completeness of Information	8
Feeling of indifference	9
Feeling regret	18
Feeling of anxiety	15
Industry experience	13
Industry knowledge	23
Job fulfilment	14
Knowledge of the market	16
Knowledge of process	29
Manager buy-in	7
Negative about industry	19
Optimistic about future	14
Overconfidence in abilities	17
Overoptimistic about budgets	15
Being professional	14
Risk appetite	15