

**Factors influencing investment decision-making before and  
after an informative Emotional Intelligence Intervention**



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## **Abstract**

A significant body of research exists in psychology pertaining to the various biases which influence human decision-making. A growing body of knowledge on the understanding of decision-making in an investment setting has been established over the last 30 or so years. The objective of this study is to understand the factors influencing investment decision-making, before and after an emotional intelligence intervention. This study places the focus on the most common cognitive psychological biases which may affect investment decision-making, by establishing these biases in behavioural finance under the theoretical literature review.

The research is scoped in the form of a case study. Two survey questionnaires were deployed on a sample of investment professionals within the vicinity of the city of Cape Town. The questionnaires seek to establish whether participants exhibit common cognitive psychological biases by phrasing questions in both investment and non-investment scenarios. On completion of the first questionnaire, each participant read an informative article on the subject of emotional intelligence and the development thereof before proceeding to the second questionnaire. The objective of this article is to make participants aware of, and create an understanding of emotional intelligence and the development thereof. The results of both questionnaires were analysed to establish whether participants exhibit any change in their responses.

The analysis confirmed varied results for the biases considered. Whilst participants appeared to exhibit higher prevalence of availability and anchoring bias post the emotional intelligence intervention, participants exhibited lower indications of herding, self-control & mental accounting bias post the emotional intelligence intervention. Participants appeared equally loss-averse in both questionnaires. Therefore, in summary, the results show that, at least to some extent, the participants exhibited the biases considered, and after the introduction of the construct of emotional intelligence and the development thereof, a change in most of the responses were noted.

By design, the scope of this study and the sample size observed does not make it possible to extrapolate these results beyond the sample group. However, the results positively demonstrate a solid basis for future research on the measured impact of an emotional intelligence intervention on investment professionals and the role of emotional intelligence and consequent bearing thereof on investment decision-making.

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## Chapter one: Introduction

Under traditional finance theory, the efficient market hypothesis (EMH) describes the market as efficient and asserts that market participants will act rationally under varying circumstances, by using their available information and applying unbiased forecasts, estimates and modelling to arrive at their decisions.

Shefrin (2007) explains that under EMH, investors cannot expect to make positive abnormal returns (i.e. when the additional expected return exceeds the risk premium) as the market prices correctly reflect the information available to the market as a whole. Under EMH, it will therefore hold that arbitrage opportunities are not possible. It has been contested throughout recent years that the theory of a simple efficient market cannot hold true by the mere fact of the entities at play under human decision-making. Humans will rely on cognition to help formulate their decisions. Cognition is defined by the Oxford dictionary as “the mental action or process of acquiring knowledge and understanding through thought, experience, and the senses” (Stevensen, 2010:337). This definition would imply that the process of cognition includes thinking, knowing, remembering, judgement or judging and problem solving. A concomitant to human nature, however, is emotion and other behavioural aspects that form part of the human psyche.

The purpose of this study is two-fold: firstly, explore whether certain cognitive psychological biases appear to be present in the decision-making process of a sample of investment professionals, and secondly, whether an informative emotional intelligence intervention may have any effect on the presence of these biases in the decision-making process of the participants. This study contributes to the existing literature in behavioural finance, by establishing and/or interpreting the effect of an informative emotional intelligence awareness intervention on the decision-making process of investment professionals.

The following chapter (Chapter two: Literature Review) provides a systematic review of the literature underpinning the concepts discussed throughout this study. Firstly, the literature review will show how certain cognitive and psychological biases are proven to impact investment decision-making. The chapter will discuss the interaction between cognition and emotion and the impact that emotion can have on the cognitive process at an individual level. A focus is placed on the construct of emotional intelligence and the development thereof, as well as the impact of emotional intelligence on financial and investment decision-making. The chapter concludes with a review of emotional intelligence intervention methods and the impact that these may have on the measured emotional intelligence scores of individuals.

The conclusions reached in the literature review underpin the research questions posed by this study. This is contextualised in Chapter three: Research Design and Methodology, where the research design and approach is discussed in light of the research questions set out. This chapter also provides clarity regarding the sample size and scope under which the study is formalised.

The results from the research are discussed and analysed in Chapter four. The discussion is in light of the questions posed by this study, as supported through the literature review. Chapter five concludes the views of this study on the results analysed and provides directions for future research.

## **Chapter two: Literature review**

### **Introduction**

Behavioural finance seeks to justify and provide insights as to why financial results often do not always align to the outcomes that are predicted under traditional finance theories and modelling.

Heuristics can be described as mental shortcuts or rules of thumb to solve a particular problem for the brain by generating an approximate answer in a quick, informal and intuitive fashion. Biases are human tendencies that lead us to follow a particular quasi-logical path, or form a certain perspective based on predetermined mental notions. This may lead us to draw incorrect conclusions in certain circumstances based on cognitive factors.

### **Cognitive and psychological biases**

This section of the chapter will focus on the following key cognitive and behavioural biases and heuristics that are present in investment decision-making: Availability theory, Anchoring and Adjustment theory, Herding theory, Loss Aversion, Mental accounting, Regret aversion theory and Self-control bias. The literature review will seek to clarify the apparent predominant nature of these biases in the formulation of decisions within an investment context.

#### Availability theory

Psychologists Amos Tversky and Daniel Kahneman are widely regarded as the pioneers in explaining the impact of biases and heuristics in judgement or decision-making. The availability heuristic can be described as a mental shortcut that relies on immediate examples that come to a person's mind when evaluating a specific topic, concept, method or decision. In general, it provides an “ease-of-

reference” as frequent events are easier to recall or imagine than infrequent events.

Tversky and Kahneman (1974) argue that the availability heuristic uses the strength of association between occurrences as a basis for judgement or decision-making. This implies that occurrences that are positively correlated or familiar may lead a decision-maker to apply judgement based on that perceived positive correlation. Whether the correlation is indeed factual is irrelevant as it is entirely based on the decision-maker.

Availability is further described as a cognitive heuristic in which a decision-maker relies upon knowledge that is readily available, rather than examining other alternatives or procedures (Sewell, 2007). Shefrin (2007) explains that people often tend to overweight information that is readily available and intuitively relative to information that is less salient and more abstract, thereby biasing their judgements. A decision-maker would therefore tend to place more reliance on the knowledge they already possess and risk to not fully account for the potential impact of new information. From a South African perspective, Marais (2007) was able to provide evidence of the manifestation of the availability heuristic in the decision-making process of a sample of financial professionals and/or entrepreneurs in the Small and Medium-Sized Enterprise (SME) environment. The study analysed responses to a survey questionnaire and positively identified the availability heuristic in entrepreneurs in the financial services sector within the North West Province.

Studies have also shown that this principle of overweighting current or known information has influenced analysts’ forecasts of economic performance and in doing so, impacted investment performance in the market (Lee, O’Brien & Sivaramakrishnan, 2008). The authors observed a systematic association between the drivers of behaviour that overweight the current state of business cycles as it pertains to growth forecasts and eventual forecast errors.

Kliger and Kudryavtsev (2010) expanded on the availability heuristic by testing the effect on investors' reactions to analyst recommendation revisions from positive and negative investment outcomes (outcome availability) and financial risk (risk availability). By employing daily market returns as a proxy for outcome availability, they found that positive stock price reactions to recommendation upgrades are stronger when accompanied by positive stock market index returns. Similarly, negative stock price reactions to recommendation downgrades are stronger when accompanied by negative stock market index returns. They also found that on days of substantial market moves, abnormal stock price reactions to upgrades are weaker, and abnormal stock price reactions to downgrades are stronger. This attempts to explain the presence of risk availability in investor decision-making.

In their review of Behavioural Finance and the Financial Crisis, Shefrin and Statman (2011) discussed the impact of the availability heuristic on the rational decision-making of investors. Investors may be influenced by recent investment experiences, as these are easier to recall. Studies have shown that a noticeable influence on investments is the most recent investment an investor has participated in (Previtero, 2012).

### Anchoring and adjustment theory

In decision-making, one common method applied to make judgements under uncertainty is to anchor on information that comes to mind and to adjust until a plausible outcome is reached. According to Tversky and Kahneman (1974), people make estimates by starting from an initial value that is adjusted to yield the final answer. This initial value is deemed the anchor. Once the anchor is set, the decision-maker has a predisposition to be biased towards interpreting any new information in a manner that points them back to the anchor.

As new information becomes available, the adjustments to the anchor made by the decision-maker are usually insufficient, giving the initial anchor a great deal of influence over the final decision (Tversky & Kahneman, 1974). For example,

consider a situation where a person acquires a new residential property. The location of the property will have a major impact on the price of the property and will set the tone for the rest of the transaction. The buyer may focus excessively on the desirable location of the property and use that as criteria for the basis of evaluating the price, rather than considering the extent of repairs required to the roof of the property and the impact it should have on the offer price. This cognitive bias is known as anchoring.

Earlier research argues that adjustments to the anchor are insufficient as people stop adjusting as and when they reach the limit of a set range of plausible values. In understanding human perception, Quattrone (1982) showed that there are circumstances in which observers or perceivers over attribute behaviour to situational causes while adjusting insufficiently for new information about an actor's dispositions, i.e. information about circumstances which may have impacted on the perceived behaviour. In other words, a judgemental bias has been established (referred to as adjustment bias).

Epley and Gilovich (2006:311) also found that adjustments from self-generated anchor values tend to be insufficient. A self-generated anchor serves as a judgemental heuristic where the decision-maker simplifies a judgement by self-generating a value through a quick adjustment of an anchor, versus applying a more rigorous assessment to be able to arrive at the decision. This research suggests that people adjust from values they generate themselves as starting points known to be incorrect but close to the target value.

In their 2006 study, Epley and Gilovich presented that an adjustment is perceived as effortful and that anything that increases a person's willingness or ability to seek more accurate estimates, tends to reduce the magnitude of adjustment-based anchoring biases. In the investment practice, methods that may be applied to limit these biases can take the form of due diligence standards, top-management reviews, compensation structures as well as company standards and policies.

Anchoring and adjustment therefore describes both a phenomenon (final estimates assimilated toward an anchor) and a process (adjusting from an initial value).

In order to test the impact of anchoring in a real-world setting, Northcraft and Neale (1987:89-90) launched a study by asking students and real estate agents to price properties after being confronted with manipulated listing prices for these properties. The results of the study confirmed that the listing prices presented an anchor for both amateur (students) and expert (real estate agents) estimations of property prices. Similar results were found in a study conducted in the legal profession. By evaluating the outcome of sentencing decisions made by legal professionals, researchers were able to show that experience does not eliminate anchoring bias. Moreover, sentencing decisions made by legal professionals were impacted by both relevant and irrelevant information (Englich, Mussweiler & Strack, 2006). These sets of relevant and irrelevant information presented the anchors in the study. This is consistent with the earlier research of Northcraft and Neale (1987) which showed that expertise does not necessarily have a significant impact in overcoming anchoring bias.

A number of studies have reviewed anchoring in relation to management, economic and investment decision-making. Anchoring is also viewed as the most common bias in investor behaviour, which impacts decision-making. In an observation of individual investors' trading on the Nairobi Securities Exchange (NSE), the majority of respondents to a survey questionnaire were found to exhibit anchoring (Murithi, 2014). Kansal and Sing (2015) provide a systematic review of the literature between 2001 and 2015 showing the impact of anchoring on investment decision-making. Typical anchors identified included visual biases in data interpretations, (e.g. chart patterns); moving averages; 52-week high and low stock prices and recent stock prices.

Investors use extreme movements depicted in charts or graphs as comparison standards for expectations of future stock prices. Investors therefore buy more and sell less when a chart depicts more salient highs than lows (Mussweiler &

Schneller, 2003). By using eye-tracking technology, Duclos (2015) found that presenting upward/downward price movements of stock in the form of graphs, swayed the price predictions of investors.

Park (2010) showed that the ratio of short-term moving averages to long-term moving averages has significant predictive power for future returns. He explains that an anchoring bias exists where investors use the moving averages to predict returns on stocks and exercise a decision to buy or sell. The same argument is given for the use of 52-week high or low stock prices as reference points (George & Hwang, 2004).

Recent prices are also frequently used as a reference point in investment decision-making. Baker, Pan and Wurgler (2012) found that recent prices help to explain the bidder's price put forward in a mergers and acquisitions deal.

### Herding Bias

Herding behaviour is simply described as a group of individuals collectively acting in a similar fashion, thereby losing their individualism. Herding follows from consensus theory in social psychology, which also underpins the group think phenomenon. It has roots in various other disciplines, such as information theory, econophysics and ethnology (Parker & Prechter, 2005). Studies have also shown that extraverted personality types normally exhibit herd behaviour (see Lin, 2012). Behavioural finance describes herding as the phenomenon of individual investors acting in the same way as a group of investors.

Herd behaviour can be caused by a number of factors and can arise in a variety of contexts. It can also stem from situations where there are commonly unpredictable outcomes to a scenario and individuals would rather 'herd' to correlate their predictions and share the blame if need be. In an example of investment management firms, portfolio managers (investors) may simply mimic the decisions of other portfolio managers whilst ignoring substantive private information (Scharfstein & Stein, 1990). In this scenario, managers

would want to ensure that they perform in line with the consensus and that their individual performance appraisals are not significantly off par when compared to their peers. Fund managers were also noticed to exhibit herding behaviour due to reputational concerns (Dasgupta, Prat & Verardo, 2011a & 2011b).

Trueman (1994) found the same to be true for analyst recommendations. In this study it was revealed that there is a tendency for analysts to release forecasts closer to prior earnings expectations than is appropriate, thereby ignoring their personal information. Further, analysts would exhibit herding behaviour whereby they release forecasts similar to those previously announced by other analysts, even when this is not justified by their information.

Herding has been widely blamed for the most significant reason that speculative bubbles occur. When applied to the stock market, this behaviour can cause irrational fluctuations in the market (Johnson, Lindblom & Platan, 2002). Winning stocks are watched very closely, especially when good performance repeats itself. New traders will then follow these stocks and in doing so, establish the herd. Fromlet (2001) draws a distinction between voluntary and enforced herd behaviour by stating that many investors or market players may well believe that a stock or currency is not correctly priced, but do not act in contrast to the rest of the market. These investors follow the herd as they deem it not worth combatting the market consensus.

People's judgements being similar at a point in time can be a result of reacting to the same information that is, for example, publicly available. When a consensus is reached on the judgement or decisions of a large group of people, individuals tend to change their decisions as a reaction to the discovery that a large group of individuals may have arrived at a different decision as to what they have. From the perspective of the individual making the change, this behaviour can be considered as rational (Shiller, 2000). This is consistent with conclusions made by Devenow and Welch (1996) that even completely rational people can participate in herd behaviour, even if they know everyone else is behaving in a herd-like manner.

Although individually rational, it is agreed that herding produces group behaviour that is irrational, explaining the cause of bubbles. Studies have also shown that herding behaviour is more prevalent in individual investors than institutional investors (Lee, Liu, Roll & Subrahmanyam, 2004). Avramov, Chordia and Goyal (2006) echo this point when they show that herding trading (non-informational trading) led to an increase in volatility in individual stock returns. Barber, Odean and Zhu (2008) documented strong herd behaviour in individuals. In their research, the authors document direct evidence that individuals are net buyers of attention-grabbing stocks and are classified as noise traders and predisposed to exhibiting herd behaviour.

In a South African context, the literature on herding behaviour is limited. This phenomenon is consistent with that of other emerging economies. Gilmour and Smit (2002) tested for “institutional” herding in the unit trust industry and found that herding is present for unit trusts at a certain level of volatility. This relationship implies that the greater the volatility, the greater the herding of unit trusts. Sarpong and Sibanda (2014) validated this point when they tested for herding behaviour amongst equity fund managers when compared to the performance of contrarian funds in South Africa. The contrarian index measures the inclination of a fund to trade in the opposite direction of the crowd. They confirmed that mutual fund managers exhibited herding behaviour. They were also able to show that contrarian funds outperform herd funds based on their net returns.

In addition, Seetharam and Britten (2013) tested for herding behaviour on the Johannesburg Stock Exchange (JSE) for the period 1995 to 2011. Herding behaviour was found to be present on a relative scale only. Herding was absent in the market overall, yet significantly present in bear markets only. It was further found that herding behaviour appears to increase before a market contraction - the most noteworthy ones being the beginning of 1999 and 2009. These were in line with global economic events.

## The Disposition Effect

Cognitive biases expose investors to reach decisions that may contradict a decision derived at solely based on available data (and in combination with application of finance theory). When considering investments, the fear of regret can make investors either risk averse (regardless of the available data pertaining to an investment decision) or motivate them to take greater risks in the future. Investor indecision and failure to take action due to the fear of bad outcomes stems from the desire not to feel responsible for a poor investment result.

In financial markets, a phenomenon exists where investors appear to have a preference for selling winning stocks too early and holding on to losing stocks too long. In earlier research, Shefrin and Statman (1985) coined this the “disposition effect” – a disposition to ride losers. In this study they examined decisions taken to realise gains and losses in the financial markets and sought to determine whether investors exhibit a reluctance to realise their losses, even when standard theory would dictate or prescribe a loss realisation. In the data analysed, they were able to show that this disposition is evident in real-world financial markets.

Many other notable authors have undertaken to study this topic in recent years and it is proven that this effect is well documented in behavioural finance literature as one of the most prevalent behavioural regularities in investors (see for example Barberis & Xiong (2009), Dhar & Zhu (2002) and Strobl (2003)). It is also documented that an investment strategy, which exhibits this behaviour, is not profitable.

Bashall (2014) tested for the presence of the disposition effect in the South African market across two classes of non-professional investors: those acting in their own capacity, and those acting with the assistance of professional

investment advice. The results were consistent with that of earlier international studies and showed that individual investors in South Africa exhibit the disposition effect in both scenarios. When acting with the assistance of professional advisors, the effect was observed to a lesser extent than when acting in own capacity.

Rational explanations for the disposition effect have failed to conclude an empirical justification for this behaviour. These explanations included portfolio rebalancing or diversification strategies (Lakonishok & Smidt, 1986), impacts of transaction costs linked to winning or losing investments (Harris, 1988) and informational differences or non-asymmetry across investors (Lakonishok & Smidt, 1986). Odean (1998) challenged these explanations and proved empirically that investors who sell their entire holding of stock who are therefore unlikely to be influenced by diversification strategies, still prefer to sell their winners over their losers. He further provides evidence showing that even when transaction costs are controlled for, investors remain reluctant to realise their losses. Ultimately, the study showed that investors who exhibit susceptibility to the disposition effect are prone to experience poor investment performance. Strobl (2003) also concluded that rational investors can exhibit the disposition effect even in a world without taxes, transaction costs and portfolio rebalancing needs. This leads us to believe that the disposition effect is irrational.

In behavioural finance literature, connections have been drawn between the disposition effect and the following framework of behavioural elements: prospect theory, mental accounting, regret aversion and self-control (Shefrin & Statman, 1985).

#### Loss Aversion - Prospect theory as a concept

Tversky and Kahneman (1979) provided the first model of decision-making under risk that deviated from the norms set out in the traditional rational finance theory. They found that people underweight the outcomes to a scenario that are merely probable in comparison to overweighting outcomes that are

obtained with certainty. The authors termed this phenomenon prospect theory. Here the authors submit that humans are not consistently risk averse, but rather risk-averse in gains and risk-taking in losses.

The theory described the decision-making process in two stages:

i) Initial stage or editing stage:

Here the decision-maker (investor) sets his/her decision outcomes according to a certain heuristic. Decisions are structured with a particular reference point in mind. Outcomes that are greater than the set reference point are deemed as gains and outcomes less than the set reference point are losses. Odean (1998) showed that investors would usually select the original purchase price of instruments or stock as their reference point.

ii) Evaluation stage:

In this subsequent stage, the decision-maker (investor) exhibits behaviour as if to compute a value or utility function based on the potential outcomes and their respective assigned probabilities. Weightings or probabilities are given to each possible outcome and essentially guides the decision being made. Investors run the risk of considering a possible outcome as highly likely and view this event as a definite occurrence in the decision-making process.

Shown below in Figure 1 overleaf, prospect theory is explained as the S-shaped value function with the central point defining the 'reference' that the investor decides upon. The function is convex in the gains domain and concave in the losses domain. It is also steeper for losses than for gains, which implies that people are generally risk-averse and would be led to sell their winning stocks earlier.

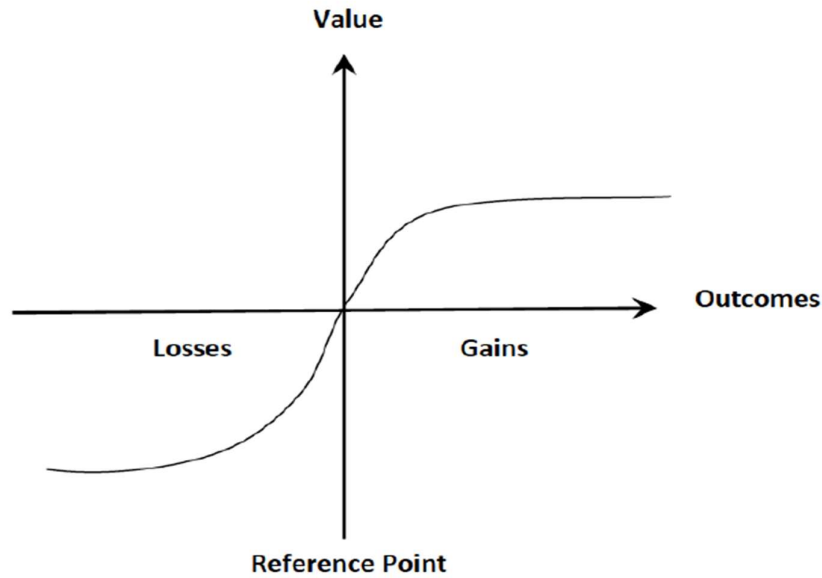


Figure 1 – Hypothetical value function depicting prospect theory.

Prospect theory has been offered as the most prominent explanation of the disposition effect. Odean (1998) analysed trading activity of 10,000 households with accounts at large brokerage firms. By showing the number of gains realised by investors over a period as a proportion of the total potential gains that could have been realised, Odean could positively link decision-making - which exhibits prospect theory - to investor behaviour exhibiting the disposition effect.

In an experimental analysis, Weber and Camerer (1998) also considered the disposition effect in securities trading and the implications of a reference point effect (i.e. prospect theory). In the study, students had to decide to invest in different stocks and decide when to sell them. They found that subjects indeed sold winners first and kept losers longer, therefore exhibiting the disposition effect.

Barberis and Xiong (2009) embarked on a study to analyse the trading behaviour of investors with prospect theory preferences to determine whether these preferences generate a disposition effect. In their study, they used the same methodology as Odean (1998) and applied it to a simulated dataset based on the way prospect theory investors would trade over time. Firstly, in many cases of

simple implementation of prospect theory on investor behaviour as seen in the data, it reliably predicted a disposition effect. They further examined a two-period portfolio scenario with a risk-free asset and a risky asset and observed share allocations at each period, after a gain and a loss respectively. In this case, they found that prospect theory often predicts the opposite of the disposition effect, being that investors prefer to sell a stock trading at a loss over a stock trading at a gain. They concluded that although prospect theory has been cited as the primary cause for the disposition effect, their modelling has proven it not be the conclusive cause.

### Mental accounting

Thaler (1985) explains a model of consumer behaviours using a hybrid of psychology and microeconomics. The psychological element refers to an individual mentally separating information into manageable pieces by maintaining separate mental accounts. Investors open mental accounts for each new investment and then apply prospect theory in measuring the performance of each separate account. Investors would set reference points for their different mental accounts to establish or determine gains or losses. Thaler further argues that investors do not take their full portfolio into consideration when deciding on whether to buy or sell stocks. They rather keep track of gains and losses of individual mental accounts, instead of for their full portfolio.

In a later study, Thaler (1999) elaborated on his theory of mental accounting and described it as the set of cognitive operations used by individuals and households to organise, evaluate and keep track of financial activities. Mental accounting is linked to the reference point of investors (as defined under prospect theory). Each new transaction represents a separate mental account. It is a form of subjective framing whereby a person subjectively frames a transaction in his/her mind that will determine the utility he/she receives or expects. Individuals using mental accounting apply prospect theory to all accounts independently whilst ignoring the possible effects of cross-interaction of mental accounts.

Many studies confirm mental accounting as part of the cause of the disposition effect (Thaler, 1985 and Shefrin & Statman, 1985). Data regarding the presence of mental accounting in developing economies are limited. In a study conducted on the Tehran Stock Exchange, Tehrani and Gharehkoolchian (2012) examined the relationships between four behavioural biases and the disposition effect among stockholders trading on the exchange. Data was collected by means of intelligible survey questionnaires and tested in conjunction with behavioural finance experts. From the questions observed, the research could positively identify a high level of the disposition effect as prevalent amongst investors trading on the exchange. They could further establish the use of mental accounting by investors and suggest a significant relationship between mental accounting and the disposition effect as exhibited. Furthermore, they could not find a significant correlation between individual experience and the level of disposition effect exhibited, which confirms the notion of earlier studies that this behaviour is irrational, but is in contrast to submissions from authors researching trading behaviour in more developed economies. Some of these studies (cf. Shapira & Venezia, 2001, Dhar & Zhu, 2002 & 2006, Seru, Shumway & Stoffman, 2010 and Richards, Rutterford, Kodwani and Fenton-O’Creevy, 2017) find that investors with less (/more) trading experience exhibit a stronger (/weaker) disposition effect.

### Regret aversion

Regret theory has been put forward to help explain the disposition effect. Shefrin and Statman (1985) define regret as an emotional feeling associated with the ex post knowledge that a different past decision would have fared better than the one chosen. The opposite of regret is pride. Regret theory models an individual’s choice under uncertainty whilst taking into account the effect of any anticipated regret. Under this framework, it is likely to see investors exhibit behaviour of seeking pride and avoiding regret.

Using the utility function as depicted by Tversky and Kahneman (1979) (see Figure 1) under their model of prospect theory, it can be deduced that in the normal decision-making process, individuals suffer losses more acutely than they would experience gains (as the curve is steeper for losses than for gains). Investor behaviour that exhibits a reluctance to implement an investment strategy with a potential loss outcome is influenced by regret aversion. Thaler (1980) mentions that whenever choice can induce regret, there is an incentive for the decision-maker to eliminate that choice, as the weight of regret is stronger than that of pride. This, in most cases, may also lead to investor inaction due to the fear of regret in the event that the wrong decision is made.

In his study of the disposition effect and investors' tendency to hold on to losing investments too long, Odean (1998) comments that it may be due to regret aversion that investors loathe to realise their greatest losses. He also suggests regret aversion is one of the reasons that may influence investors not to buy additional stock of big winners, which confirms the statements made previously by Thaler (1980) as well as Shefrin and Statman (1985). Consider an example where an investor acquires 100 shares of stock A at R100. If the stock appreciates to say, R150 and the investor believes the stock will continue to appreciate, he might refrain from buying additional stock as he will more poignantly regret that he did not buy the stock at the original purchase price. This example also illustrates the use of the original purchase price as a reference point in prospect theory.

Meurmann and Volkman (2007) presented a dynamic portfolio of choice model that incorporated anticipated regret and pride in individual preferences. They formally investigated whether avoidance of regret and the investors ambition for pride will lead to a trading behaviour that exhibits the disposition effect. In their analysis, they were able to show that under certain specific conditions, the feelings of pride and regret were compatible with the disposition effect. Similar confirmations were also documented by Fogel and Berry (2006) as well as Lee, Kräussl and Paas (2012).

Fogel and Berry (2006) surveyed individual investors and found that more respondents reported regret about holding on to a losing stock too long than about selling a winning stock too soon. Although investors in this study received professional advice and were knowledgeable about the potential loss and the prospect of regret, they still exhibited trading behaviour consistent with the disposition effect.

Lee et al. (2012) also investigated the effect of anticipated and/or experienced regret in individual investor decisions to hold or sell a winning or losing investment. Their results suggest that in the loss domain, low anticipated regret predicts a greater probability of selling a losing investment. While in the gain domain, high anticipated pride indicates a greater probability of selling a winning investment. The authors also presented evidence supporting the fact that anticipated and experienced emotions are interconnected and can cause behaviour consistent with the disposition effect.

### Self-control bias

Self-control bias is deemed emotional and is best explained as a human behavioural tendency that causes an individual to consume today at the expense of tomorrow's savings. Thaler and Shefrin (1981) presented self-control bias as an intrapersonal agency conflict between an individual's rational side (principal) and emotional (or irrational) side (agent).

By building further on the earlier work of Thaler and Shefrin (1981), Shefrin and Statman (1985) argue that investors' lack of self-control is one of the reasons why they are unable to realise their losses. They present self-control bias as part of a behavioural framework that is responsible for the disposition effect. The authors propose that the rational part of the investor's brain is unable to override the emotional (or irrational) part of the brain which causes the investor to exhibit poor self-control and leads to the disposition effect. In their study, they investigated seasonal patterns of the disposition effect and predicted that the disposition effect should be weaker at the end of the tax year due to self-control

on behalf of investors. The rational part of the investor's decision-making process will recognise the advantage of realising their losses when taking into account tax consequences. The irrational (or emotional) part of the brain will then focus on the positive experience of potentially realising gains with a particular investment, and in doing so, will disregard the potential benefits from a tax perspective for losses suffered.

The most commonly applied method to reduce the self-control bias in investment management is the 'stop loss order', which also acts as an efficient manner to manage risks. Lei and Li (2009) investigated whether investors using stop loss strategies to sell their (losing) investments would be better off relative to a buy-and-hold strategy. They did this by considering two stop loss strategies on ordinary common stock on the New York Stock Exchange and the American Stock Exchange from 1970 to 2005, versus buy and hold strategies for periods of three months, six months and one year during the same period. Their results indicated that these strategies neither reduce nor increase investors' losses relative to a buy-and-hold strategy. The authors submitted that the value from stop loss strategies comes largely from the risk reduction rather than return improvement.

Richards et al. (2017) argue that a stop loss order is a relatively easy way to reduce the disposition effect as it provides an automated exit strategy, reducing the reliance on an investor's impulse control. In their research, they prove investors in the United Kingdom, similar to many other studies in different countries, also to be susceptible to the disposition effect. By using trading records of the United Kingdom stock market individual investors from 2006 to 2009, they show that stop losses used as part of investment decisions are an effective tool for inoculating against the disposition effect.

## **Emotional Intelligence**

The following section of this chapter will define and discuss emotional intelligence (EI), also known as emotional quotient, (EQ) and the role it has in decision-making processes. This part of the literature reviewed will relay the rise to prominence of the concept of emotional intelligence in modern psychology; provide a brief review of the two most notable measurement techniques established for measuring EI; and explore both the predictability of EI as a measure of success in the workplace as well as its potential impact on financial management and investment decision-making. Lastly, this section will discuss some studies on emotional intelligence interventions, their methodologies and what the impact of these interventions has been as it pertains to EI development.

### Emotions and Intelligence: the evolution of affective elements in general intelligence

There is no concise definition for 'emotions', although many authors have written about them and their consisting parts. William James and Carl Lange were possibly the most notable psychologist of the 19<sup>th</sup> century, hypothesising one of the earliest theories of emotion. They claimed that physiological arousal instigates emotion, and that emotion is a secondary experience, which is produced as the brain reacts to new information received from a primary physiological change. This theory has been criticised since its inception. One of the earliest critics argued the complete opposite to be the case. Walter Cannon (1927), alongside Philip Bard, presented a theory that hypothesised physiological reaction to follow emotion. Nesse (1990) offers a more purposeful explanation for emotions and explains them as specialised states, shaped by natural selection, that increase fitness in specific situations. He further claims that the physiological, psychological and behavioural characteristics of a specific emotion can be analysed as possible design-features that increase an individual's

ability to cope with the threats and opportunities present in the corresponding situation.

The fields of neuroscience and neurobiology as well as broader psychology and physiology continue to add to the definition of emotion(s). In general, emotions may be viewed as subjective, involuntary, irrational and sometimes disorganised disruptions or deviations of the normal cognitive responses (or mental activity) of an individual. Meyer, Salovey and Caruso (2004) echo this by stating emotions signal, govern and motivate responses to events.

Intelligence is generally described as a cognitive ability to acquire and apply knowledge and skills. This ability is deemed specific to an individual and includes the benefits learnt from past experiences. Intelligence Quotient (IQ) has become the standardised psychological test as a tool to measure and describe the intelligence level of an individual. Earlier research already indicated and asked the question on whether non-intellective abilities should form part of assessing the intelligence of an individual. Wechsler (1940) wrote that, in his opinion, affective and conative abilities are necessary factors of general intelligence and contended that it is inaccurate to measure total intelligence, until the tests include some measures of the non-intellective forces. Other researchers also contributed in their quest to understand non-cognitive abilities and how this should be measured (and included) if at all, as part of the general intelligence of an individual. Robert Thorndike introduced social intelligence (or abstract intelligence) as part of the feeders for IQ as early as 1934. He later introduced tests that attempted to measure social intelligence (Thorndike & Stein, 1937). Gardner (1983) introduced his theory of multiple intelligences by suggesting that the traditional notion of intelligence and intelligence testing (based on IQ) was too limited and introduced seven different intelligences to account for a broader range of human potential in children and adults. These included:

- *Linguistic intelligence*: Linguistic intelligence refers to the ability to use words or language effectively. People who exhibit this intelligence strongly, have high auditory skills and are good at memorising words alongside dates.

- *Logical-mathematical intelligence*: This type of intelligence explains a superior ability and capacity to discern logical reasoning, critical thinking, abstract reasoning and numbers.
- *Spatial intelligence*: Spatially intelligent individuals have the ability to accurately perceive the visual-spatial world and to perform transformations on their initial perceptions.
- *Bodily-Kinesthetic intelligence*: An individual with high bodily-kinesthetic intelligence possesses the ability to control his/her bodily motions and the capacity to handle objects skilfully. This can also include a sense of timing, a clear sense of the goal of a physical action and the ability to train responses.
- *Musical intelligence*: People with the ability to procure and appreciate musical rhythm, pitch and timbre, have high musical intelligence
- *Interpersonal intelligence*: People with high interpersonal skills (or social skills) have the ability to be sensitive to feelings or temperaments, moods, motivations and desires of other people.
- *Intrapersonal intelligence*: This intelligence-type describes a person's ability to command introspection and to have a deep understanding of his/her strengths and weaknesses, desires and intelligences.

In a later study, Gardner (1995) also introduced naturalistic intelligence and described it as the ability to classify natural forms such as animal and plant species, rocks and mountain types relating to one's natural surroundings.

### Emotional Intelligence and emotional awareness

Traditionally, emotion and cognition have been viewed as largely separate, but the paradigms of modern research in psychology have shifted to the

interdependence of the two, showing that emotion and cognition conjointly and equally contribute to the control of thought and behaviour (Gray, Braver & Raichle, 2002). This indicates a shift in the definition of emotions being considered as *disruptive* to now being considered as *conducive* to cognition. Cherniss (2000) states that cognitive and non-cognitive abilities are very much related and quotes research that suggests that emotional and social skills actually help improve cognitive functioning.

Salovey and Mayer (1990) presented a set of skills termed emotional intelligence which they hypothesised to contribute to the accurate appraisal and expression of emotion in oneself and in others. They contended that these skills are also responsible for the effective regulation of emotion in oneself and others as well as the feelings used to motivate, plan and achieve in one's life. The authors define EI as "the subset of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions". They build on the concept of 'Social Intelligence' as introduced by Thorndike and Stein (1937) and contend that social intelligence cannot stand independent from other forms of intelligence. They furthermore link EI to the work by Gardner (1983) and explain that Gardner's Inter- and Intrapersonal intelligences (personal intelligences) had to include emotional intelligence as it relates to knowledge about the self and others.

The authors also initiated studies in order to show the relevance of EI as it pertains to the success of individuals whether socially or in the workplace. Salovey, Mayer, Goldman, Turvey and Palfai (1995) performed a study on 78 student volunteers where they introduced a measure of individual differences in the ability to reflect upon and manage emotions. They did this by indexing the degree of attention that individuals devote to their feelings, the clarity of their experience of those feelings, as well as their regulation of their current mood states. After completing a battery of emotional measures, the students were showed a 12-minute video clip of a documentary on drunken driving. The authors found that those students who scored high in emotional clarity

recovered more quickly from the disturbing images/emotions experienced or induced from watching the video.

Mayer and Salovey (1995) define emotionally intelligent people as those who regulate their emotions according to a logically consistent model of emotional functioning. The authors also present various models on self-regulation of emotions as this forms the cornerstone of their theory. The concept of EI was only really popularised by Daniel Goleman’s book, *Emotional Intelligence* (1995). He defines EI as “the capacity for recognising our own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and in our relationships. Emotional intelligence describes abilities distinct from, but complementary to, academic intelligence or the purely cognitive capacities measured by IQ”. Goleman presents five components as the building blocks of emotional intelligence and identifies hallmarks as indicators of each of these building blocks as can be seen in Table 1 below:

**Table 1 – Goleman’s five building blocks of emotional intelligence**

| <b>Building Block</b>  | <b>Definition</b>                                                                                                      | <b>Hallmarks</b>                                                                                 |
|------------------------|------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| <i>Self-awareness</i>  | The ability to recognise and understand your moods, emotions, and drives, as well as their effects on others.          | Self-confidence.<br>Realistic self-assessment.<br>Self-deprecating sense of humour.              |
| <i>Self-regulation</i> | The ability to control or redirect impulses and moods.<br>The propensity to suspend judgement and think before acting. | Trustworthiness and integrity.<br>Comfort with ambiguity.<br>Openness to change.                 |
| <i>Motivation</i>      | A propensity to pursue goals with energy and persistence.                                                              | Strong drive to achieve.<br>Optimism, even in the face of failure.<br>Organisational commitment. |

|                      |                                                                                                                                       |                                                                                                                 |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| <i>Empathy</i>       | The ability to understand the emotional makeup of other people.<br>A skill in treating people according to their emotional reactions. | Expertise in building and retaining talent.<br>Cross-cultural sensitivity.<br>Service to clients and customers. |
| <i>Social skills</i> | Proficiency in managing relationships and building networks; an ability to find common ground and build rapport.                      | Effectiveness in leading change.<br>Persuasiveness.<br>Expertise in building and leading teams.                 |

Techniques and methodologies for measuring emotional intelligence

Various models have been presented to measure the levels of EI. As discussed under the limitations of this study, actual measurement of EQ levels will not be performed. For this reason, a limited review of two prominent models will be provided to gain an understanding of the processes and techniques involved in arriving at an individual's EQ level.

*i. Ability model and MSCEIT*

In their review of the existing psychological literature, Mayer, Salovey and Caruso (2004) explain their approach to divide the abilities and skills of EI into four areas, which they term the "four-branch ability model". These include the ability to (i) accurately perceive, evaluate and be expressive of emotion; (ii) access and generate emotions and to facilitate thought; (iii) understand and derive knowledge from emotion; and (iv) manage and regulate emotion.

They explain the first branch as having to do with the capacity to recognise emotion in other's facial and postural expressions, involving non-verbal perception of emotion through communication. Branch two deals with the

ability to mobilise emotions to assist thinking and problem-solving. The third branch reflects the ability to analyse emotions and understand their impact over time by being able to link emotions to each other to plan better for the future. Finally, the fourth branch of emotion involves the remaining aspects of an individual's personality, as it relates to the management of emotions in the context of an individual's goals, self-knowledge and social awareness. The authors developed a model termed the Mayer Salovey Caruso Emotional Intelligence Test (MSCEIT) to measure EI. The initial model presents a non-self-report measure of eight tasks associated with EI, divided into two tasks each to measure each of the four branches while focusing on these branches in a hierarchical manner as described above. Correct answers are based on experts' decisions or alternatively on popular consensus. The MSCEIT measures perception of emotion by rating the extent and type of emotion expressed on different types of pictures of faces or in a picture of a design or landscape. Emotional facilitation of thought is measured by asking people to draw parallels between emotional sensations and other sensory modalities. Understanding emotion is measured by asking the examinees to explain how emotional reactions can change from one experience to another over time. Management of emotions is measured by having people choose effective ways to manage their own emotions and those of others in hypothetical scenarios (Brackett & Mayer, 2003).

Brackett, Rivers and Salovey (2011) quoted studies proving that individuals with higher MSCEIT scores utilised less cognitive effort in problem-solving and solved social problems quicker. When reviewing social interaction, they note that people with higher MSCEIT scores tend to engage in better quality relationships and are viewed as interpersonally sensitive. Other citations of Brackett and Mayer (2003) quote studies which link higher MSCEIT scores (higher EI) with higher levels of attending to health and appearance, positive social interactions and possessing goals which remind people of their loved ones. In contrast, they explain that people with lower scores (lower EI) have been associated with higher reported use of drugs and alcohol, more deviant behaviour and owning a larger number of self-help books.

ii. *The BarON EQ-i*

Doctor Reuven Bar-On is credited with developing the first commercially available operational index for the assessment of EI. His model defines EI in terms of an array of traits and abilities related to emotional and social knowledge that influences an individual's overall ability to cope effectively with environmental demands. Bar-On (1997) refers to his model as a "mixed model" as it covers "an array of non-cognitive capabilities, competencies, and skills that influence one's ability to succeed in coping with environmental demands and pressures". This point is echoed by Matthews, Zeidner and Roberts (2002), who explain that self-report measures of EI normally observe a diversity of constructs which measures both ability and personality traits. Personality traits are normally non-cognitive.

The Bar-On EQ-i is presented in a 133-item self-report measure that takes approximately 30 minutes to complete, containing five composite factors which are composed of fifteen subscales. These are composed as follows (Bar-On, 1997):

- i) *Intrapersonal EQ*, composed of emotional self-awareness, assertiveness, self-regard, self-actualisation, and independence;
- ii) *Interpersonal EQ*, composed of empathy, relationship skills, and social responsibility;
- iii) *Adaptability*, composed of problem-solving, reality testing, and flexibility;
- iv) *Stress management*, composed of stress tolerance and impulse control; and
- v) *General mood*, composed of happiness and optimism. Bar-On later revised the model to view the general mood factor as a facilitator of emotional intelligence, rather than a part of it.

Bar-On's EQ-i model focuses more on the potential for success rather than success itself and is more process-oriented than outcome-oriented. Bar-On also suggests that EI should be considered as an integral part of positive psychology, asserting that higher levels of EI positively contribute to a person's happiness and psychological well-being in life (Bar-On, 2010).

### **Emotional Intelligence in the workplace and the bearing it has on success**

Robert Cooper (1997) stated that individuals can enjoy a successful career and better relationships by relying on their emotional intelligence. He contends that individuals with high levels of EI have greater career success, foster stronger personal relations, have effective leadership skills and are healthier than those with a low emotional quotient. In his book, Goleman stated that, in contrast to IQ, EI can be developed. Goleman (1998) argued that EQ alone cannot be the key predictor of job performance, but instead provides the bedrock for competencies that are. He makes a distinction between emotional intelligence and emotional competence and defines the latter as *"a learned capability based on emotional intelligence that results in outstanding performance at work"*. He contends that possessing EI does not guarantee that the person will have the acquired skills necessary to excel at their jobs, but merely that they have a potential for learning them.

Cherniss, Goleman, Emmerling, Cowan and Adler (1998) explored whether it is possible to improve the social and emotional competence of adult workers. In their technical report, they present 22 guidelines for developing EI in organisations based on the best knowledge available on how to promote social and emotional learning at that point in time. They also estimate that, at that point in time, American businesses were losing between US \$5.6 billion and US \$16.8 billion each year by not consistently following their guidelines.

In a following paper, Cherniss (2000) discussed the value of EI in the workplace

and provided examples of studies where this has been proven. The ability to handle stress and manage feelings is a key aspect of EI. In their study, Lusch and Serpkenci (1990) investigate the relationship between four personal difference variables and job outcomes of retail store managers, as well as the influence of job tension on managerial performance and how this translates into the financial performance of the store. They found that the ability to handle stress proved to be a good predictor of net profits, sales per square foot, sales per employee, and per dollar of inventory investment.

A recent theoretical study by Jordan, Ashkanasy and Hartel (2002) suggests that the level of EI moderates employees' emotional reactions to job insecurity as well as their ability to cope with associated stress. The authors contend that employees with lower EI are more likely to experience negative emotional reactions to job insecurity and adopt negative coping strategies. These employees are deemed to be more likely to behave defensively and negatively. Empathy is also seen as one of the more important aspects of EI as it directly embodies the recognition of emotion and feelings in others.

Other theoretical studies have also set out to find positive correlations between high EI and workplace performance. Van Rooy and Viswesvaran (2004), for example, used meta-analytic techniques to examine the relationship between EI and performance outcomes. The authors were able to show a correlation between EI and job performance and noted that the overall predictive validity of EI as a cornerstone for performance appeared to hold firm across performance domains observed. Law, Wong and Song (2004) also found that peer ratings indicated that emotionally intelligent people are better performers than their less emotionally intelligent counterparts.

In an effort to provide empirical evidence, Lopes, Grewal, Kadis, Gall and Salovey (2006) tested for the association between EI and multiple indicators of work performance including salary, merit increases, company rankings as well as ratings of interpersonal facilitation. The authors analysed performance and positive workplace outcomes in relation to levels of EI in 44 analysts and clerical

employees from the finance department of a Fortune 400 insurance company. They found that emotionally intelligent individuals held greater company rankings than their counterparts with lower levels of EI. They also found that these individuals received higher merit increases and better peer or supervisory ratings of interpersonal facilitation, stress tolerance, and leadership potential than those with lower EI.

Kerr, Garvin, Heaton and Boyle (2006) tested the EI of 38 supervisors within a large manufacturing concern and investigated the relationship between the level of EI identified and a rating of leadership effectiveness given by subordinates. They found EI to be a strong predictor of leadership effectiveness and suggest that the findings endorse the validity of incorporating emotional intelligence interventions alongside recruitment and selection processes and the training and development of managerial personnel.

By using a quantitative survey of a random sample of 270 adults employed in the South African service industry, Coetzee and Schreuder (2011) explored the relationship between people's employability, EI and career anchors or satisfaction. Their analysis revealed significant relationships between the participants' career anchors, EI and employment satisfaction.

Zeidner, Matthews and Roberts (2004) provide a critical review of the conceptualisations and empirical evidence of EI and its predictability in the workplace. From their analysis, it is made clear that empirical data on the subject is lacking and that the topic is mostly discussed theoretically and by anecdotal evidence. Brackett et al. (2011) also provide a thorough discussion and review of the research describing the correlation of EI and workplace success. They contend that most of the studies examined in their review remained statistically significant in establishing the role of EI in the workplace as it pertains to job performance and leadership. This view is also taken in this study and the remainder of the chapter is built on this assumption.

## **Understanding Emotional Intelligence and its application in financial and investment management**

Regarding the impact of EI in the workplace, research done by Cooper (1997) confirmed that people with higher levels of EI (i) enjoy more career success, (ii) are able to build stronger relationships, (iii) have the capacity to lead people more effectively and (iv) are generally healthier than those with a lower EI. Lerner, Small and Loewenstein (2004) investigated the carryover effect of emotions on economic decisions and concluded that emotions can have a dramatic effect on economic transactions even when these emotions arise from a prior, irrelevant situation. The authors found that emotional moods stemming from anger or sadness can influence investment decisions in a negative manner. Schwarz (1990) explains that subjective experiences (such as emotions, moods, metacognitive experiences and bodily sensations) impact judgement as people generally attend to their feelings or emotions as a source of information in formulating a decision. Here, he concludes that feelings significantly influence decision-making, especially when making decisions under risk and uncertainty.

In a study on investor transactional behaviour, Ameriks, Wranik and Salovey (2009) evaluated associations between investors' EI and their investment decisions. In this study, they performed an online survey of 2 595 investors of Vanguard Group. Demographic information of these investors was collected. Three psychological tests were administered, measuring EI, personality and impulsiveness. All of these investors were born between 1946 and 1964 and all participants had a traditional individual retirement account (IRA). These included Roth IRA, or 401(k) plan assets of at least \$5,000 with at least \$1,000 in two different mutual funds.

In their analysis, the authors (Ameriks, Wranik & Salovey, 2009) focused on five distinct aspects of investment behaviour of the group of individuals surveyed. These were:

- i. Asset allocation and overall exposure to stock market risk in retirement accounts,

- ii. Frequency of trading or transaction activity in retirement accounts,
- iii. Use of passive, index-based mutual funds as opposed to actively managed funds as part of investment portfolios,
- iv. Adoption of internal equity investing, and
- v. Internal rate of return on investments in retirement accounts.

The hypothesis they were most interested in testing was whether individuals who demonstrate a high degree of EI demonstrate patterns in investment behaviour, or in investment results, that normatively appear to be better than other investors. The authors found that those investors who showed a higher level of EI were generally more conservative and less aggressive in risk-taking than those who showed lower EI. They further showed that high-EI investors were unlikely to hold more than 90% of their investment in stocks, but often held less than 50% in stocks. They also proved that high-EI investors traded less or made fewer changes to their portfolios whilst generally using index funds as part of their portfolios. This leads one to believe that investors who have higher EI prefer a balanced investment approach and are less likely to make extreme investment decisions. This seems to be consistent with the statement made by Salovey (2001), that investors with a greater ability to manage emotions should be less inclined either to be risk averse or risk seeking. This is in direct correlation to the explanations given for 'regret aversion' being an influential factor of investment decision-making.

Ware and Dethmer (2006) provide arguments on the application of EI on investment management. In particular, they insist that non-rational aspects like emotion and intuition should be taken into account when building high performing investment teams. In their research, the authors identify a need to help investment professionals experience, identify and express their emotions and develop the Continuum of Emotional States. This framework divides feelings or emotions into four basic categories (namely anger, sadness, fear and happiness) and aims to help investment professionals to identify their emotions quicker in order to react accordingly.

Seo and Barrett (2007) investigated a link between emotions (affective experiences) and investment decision-making and how feelings can induce biases in decision-making. They conducted an investment simulation whereby 101 stock investors rated their feelings or emotions whilst performing investment decisions each day for 20 consecutive business days. Their results show that individuals who experience their feelings more intensely achieved higher decision-making performance. They also found that individuals who have a higher ability to identify and distinguish between their feelings (an ability to self-regulate emotions, i.e. have higher EI) achieved higher decision-making power. People who were able to understand and differentiate among their current negative feelings achieved the benefit of successful affective influence regulation. The authors then contended that this emotional capacity (higher EI) shows a superior ability to control the possible (cognitive) biases which are induced by the feelings experienced. Their views expressed in the study are consistent with the dominant views in literature on emotions and decision-making, which state that affective or emotional experiences produce various biases in judgements that must properly be regulated to enhance decision-making performance.

Peterson (2007) conducted a review on neuroscience literature that illustrated the existence of separate brain systems which deal with emotional processing that are also responsible for risk-taking and risk-avoiding behaviours in financial settings. The study indicated that excessive activation or suppression of either system of the brain can lead to errors in the investment decisions and trading behaviours exhibited by investors. From the literature reviewed, it can be noted that recent experiences of financial losses and gains can directly impact and change investor behaviour. Losses are felt more poignantly and may lead to nervousness or other irrational risk or regret aversion behaviour when approaching future decisions. It follows therefore that investors should take care in regulating feelings or emotions in considering future investment decisions.

In a study on emotionally intelligent decision-making, Yip and Côté (2012) conducted two experiments in order to examine how EI ability and awareness

facilitate decision-making in the face of risk. They hypothesised that participants with high degrees of emotional understanding will correctly identify the events that lead to an emotional response and specifically investigate whether their emotions arise from events unrelated to their current decisions. The authors expected incidental anxiety - not associated with current decisions - to reduce risk-taking more significantly among individuals with lower levels of EI. The results of their first experiment were consistent with their hypothesis. In their second experiment, they informed participants about the source of the anxiety and it was found that the level of emotional awareness was irrelevant. This study confirmed the suggestions made in previous literature that a significant or superior ability to understand emotions helps to control and eliminate biases that may be caused by emotions in decision-making.

Tuckett and Taffler's (2012) publication also connects emotional experiences with the cognitive biases that they can induce. They discuss the term 'emotional finance' and state that emotional finance formally recognises the key role that feelings and emotions, both conscious and unconscious, play in the investment decision-making process. According to the authors, emotional finance is an extension of behavioural finance. They report their findings from analysing the statements from in-depth interviews with 52 professional senior fund managers. In general, they conclude that various expectations on fund managers (decision-making with ambiguous information, stress, client expectations, etc.) may create an environment for a fund manager that is emotionally ambivalent. From the interviews conducted, the authors perceive the investment process to function based on excitement, anxiety and denial and note that this may be due to cognitive biases and heuristics as explained by Tversky and Kahneman's work in the 1970s. As cited by Lashgari (2015), Tuckett and Taffler (2012) found that money managers may often avoid or repress negative thoughts whilst deciding on what actions to take. Lashgari (2015) contends that the groupthink phenomenon strengthens this repressive behaviour. Earlier in this chapter it was pointed out that herding bias in investment decision-making has its roots in social psychology and groupthink. Tuckett and Taffler (2012) also found from their interviews that the notion of risk is asymmetric to many managers. Losses

from their actions have negative consequences whilst the ability to outperform the market does not necessarily translate to being rewarded. This can spur on feelings of anxiety and induce investment decisions that avoid potential losses (loss aversion or regret aversion). The study also found money managers to view each of their decisions in an isolated environment (which also confirms the presence of mental accounting in investment decision-making, as discussed early in this chapter).

Charles and Kasilingam (2014) reviewed data from 742 retail investors on the Indian stock market. Investors participated in a survey which attempted to ascertain how the different emotions they experienced helped to determine their investment personality. They contend that investors' different emotions explore their cognitions towards the market. They explain the emotional cycle of an investor as starting and ending with optimism whilst experiencing different emotions such as excitement, thrill, euphoria, anxiety, denial, fear, desperation, capitulation, despondency and depression, as well as hope and relief in between. They found that most of the investors surveyed were influenced by intuitive emotions and were not methodical in their investment personality or approach. Overall, the study concluded similar findings to those mentioned previously in this discussion and confirms that emotions play a major role in determining investment decisions.

To summarise the literature reviewed above, a conclusion can be drawn that consensus exists in the literature that emotions can influence investor decision-making. Emotions can induce cognitive biases which may have a discerning impact on the ultimate decisions that are to be taken by investors. Self-regulation and self-awareness are two of the building blocks of emotional intelligence. Superior EI abilities in individuals are said to be a key weapon in fending off the onset of cognitive biases in investment decision-making. It therefore warrants the question on what methods can be implemented to create awareness of EI levels and what systems firms may implement to develop these levels further.

## **Emotional intelligence interventions and the outcomes documented**

Goleman (1998) asserted that in contrast to IQ, emotional intelligence can be developed. In the work performed by Cherniss et al. (1998) on the 22 guidelines for developing EI in organisations, they insist that two types of distinct learning (cognitive learning and emotional learning) are necessary in training curricula of organisations to ensure organisational effectiveness and successful delivery from their staff. They state that cognitive learning involves the incorporation of new insights and data into existing frameworks of understanding, in order to enrich and extend the body of knowledge which individuals already possess in a particular industry. Emotional learning extends beyond this process and requires us to access, engage and change the part of our composition where our emotional habit repertoire is stored. Cherniss et al. (1998) explain their 22 guidelines as the “Optimal Process for Developing Emotional Intelligence in an Organisation” which divides this process into four distinct phases, i.e. the Preparation for Change Phase, the Training Phase, the Transfer and Maintenance Phase and the Evaluation Phase. Each phase contains certain key steps or guidelines to ensure improved performance. This is presented diagrammatically below:

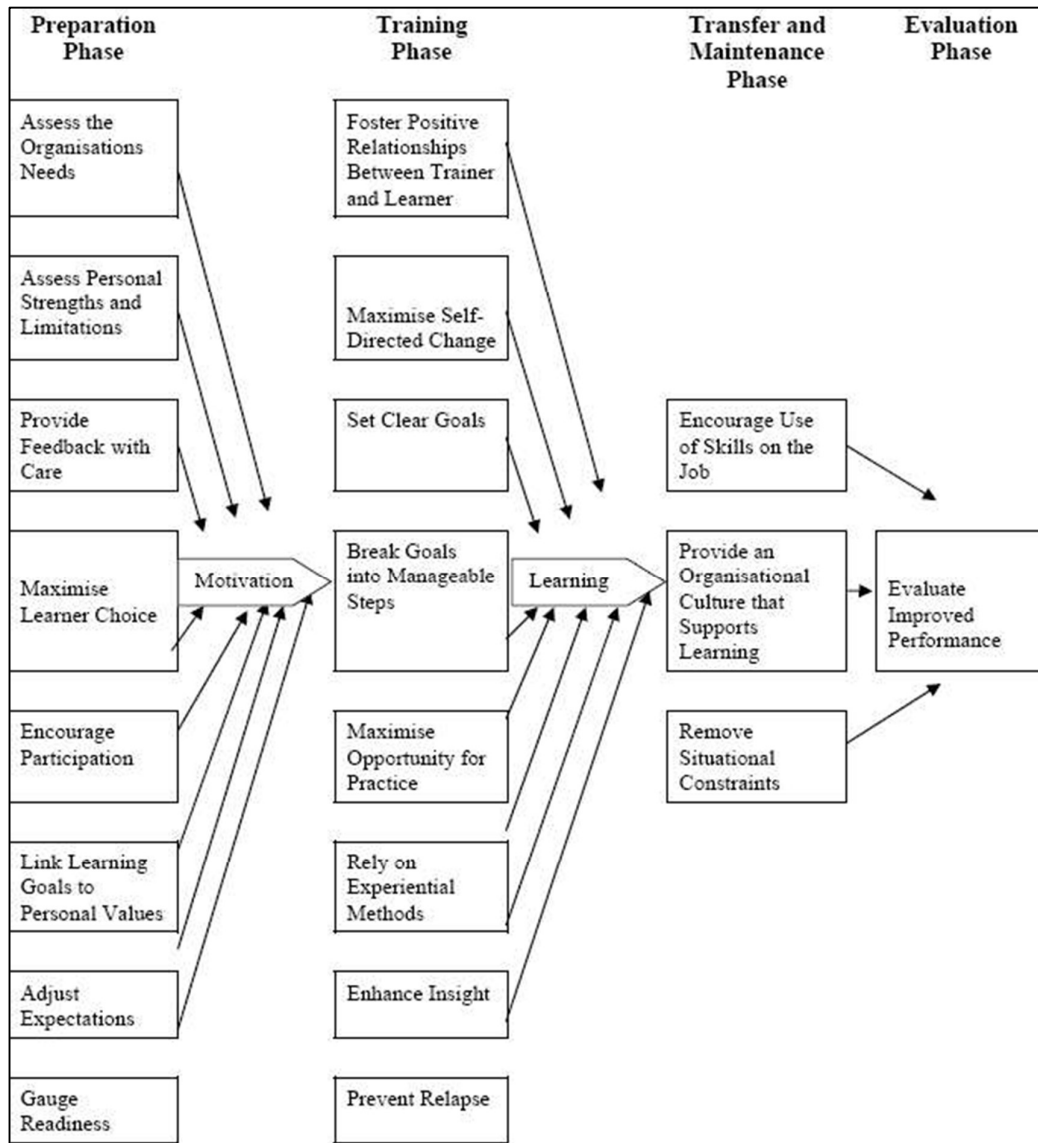


Figure 2 - Optimal Process for Developing Emotional Intelligence in an Organisation (*The Consortium for Research on Emotional Intelligence in Organizations*).

Cherniss et. al. (1998) contend that although organisations do not have to include all 22 guidelines in their training curricula, the success rate of achieving greater social and emotional development increases as each additional guideline is incorporated.

Although the literature on emotional intelligence interventions specific to the investment practice is limited, other intervention studies have set out to link the

results of EI interventions to higher overall EI scores and improved performance over time. An earlier study conducted by Slaski and Cartwright (2003) divided 120 retail managers into two groups: a group of 60 managers subject to an EQ intervention and a control group of 60 managers. Training intervention was provided to the participants based on the methodologies described by Cherniss and Adler (2000) in their book on promoting EI in organisations. The post-intervention results of the training group indicated that their EI scores increased significantly from pre- to post-training.

Fletcher, Leadbetter, Curran and O'Sullivan (2009) performed a pilot study involving medical students enrolled at a UK-based medical school. Fifty students were randomly assigned to an intervention group whilst thirty students were designated as the control group. The students were enrolled in a 7-month training program consisting of EI developmental workshops over the course of the period. Post-completion assessments using the Bar-On EQ-i concluded significantly higher EQ scores for the intervention group when compared to their base scores prior to the inception of the intervention training.

In the same way, Crombie, Lombard and Noakes (2011) investigated the effect of emotional intelligence training and development on the EI profile scores of individual cricketers. In their study they randomly divided 24 cricket players into an intervention group who participated in an EI training and development program, and a control group for which no EI intervention was performed. All participants were evaluated for their EI levels by applying the MSCEIT. In the first year of the study, the pre-intervention EI score for the intervention group was 84.9% and increased to 96.6% after completion of the intervention workshop. By contrast, the control group, on which no intervention was conducted, had a base EI score of 81.8% and a post-intervention score of 83.4%. Based on the results, the authors commented on the significance of the change of the EI measure of the group subjected to the intervention as well as the contribution of the development program.

In a recent study, Görgens-Ekermans, Delpont and du Preez (2015) used a

controlled experimental research design to evaluate the effect of an EI training intervention on the EI scores of first-year extended degree programme students. The experimental group received two-hour small group training sessions (four students and one facilitator) once a week over a period of five consecutive weeks, whilst control group participants received no intervention. The training programme followed a developmental structure in stages from basic to more complex psychological process as expressed by Mayer and Salovey (1995). The training provided workbooks and formulation of learning goals for each session. The facilitators used group interaction, feedback and individual training tasks in their small group sessions. Overall, the intervention showed a significant improvement in EI scores from pre-intervention testing for the intervention group.

### **Summary of key areas and support for this study**

The literature reviewed in this chapter confirmed the key departure points of this study with sufficient merit and comfort. Under the first section of this chapter, the literature showed empirically that investors are prone to behavioural and cognitive biases and that these biases may have a profound impact on their decision-making process, as well as the ultimate decision reached. This section cited important research to establish the foundation of behavioural finance in literature and to show results and findings of key empirical studies, notably Tversky and Kahneman (1974 & 1979), Thaler and Shefrin (1981), Shefrin and Statman (1985) as well as Odean (1998).

The chapter further discussed and illustrated through literature the interaction between cognition and emotion as well as the impact that emotion or affect has on the cognitive processes of the individual. Early studies regarded as important research in psychology (Cannon, 1927, Thorndike, 1934 & Wechsler, 1940) are cited to showcase the evolution of intelligence to include affective and conative abilities.

The formulation of the concept of EI and its building blocks were discussed in

detail (Salovey & Mayer, 1990 & Goleman, 1995). The chapter continued to discuss the importance of higher EI as an indicator of success in the workplace as well as the development of EI in the workplace exactly for this purpose. Cherniss et al. (1998), Cherniss (2000), Lopes et. al. (2006) and Coetzee and Schreuder (2011) were notable studies conducted for this purpose.

The literature reviewed furthermore demonstrated the impact of EI on financial and investment decision-making by firstly indicating the effect of emotions on economic outcomes of decisions (Lerner, Small & Loewenstein, 2004). The chapter further reviewed an important study which empirically proved that in general, investors who showed a higher level of EI were more balanced in their decision-making and less likely to be influenced by cognitive biases (Ameriks, Wraniak & Salovey, 2009). This was supported in other studies reviewed as well (Salovey, 2001, Ware & Dethmer, 2006 and Seo & Barrett, 2007).

The chapter concluded with empirical evidence of the impact of emotional intelligence interventions on the EQ-scores of participants pre- and post-interventions (Slaksi & Cartwright, 2003, Fletcher et. al., 2009, Crombie, Lombard & Noakes, 2011 and Görgens-Ekermans, Delpont & du Preez, 2015). It is therefore concluded that EQ interventions enhance the understanding of the participant's emotions and the impact they may have on decision-making.

In summary, through literature, the chapter conceptualises common cognitive and behavioural investor biases, whilst showing the interlinked-nature of the decision-making process and emotions; with specific emphasis to the impact of emotional intelligence on investment decision-making. The notable studies referenced in this chapter form the basis for the investigation of the impact of an EQ intervention on the cognitive and behavioural biases which may influence investment decision-making.

## **Chapter three: Research Design and Methodology**

### **Introduction**

A significant body of research exists within the field of psychology pertaining to the various biases which influence human decision-making. A growing body of knowledge on the understanding of decision-making in an investment setting has been established over the last 30 years within the finance and investment fraternity. This study explores the presence of certain cognitive biases influencing investment decision-making before and after an informative emotional intelligence intervention.

In particular, this study focuses on the most common cognitive psychological biases which may affect investment decision-making based on the psychological predisposition of the investor. This is done by reviewing the literature on the subject and establishing the most common cognitive and behavioural biases found to exist in investor decision-making through consensus apparent from the results of the reviewed literature.

Forthcoming from the literature reviewed in the previous chapter is proof that human emotion can enhance the predisposition to psychological biases to which the human decision-making process is subjected. Knowledge of these emotions and how to regulate them is therefore key to influence the decision-making process. This study further explores the impact of an informative emotional intelligence awareness intervention on the decision-making of investment professionals. The intervention focuses on the understanding of EI as a construct and how it is developed by relaying key concepts.

This chapter contextualises the current study by defining the problem statement and research question(s) which this study seeks to address. It also defines and explains (i) the research design and key assumptions underlying the approach to the study, (ii) the sample or testing group selected for the study and (iii) the reliability of the data obtained and rebuttal of statistical relevance.

## **Problem statement and research question**

This study will seek to investigate the impact certain psychological biases may have on the manner in which investment professionals formulate their investment decisions. In addition, this study will seek to assess whether the awareness of EI, its development and the impact it may have on human decision-making holds any bearing on how decisions are influenced, with reference to the presence of the biases discussed in the previous chapter. In short, this study seeks to establish and/or interpret the effect of an informative emotional intelligence awareness intervention on the decision-making process of investment professionals.

To date there has been relatively limited studies in this field within a South African context as it pertains to biases and heuristics impacting investment decision-making. Locally, EI awareness intervention studies have been conducted in other fields, but not on a South African sample of investment professionals in the informative manner inferred by this study.

The following are the research questions for this study:

1. Are the following biases (as proven from previous research in the field of behavioural finance) prevalent in the decision-making process of investment professionals in the sample group?
  - Availability theory,
  - Anchoring & Adjustment theory,
  - Herding theory,
  - Loss Aversion,
  - Mental accounting,
  - Regret aversion theory,
  - Self-control bias
  
2. Does an informative emotional intelligence awareness intervention have any effect on the prevalence of these biases?

The literature reviewed suggests that the biases noted in question 1 above are the most common biases experienced when making investment decisions.

The null hypothesis for the above questions would be that the awareness of EI and its development do not have any impact on the prevalence of the biases mentioned. If this null hypothesis is rejected, the implication could be that investment professionals are susceptible to their emotions and being biased in their decision-making; and an awareness of the construct of EI and its development may have an impact on the degree to which these professionals are susceptible to the identified biases in formulating their investment decisions.

### **Research design, sample group and description**

This study examined the outcome of a singular event (that being the informative emotional intelligence awareness intervention) on the prevalence of identified cognitive biases in the decision-making process of a group of investment professionals. According to Zainal (2007) the case study method of research enables the researcher to examine data within a specific context and/or environment closely. Yin (1984:23) defines the case study research method as “an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used”. He (Yin, 1984) further notes that exploratory case studies are a category of case study which serves to explore a particular point of interest in the phenomenon being observed and can be utilised to indicate or direct further research on said phenomenon.

Yin (1984) explains the meaning of 'sample' in a case study method. One of the many critiques of this method of research is the inability to generalise findings from a single experiment without having any statistical relevance on a larger population. Yin (1984) further explains that research scoped in the form of a 'case study' should be viewed similarly to scientific experiments, in the sense that the results are only generalisable to theoretical propositions, but not to the

full population. The goal of the researcher is therefore to expand and generalise theories (analytic generalisation) and not to enumerate frequencies of occurrences (which would be relevant for statistical generalisation).

As this study focused primarily on behavioural finance aspects of investment professionals, and the impact of a singular intervention (phenomenon), the case study method was deemed an appropriate design to execute the study.

#### *Sample group and limitations posed*

The target participants for the study were investment professionals who exercise investment decision-making as part of their everyday duties. From the formulation of the research questions and the theory which this study sought to investigate, there was no requirement for specificity in relation to a particular industry, nor a particular vehicle used for investments (example fund management, currency, equity or fixed income).

No identifying characteristics of any of the participants is disclosed in this research project. This is to ensure complete confidentiality of all responses is maintained. Participation in this research was entirely voluntary and dependent on the responses received to the letter of invitation to participate in research. This study is conducted by means of survey questionnaires, a self-report tool, which may pose inherent risks to data quality. As such, the results of this study ought to be interpreted with this understanding. The invitation for research was only circulated to investment firms within the vicinity of the city of Cape Town. The limitation of geographical area is accepted within the scope of a case study as research methodology. A total of eight fully completed individual responses were received in this research project. The number of fully completed individual responses is not representative of the total population of investment professionals in South Africa and the sample is therefore not regarded as sufficient to bear any statistical relevance, but rather to be applied in this case study in the investigation of the theory inferred by the research questions set out earlier in this chapter. The number of responses is in conformity to the scope and design of research under the case study methodology. The results of this

study will further strive to direct future research on the effect of EI on investment decision-making.

### *Sample description*

All individuals participated in this research project voluntarily. All were reached by letter of invitation for research issued to a number of investment firms operating within the city of Cape Town and nearby suburbs. The letter of invitation relayed the request for investment professionals to participate in a research study on the factors influencing investment decision-making before and after an emotional intelligence intervention. Refer to Appendix 1 for a copy of the letter of invitation.

Based on the general credentials of investment professionals normally encountered in practice, for the purposes of this research project, the following assumptions are made of all participants:

i) Due to the nature of their work, all participants should have at least the required level of tertiary education deemed necessary by professional investment firms, such as a relevant bachelor's degree or postgraduate level of education.

ii) Due to the nature of their operating environment, it is accepted that all participants would be adequately experienced and would typically have a relevant financial professional affiliation (such as Chartered Financial Analyst (CFA), Chartered Accountant or alike). Years of experience is therefore not controlled for in this case study.

From the assumptions on general credentials explained above, another key assumption made was that each participant has an IQ acceptable for employment as an investment professional, as would hold through standards set by investment firms in their recruitment processes. No separate measurement of IQ abilities were therefore deemed necessary. This is further supported as this study did not seek to build further or establish any links between EQ and IQ, other than as so pointed out in the literature review.

Based on the nature of this study and the sample group as well and in order to not compromise the confidentiality of the participants, no differentiation was made as it pertains to age, gender, race or similar demographics. This study, by design, can therefore not make any assertions inferring the results obtained herein on any of these demographics.

In line with the rationale of this study and the formulation of the research question, this study did not make any assumption on the level of EI of any of the participants. It is further not within the scope of this study to measure the level of EI of any of the participants, nor did this study seek to establish an acceptable level of EI for the participants as the current sample group was not statistically representative of any larger demographic, professional group or population.

### **Data collection**

The data collection and availability were entirely dependent on consent from the participants. The data for the case study was collected by using descriptive survey questionnaires. Two survey questionnaires were administered and participants were requested to complete the first questionnaire prior to the informative emotional intelligence awareness intervention and the second questionnaire post completion of said intervention.

#### *Development of the questionnaires:*

The main focus of the survey questionnaires is to determine the relevant influences on an investment decision both before and after an informative emotional intelligence awareness intervention. The questions have been developed to identify the biases mentioned in the statement of the first research question above.

An extensive literature review underpinned the development of the survey questionnaires. Various studies across behavioural finance and the prevalence of biases have been of influence in the development of the nature and style of the set of questions which anchors this study. The questions were developed to have an appeal to the South African investor and are influenced by similar studies

done in South Africa and other developing or smaller economies (Marais, 2007, Tehrani & Gharehkooolchian, 2012 and Shikuku, 2014). The formulation of each question is discussed in the next section of this chapter. Where relevant, references to prior studies are also noted.

The survey questionnaires were structured to fulfil the objective of this research study. Each question sought to establish whether the corresponding cognitive bias is prevalent in the participant by means of measuring the responses received. This process is followed from the first survey through to the second survey by tracking the responses of each participant from the first survey to the second survey after the participant completed the informative emotional intelligence intervention. To enable the tracking of individual responses from the first survey to the second survey, each participant was asked to disclose the last four digits of their mobile telephone numbers. This information has not been disclosed in this dissertation so as to ensure that the anonymity of participants is not compromised in any manner.

The following section explains the objective of each question in the first and second questionnaire. For the purposes of this study, a measurement scale for indicative prevalence of the related biases based on the response selected for each question is established and is defined as follows:

| <b>Measure</b> | <b>Description</b>                                        |
|----------------|-----------------------------------------------------------|
| <b>H</b>       | Indicative of a high prevalence of the mentioned bias     |
| <b>M</b>       | Indicative of a moderate prevalence of the mentioned bias |
| <b>L</b>       | Low indication of prevalence of the mentioned bias        |

| <b>First Survey Questionnaire: Formulation and Response Rating</b> |                 |                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                         |                          |
|--------------------------------------------------------------------|-----------------|--------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|--------------------------|
| <b>Bias addressed</b>                                              | <b>Question</b> | <b>Question description</b>                                                                                  | <b>Formulation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>Response options</b> | <b>Prevalence Rating</b> |
| <b>Availability theory</b>                                         | 1               | Which of the following two causes of death, do you think caused the most deaths in South Africa during 2015? | To measure the response based on easily available reference points from, inter alia, media reports, publicised statistics and government propaganda. Shefrin (2007) explains that people often tend to overweight information that is readily available and intuitive relative to information that is less salient and more abstract, thereby biasing their judgements. Marais (2007) employs this question in a prior study within a South African context. | Tuberculosis            | L                        |
|                                                                    |                 |                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                              | HIV/AIDS                | H                        |
|                                                                    |                 |                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Road Accidents          | M                        |
| <b>Anchoring &amp; adjustment theory</b>                           | 2               | On a normal day, do you usually approach an investment transaction with a price in mind?                     | To identify application of a starting point to a day-to-day investment decision. A positive response would indicate the prevalence of anchoring bias. The question is adapted from Murithi (2014) where a similar question was asked of investors on the Nairobi Stock Exchange in a study to measure anchoring bias.                                                                                                                                        | YES                     | H                        |
|                                                                    |                 |                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                              | NO                      | L                        |
|                                                                    | 3               | Do you believe that the percentage minority representation in the South African rugby team is at a           | To indicate the use of current information available to adjust for a previous standpoint. A positive                                                                                                                                                                                                                                                                                                                                                         | YES                     | H                        |

|                          |   |                                                                                                                   |                                                                                                                                                                                                                                                                                                                                              |                                           |   |
|--------------------------|---|-------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|---|
|                          |   | high level?                                                                                                       | response would indicate a lower willingness for adjustment of opinions (anchor) versus current available information (high prevalence of anchoring).                                                                                                                                                                                         | NO                                        | L |
|                          | 4 | I know when to cut my losses and will let go of a losing share or investment at or below the price I paid for it? | An unwillingness to acknowledge losses on a losing investment and a persistent strategy to achieve the initial price paid for it points to a higher prevalence of anchoring. The question is adapted from Murithi (2014) where a similar question was asked of investors on the Nairobi Stock Exchange in a study to measure anchoring bias. | Yes, always                               | L |
|                          |   |                                                                                                                   |                                                                                                                                                                                                                                                                                                                                              | I sometimes do                            | M |
|                          |   |                                                                                                                   |                                                                                                                                                                                                                                                                                                                                              | I don't lose                              | H |
|                          |   |                                                                                                                   |                                                                                                                                                                                                                                                                                                                                              |                                           |   |
| <b>Loss Aversion</b>     | 5 | When deciding to sell, I normally sell shares or investments with increasing prices first.                        | Shefrin and Statman (1985) refer to the phenomenon where investors appear to have a preference for selling winning stocks too early and holding on to losing stocks too long as the "disposition effect". A strategy of selling winning investments indicates a high prevalence of loss aversion bias.                                       | Always                                    | H |
|                          |   |                                                                                                                   |                                                                                                                                                                                                                                                                                                                                              | Depends on what the word on the street is | M |
|                          |   |                                                                                                                   |                                                                                                                                                                                                                                                                                                                                              | Never                                     | L |
|                          |   |                                                                                                                   |                                                                                                                                                                                                                                                                                                                                              |                                           |   |
| <b>Mental accounting</b> | 6 | I classify all my investments separately in categories, for                                                       | Separate classification of portfolios into groups of funds has been                                                                                                                                                                                                                                                                          | YES                                       | H |

|                        |   |                                                                                          |                                                                                                                                                                                                                                               |                  |   |
|------------------------|---|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---|
|                        |   | example: commercial property, holiday home, retirement portfolio, cash portfolio.        | documented as signs of mental accounting bias (Thaler, 1985 and Thaler, 1999 as examples or earlier research). A positive response indicates a practice of using mental accounting and a high prevalence of this bias.                        | No               | L |
|                        |   |                                                                                          |                                                                                                                                                                                                                                               |                  |   |
| <b>Regret Aversion</b> | 7 | I don't take chances on sure losses, regardless what the probability of a gain might be. | The question is developed to showcase anticipated regret. Refer to Odean (1998). A positive response indicates an emotional feeling or impulse associated with a past experience. This is indicative of a high prevalence of regret aversion. | Strongly Agree   | H |
|                        |   |                                                                                          |                                                                                                                                                                                                                                               | Agree            | H |
|                        |   |                                                                                          |                                                                                                                                                                                                                                               | Moderately Agree | M |
|                        |   |                                                                                          |                                                                                                                                                                                                                                               | Disagree         | L |
|                        |   |                                                                                          |                                                                                                                                                                                                                                               |                  |   |
| <b>Self-Control</b>    | 8 | If I like it, I normally buy it.                                                         | A positive response indicates a decision strategy that is instant and emotional based on investor preference rather than more rational information. A positive response would indicate a higher prevalence of self-control bias.              | Strongly Agree   | H |
|                        |   |                                                                                          |                                                                                                                                                                                                                                               | Agree            | H |
|                        |   |                                                                                          |                                                                                                                                                                                                                                               | Moderately Agree | M |
|                        |   |                                                                                          |                                                                                                                                                                                                                                               | Disagree         | L |
|                        |   |                                                                                          |                                                                                                                                                                                                                                               |                  |   |
| <b>Herding</b>         | 9 | My investment decisions are informed by the collective                                   | The question is adapted from Coffie (2013) who tested for the presence                                                                                                                                                                        | Strongly Agree   | H |

|       |    |                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                      |                           |   |
|-------|----|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---|
|       |    | analysts' recommendations/other media headlines                                                                          | of Herding by asking respondents to indicate to which level they are in agreement with the following statement: "I often use information gained from news and/or magazines when making investment decisions". A positive response is indicative of overreliance on group consensus rather than independent information. This will indicate a higher prevalence of herding behaviour. | Agree                     | H |
|       |    |                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                      | Moderately Agree          | M |
|       |    |                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                      | Disagree                  | L |
|       | 10 | When having lunch or a drink by myself I am most likely to go to...                                                      | Extraverted personality types have been shown to exhibit herd behaviour (see Lin, 2012 as well as Kabulay & Bayrakdoruglu, 2016). It is expected that a participant who selects solitary company in this context may show lower prevalence of herd behaviour.                                                                                                                        | a busy restaurant / café  | H |
|       |    |                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                      | a quiet restaurant / café | L |
|       | 11 | It is my consultation with other colleagues/investors/market players that predominantly inform my investments decisions. | Herding behaviour implies that colleagues and other market participants would be important sources of information. (Menckhoff et al., 2006). As this questionnaire is issued to investment                                                                                                                                                                                           | Strongly Agree            | H |
| Agree |    |                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                      | H                         |   |

|  |  |  |                                                                                                                                                                                                     |                  |   |
|--|--|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---|
|  |  |  | professionals, the reference to consultation is expanded from "investment advisors" to colleagues/investors/market players. A positive response indicates a higher prevalence of herding behaviour. | Moderately Agree | M |
|  |  |  |                                                                                                                                                                                                     | Disagree         | L |

| <b>Second Survey Questionnaire: Formulation and Response Rating</b> |                    |                                                                                                                      |                                                                                                                                                                                                                                                                                      |                         |                          |
|---------------------------------------------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|--------------------------|
| <b>Bias</b>                                                         | <b>Question nr</b> | <b>Question description</b>                                                                                          | <b>Formulation</b>                                                                                                                                                                                                                                                                   | <b>Response Options</b> | <b>Prevalence Rating</b> |
| <b>Availability theory</b>                                          | 1                  | Do you buy more shares/instruct more trades/trade more on days when the JSE All-Share index increased?               | To measure the response based on easily available reference points from available market data as a basis for decision-making. Kliger Kudryavtsev and Andrey (2010) show stock market movements as a proxy for trade recommendations in their analysis of the availability heuristic. | YES                     | H                        |
|                                                                     |                    |                                                                                                                      |                                                                                                                                                                                                                                                                                      | NO                      | L                        |
|                                                                     | 2                  | Conversely, do you sell more shares on days when the JSE All-Share index decreased?                                  |                                                                                                                                                                                                                                                                                      | NO                      | L                        |
|                                                                     |                    |                                                                                                                      |                                                                                                                                                                                                                                                                                      | YES                     | H                        |
| <b>Anchoring &amp; adjustment theory</b>                            | 3                  | Recent company information (of a potential investment) tends to have a heavier bearing on your investment decisions? | YES                                                                                                                                                                                                                                                                                  | H                       |                          |
|                                                                     |                    |                                                                                                                      | NO                                                                                                                                                                                                                                                                                   | L                       |                          |
|                                                                     | 4                  | Do you normally find it difficult to sell an investment or asset for less than what you initially paid for it?       | Yes, very difficult                                                                                                                                                                                                                                                                  | L                       |                          |
|                                                                     |                    |                                                                                                                      | I never sell for less                                                                                                                                                                                                                                                                | H                       |                          |

|                          |   |                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                         |                                                                             |   |
|--------------------------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|---|
|                          |   |                                                                                                                                                                                           | indicates a high presence of anchoring bias.                                                                                                                                                                                                                                                                                                            |                                                                             |   |
|                          | 5 | Who is to blame for the recent deterioration in the results of the South African rugby team?                                                                                              | To correlate the participant's response on investment-related questions versus formulating an opinion based on recent information available. In this example, a response indicating to SARU and Allister Coetzee is likely influenced by the recent media in general and may indicate a higher prevalence of adjustment based on available information. | SARU and/or Allister Coetzee                                                | H |
|                          |   |                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                         | The players                                                                 | L |
|                          |   |                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                         |                                                                             |   |
| <b>Loss Aversion</b>     | 6 | When deciding to sell, do you normally sell shares or other assets with increasing prices first?                                                                                          | See Shefrin and Statman (1985). A strategy of first selling winning investments indicates a high prevalence of loss aversion bias.                                                                                                                                                                                                                      | Always                                                                      | H |
|                          |   |                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                         | Depends on what the word on the street is                                   | M |
|                          |   |                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                         | Never                                                                       | L |
|                          |   |                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                         |                                                                             |   |
| <b>Mental accounting</b> | 7 | Consider the following scenario: You recently won a competition at your workplace and have been awarded an iPhone 7. Your cell phone contract is also up for renewal/upgrade and you have | This question illustrates the application of mental accounting in daily life, whereby it would be easy to create two separate mental accounts: one for own expenditure and one for                                                                                                                                                                      | Upgrade your current device and utilise both mobile phones (one as a spare) | H |

|                        |   |                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                  |   |
|------------------------|---|----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|---|
|                        |   | been thinking of upgrading to an iPhone 7. What do you do?                                                                             | the competition win. A response selection of maintaining two separate mobile devices is likely to indicate a higher prevalence of mental accounting bias.                                                                                                                                                                                                                       | Upgrade but utilise the device from the competition as your only device (do not take another device on contract) | L |
|                        |   |                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                  |   |
| <b>Regret Aversion</b> | 8 | You rarely make the same mistake twice when deciding which shares to invest in: if it did not work before, you're not trying it again! | The question is developed to analyse the participants' appetite for anticipatory regret, from choice ex-post knowledge of prior decisions. See Lovelady, 2014, for an explanation of 'experiential regret aversion'. A positive response indicates an emotional feeling or impulse associated with a past experience and is indicative of a high prevalence of regret aversion. | Strongly Agree                                                                                                   | H |
|                        |   |                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                 | Agree                                                                                                            | H |
|                        |   |                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                 | Moderately Agree                                                                                                 | M |
|                        |   |                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                 | Disagree                                                                                                         | L |
|                        |   |                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                  |   |
| <b>Self-Control</b>    | 9 | I only invest in industries I enjoy or find appealing, no matter what the word on the street is.                                       | A positive response indicates a decision strategy that is instant and emotional on the basis of investor preference rather than more rational information. A positive response would indicate a higher prevalence of                                                                                                                                                            | Strongly Agree                                                                                                   | H |
|                        |   |                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                 | Agree                                                                                                            | H |
|                        |   |                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                 | Moderately Agree                                                                                                 | M |
|                        |   |                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                 | Disagree                                                                                                         | L |

|                |    |                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                  |   |
|----------------|----|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---|
|                |    |                                                                                                                                           | self-control bias.                                                                                                                                                                                                                                                                                                                                                                                                                           |                  |   |
|                |    |                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                  |   |
| <b>Herding</b> | 10 | My decision to invest more money in a share is influenced by how frequently that share is traded in the market                            | Herding follows from consensus theory in social psychology, which also underpins the groupthink phenomenon. Both questions were developed to showcase group consensus as the driver for herd behaviour within the context of this study. Also see Shikuku (2013). A positive response may be indicative of overreliance on group consensus rather than independent information. This will indicate a higher prevalence of herding behaviour. | Strongly Agree   | H |
|                |    |                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                              | Agree            | H |
|                |    |                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                              | Moderately Agree | M |
|                |    |                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                              | Disagree         | L |
|                | 11 | I get a sense of belonging or camaraderie when investing in the same share or transaction dubbed by other players as the new "must have". |                                                                                                                                                                                                                                                                                                                                                                                                                                              | Strongly Agree   | H |
|                |    |                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                              | Agree            | H |
|                |    |                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                              | Moderately Agree | M |
|                |    |                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                              | Disagree         | L |

*Emotional Intelligence Awareness Intervention:*

The emotional intelligence awareness intervention was offered in this study to attempt to determine whether the perceived awareness of the construct of EQ would have any bearing on the responses seen from participants after completing both survey questionnaires.

The method of delivery of the intervention was in the form of an informative article on the subject of EI and the development thereof, titled: *Understanding and developing emotional intelligence* (Serrat, 2010). A copy of the publication is attached to this paper in Appendix 2. Each participant was required to read the article upon completion of the first survey questionnaire.

The objective of the article was to make participants aware of, and create an understanding of EI and the development thereof. It was the assumption of the researcher that the participants should have at least an elementary understanding of the personal and social attributes (emotions) which contribute to EI abilities after reading the intended article; and that the article would garner emotional awareness after reading the content.

The article was first published by the Asian Development Bank and later incorporated into the International Publications of the Industrial and Labour Relations (ILR) School of Cornell University, New York (Serrat, 2010). The content of the publication bears reference to notable literature studies in EI and uses material made available by the Consortium for Research on Emotional Intelligence in Organizations, a body focused on the advancement of research in the practice of emotional and social intelligence in organisations.

The article was deemed fit for the purpose of the informative intervention in this study due to it being aimed at a reader who is active in the workplace, such as the participants. The content is analogous with the literature reviewed in chapter two of this study. The article was made available free of charge and with open access by the ILR of Cornell University.

To enable the researcher to submit the article to each individual with a completed response on the first survey questionnaire, individuals were

requested to disclose their e-mail details as part of the first questionnaire. This information has not been disclosed in this dissertation to ensure that the anonymity of participants is not compromised in any manner.

The article was submitted together with the link to the second survey for each completed first survey questionnaire with a valid e-mail address. Before proceeding with the questions of the second survey, participants were requested to confirm that they had read the article submitted to them. From this confirmation, the researcher accepted that the intervention had been executed sufficiently as set out for the purpose of this study.

### **Data analysis**

The data collected through the completed questionnaires was analysed by utilising spread sheets. Each completed questionnaire (for both the first and second survey) was inspected in order to ensure the validity of all responses. Only completed, valid responses were considered in the final analysis in the following chapter. A response was considered invalid in the following circumstances:

- i. the participant neglected to include the four digits of the mobile number and therefore rendered it impossible to track their responses, unless the participant included their e-mail address on both the first and second responses,
- ii. the e-mail address provided by the participant in the first survey was incorrect or returned an undeliverable message, thereby not enabling the researcher to submit to the them the article and the second survey,
- iii. the participant did not confirm that they had indeed received and read the article used for the purposes of conveying the informative emotional intelligence intervention with the completion of the second survey,
- iv. duplicate submissions of both questionnaires which were visible to the researcher based on duplicate e-mail addresses or duplicate

mobile numbers received.

All completed and valid responses by participants were compared for each bias to establish whether there were any changes in the prevalence of the biases tested for by each question after reading the article submitted to the participants. The results of these comparisons are discussed and presented in the following chapter.

### **Ethical considerations**

The data collected for this study involved the participation of human subjects for the completion of the survey questionnaires as discussed earlier in this chapter, as well as participation in an informative intervention delivered through an article on EI. Ethical clearance approval for this study has been obtained from the Faculty of Commerce Ethics in Research Committee of the University of Cape Town.

## Chapter four: Results analysis

### Introduction

This chapter will examine the results of the survey questionnaires from completed and valid responses received, as defined in the previous chapter. The questionnaires were directed to and envisaged for investment professionals within the vicinity of Cape Town. No other socio-demographic factors are controlled for in this study. From the requests for participation sent out to investment firms within the vicinity of Cape Town, eleven responses were received. However, only eight (8) of these responses were fully completed and are used for the purpose of this study.

### Approach to analysis of the results

To examine the outcome of the responses logically, responses to each of the biases addressed in this study will be reviewed separately in both the first and second survey. The second survey was taken after the introduction of the construct of EI by means of an academic publication submitted to each of the participants who completed the first survey. Each completed response considered in this study positively confirmed that the participant has received and read the publication, *Understanding and developing emotional intelligence*, by Olivier Serrat (2009).

The objective for each question has been discussed in the previous chapter, and where applicable, literature references to the construction of the questions were provided. Each response is measured to indicate the probable existence of the related bias as *High*, *Moderate* or *Low*. Responses are examined in total for the sample group per bias, as well as any changes to individual responses between the first and second surveys. Where more than one question is utilised to illustrate a particular bias, the weighted average per individual response as *High*,

*Moderate* or *Low* for the related bias is used to be able to comment on the sample group as a whole.

## **Interpretation of results**

### *Availability theory*

The availability bias was measured by asking participants both investment and non-investment related questions. In the first survey, participants were asked about the major cause of death in South Africa, which is published each year by Statistics South Africa. Response options included causes that were widely accepted through major media propaganda as easily identifiable reference points. In the second survey, participants were asked about their trading behaviour with reference to trends of the JSE All Share Index. A summary of responses is presented in Table 2.1 below.

**Table 2.1: Results analysis for Availability bias**

|               | <b>Question nr:</b> | <b>L</b> | <b>M</b> | <b>H</b> |
|---------------|---------------------|----------|----------|----------|
| First Survey  | <b>1</b>            | 50%      | 38%      | 13%      |
| Second Survey | <b>1,2</b>          | 94%      | 0%       | 6%       |

From the first survey, 50% of participants indicated “Tuberculosis” (the correct cause of death) over other more widely publicised options. From the second survey, 94% of participants indicated not to use the JSE All Share performance as reference. All participants who showed probable moderate to high existence of availability bias as envisaged by the question in the first survey, exhibit a change in response from the first to the second survey.

### *Anchoring*

In the first survey, the questions on anchoring were phrased to provoke a response from participants more intuitively as the reference points were less prominent, e.g. by asking if they approach a transaction with a price in mind and/or if they know when to cut their losses. These provoke more personal, subjective and intuitive responses. In contrast, the second survey introduced more prominent reference points to the questions (e.g. by referring to “recent

company information” which would be factual and specific in whatever example each participant may be reflecting upon). A summary of responses is presented in Table 2.2 below.

**Table 2.2: Results analysis for Anchoring bias**

|               | <b>Question nr:</b> | <b>L</b> | <b>M</b> | <b>H</b> |
|---------------|---------------------|----------|----------|----------|
| First Survey  | <b>2,3,4</b>        | 83%      | 8%       | 8%       |
| Second Survey | <b>3,4,5</b>        | 29%      | 0%       | 71%      |

When response options were more subjective in the first survey, participants were less probable to exhibit anchoring (83%). However, with the introduction of specific reference points in the second survey questions, the majority of participants were probable to exhibit anchoring (71%). Changes in responses were noticed for all participants from the first to the second survey.

*Loss Aversion*

Humans tend to be naturally loss averse. In the literature review chapter, it was established that a strategy to sell investments/stock that are winners first, indicates a high probability of loss aversion bias to be present in the decision-making process. This is likely due to anticipated regret from possible losses or anticipated pride from gains made, which are both emotions that may induce this bias.

Participants were asked in both surveys whether they are likely to sell shares or investments with increasing prices first when deciding on a sell. Their responses can be seen in Table 2.3 below.

**Table 2.3: Results analysis for Loss-Aversion bias**

|               | <b>Question nr:</b> | <b>L</b> | <b>M</b> | <b>H</b> |
|---------------|---------------------|----------|----------|----------|
| First Survey  | <b>5</b>            | 50%      | 38%      | 13%      |
| Second Survey | <b>6</b>            | 50%      | 38%      | 13%      |

In both surveys, 50% of participants indicated they would choose not to sell their winning investments first, which may indicate a low probability of participants to exhibit loss aversion bias, whilst the remainder of participants show moderate to high probability of loss aversion bias being present in their decision-making process. Additionally, there were no changes in individual responses from the first to the second survey.

It is possible that based on the fact that all participants are professional investors, they would normally have professional advice at hand and would possibly be more knowledgeable than an individual investor in their own capacity when making investment decisions. These are negating factors for this bias and these could therefore offer an explanation for the results seen from 50% of the responses above. This explanation would be consistent with the findings of Bashall (2014) in a South African context, who demonstrated that the effect of this bias is exhibited to a lesser extent by an individual with access to professional advice than examples of individuals who act without professional advice.

#### *Mental accounting*

To try and ascertain whether participants exhibit behaviour akin to mental accounting bias, the first survey asked participants directly whether they apply a practice of separating all investments and transactions in particular categories. The second survey presented participants with a scenario in their daily lives as individuals where it would be easy to create two separate mental accounts relating to a particular expense. Participants' responses to both the surveys regarding mental accounting bias can be seen in Table 2.4 below.

**Table 2.4: Results analysis for Mental Accounting bias**

|               | <b>Question nr:</b> | <b>L</b> | <b>M</b> | <b>H</b> |
|---------------|---------------------|----------|----------|----------|
| First Survey  | <b>6</b>            | 25%      | 0%       | 75%      |
| Second Survey | <b>7</b>            | 75%      | 0%       | 25%      |

A surprising outcome to note while considering the question in the first survey regarding investment decisions, is that participants tend to exhibit a high likelihood of applying mental accounting (75% of all responses). However, where the decision is more personal in nature, the response is the complete opposite. A likely explanation could be that participants view financial decisions holistically in their personal capacity but separated on an account-by-account basis in their professional capacity. Changes in responses from previously exhibiting high to low mental accounting are seen for 50% of individual responses from the first to the second survey.

### *Regret Aversion*

Questions phrased to participants under this bias sought to invoke a reflection of a past experience. Under regret theory, the participant's decision is made under uncertainty, however, whilst having prior experience of a similar situation. If any of the decision options may induce regret, it is likely that the participant will eliminate that option. The summary of responses is presented below.

**Table 2.5: Results analysis for Regret Aversion bias**

|               | <b>Question nr:</b> | <b>L</b> | <b>M</b> | <b>H</b> |
|---------------|---------------------|----------|----------|----------|
| First Survey  | <b>7</b>            | 25%      | 0%       | 75%      |
| Second Survey | <b>8</b>            | 13%      | 63%      | 25%      |

When asked directly if participants would take a chance on losses, regardless what the potential gain may be, 75% participants strongly agreed that they do not take any chances on losses, irrespective of probable gains. When asked in the second survey if participants would consider the same investment that may not have worked before again, the majority of the responses indicate that participants are reluctant to make the same mistake twice.

Although changes were seen in all but one of the participants' responses from the first survey to the second, it is evident that probable or anticipated regret may have a large impact in the investment decision-making process.

### *Self-control bias*

In simple terms, a lack of self-control is caused by an inability of the rational part of an individual's brain to influence the irrational or emotional part when considering a decision (see Thaler & Shefrin, 1981 and Shefrin & Statman, 1985). The questions posed to participants sought to provoke a response indicative of an emotional reaction to investment decisions. The first survey asked whether participants normally buy or invest when they "like" an investment opportunity. The second survey attempted to personalise this further by asking participants whether or not they prefer only to invest in their industries of choice or preference. Refer to the summary results presented in Table 2.6 below.

**Table 2.6: Results analysis for Self-control bias**

|               | <b>Question nr:</b> | <b>L</b> | <b>M</b> | <b>H</b> |
|---------------|---------------------|----------|----------|----------|
| First Survey  | <b>8</b>            | 25%      | 13%      | 63%      |
| Second Survey | <b>9</b>            | 50%      | 25%      | 25%      |

The majority of responses (63%) appear to exhibit a high probable existence of self-control bias when considering the question in the first survey. Considering the use of personal preference to a particular industry or industries as a proxy to direct investment decision-making, 50% of participants responded that they disagree with this statement.

### *Herding bias*

Studies have shown that individual investors are prone to exhibit herd behaviour (Lee et al., 2004). Participants were asked about the way in which collective market consensus influences their decision-making process when approaching investments. The questions posed in the first and second survey also tried to establish or provoke a response from the participants indicative of whether they would prefer to act alone or feel more assured when acting in unison with the crowd or herd. Refer to table 2.7 below for a summary of the responses.

**Table 2.7: Results analysis for Herding bias**

|               | <b>Question nr:</b> | <b>L</b> | <b>M</b> | <b>H</b> |
|---------------|---------------------|----------|----------|----------|
| First Survey  | <b>9,10,11</b>      | 63%      | 29%      | 8%       |
| Second Survey | <b>10,11</b>        | 63%      | 25%      | 13%      |

By disagreeing with the statements posed in the first and second surveys, the responses appear to indicate that the majority of the participants do not strongly exhibit herd behaviour.

Only one participant exhibited a change in responses from the first to second survey, indicating their choice to follow market trends on how frequently a share is traded when choosing to invest, as well as obtaining a sense of belonging when investing in a new share that other players dub the new “must have”.

## **Chapter five: Conclusion and areas for future research**

### **Aim of this research paper**

Research has shown empirically that investment professionals are prone to psychological and emotional biases when executing investment decisions. The interaction between cognition and emotion is also discussed through literature reviewed in this research paper. Research furthermore has shown that investors with higher emotional intelligence are less prone to biases induced by their emotions. The literature reviewed as part of this study also discussed EI interventions and the impact such interventions may have on EQ scores of participants over time.

The core aim of this research paper was to explore whether certain cognitive psychological biases appear to be present in the decision-making process of investment professionals within the vicinity of Cape Town. Together with this, the research intended to discover how the presence of these biases appear to change after an informative emotional intelligence intervention. The biases tested for in this study have been established through literature as the most common biases in behavioural finance theory.

In order to achieve the aims set out in this study, the data collection was divided into two stages, namely the completion of a first survey and a second survey. Before completing the second survey, all participants received and read an informative article on the subject of EI and the development thereof, titled *Understanding and developing emotional intelligence* (Serrat, 2010).

### **Summary of findings**

Under the availability bias, 50% of participants exhibited low probability of availability bias in the first survey. This increased to 94% with responses from the second survey claiming not to be influenced by available information such as the JSE All Share Index in this example.

When introducing more specific anchor points in the second survey, 83% of participants indicated a higher level of anchor bias versus the first survey (8%). This outcome suggests clearly that when participants have a particular reference point, it is possible for them to be prone to use this reference point in their decision-making process as their anchor.

Whilst participants indicated that they were equally loss-averse during the first and second survey, the results show that the majority of participants continued to exhibit lower regret, self-control bias and mental accounting bias in the second survey. In behavioural finance literature, connections have been drawn between these biases and the practice of selling winning investments too early (disposition effect).

Herding behaviour appeared to be low with 63% of participants, whilst the remaining participants exhibit varied results between moderate to high. These results were seen both in the first and the second survey.

As discussed in the previous chapter, the limitations of this study prevent the interpretation of the data to be statistically representative of any larger group and/or specific demographic. Whilst the research cannot be comprehensive enough to adequately examine the presence of all biases and its causes, from the results analysed from the participants who completed the descriptive survey questionnaires, the following conclusions can be made:

- During both the first and second survey questionnaire, some level of the mentioned biases was observed through the responses in all questions posed with some participants exhibiting higher levels of these biases.
- The second survey was taken after having confirmed that participations have received and read the publication *Understanding and developing emotional intelligence*, by Olivier Serrat (2009). Barring the results seen in the analysis of responses to survey questions testing for loss-aversion bias, some participants showed

changes to their responses for each of the other biases on the second survey.

The research presented here is not conclusive enough to examine and extrapolate conclusions to any population and/or demographic. However, purely considering the sample group of fully completed responses observed in this case study, notwithstanding the need for further research, the null hypothesis defined for this study can be rejected. Following from this point, it can be concluded that the participants exhibit some level of cognitive psychological biases in their decision-making. It further appears that having awareness and understanding of the construct of EI and its development may influence the degree to which these biases are present in their decision-making process.

### **Direction for future research**

Due to the nature of this study, as well as the sample size obtained, it was not possible to comprehensively analyse the measured impact of an EQ intervention. Further research to understand this topic is therefore essential.

A larger sample size of professional investors would remain most ideal to this study. The study should be initiated in a similar fashion as the current study, with a descriptive survey questionnaire to be filled out by all participants to establish whether they exhibit any cognitive psychological or emotional biases in their investment decision-making. It is recommended for future research that a sufficient sample size is obtained from which a control group can be selected at random.

An EQ test should be administered to both the control group and the sample group by use of the MSCEIT model (Mayer, Salovey & Caruso, 2004). It is recommended to use the services of a professional individual qualified in psychometrics for this purpose (see Mulder, 2009). The EQ intervention should not be applied to the control group, but only to the sample group. For the sample group it is further recommended that the design of an EQ intervention be

expanded beyond the current study. Recent studies in the South African context envisaged EQ training with positive results in EQ scores after interventions (refer to Crombie, Lombard & Noakes, 2011 and Görgens-Ekermans, Delpont & du Preez, 2015). The intervention should be conducted over a period of time sufficient to enable the sample group to apply the knowledge from the intervention in their professional capacity. After the completion of the EQ intervention, a second MSCEIT should be conducted on both the control group and the sample group to measure the effect (if any) of the EQ intervention on the perceived EQ levels scored in the MSCEIT in comparison to the previous one. The study should conclude with a final descriptive survey on all participants to evaluate the levels of indicative biases in their decision-making.

The results of this research may be able to determine empirically whether the development of emotional intelligence in the workplace for investment professionals would enable them to limit their exposure to cognitive and emotional biases in their investment decision-making, and ultimately contribute to improved investment results.

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## Appendix One: Letter of invitation for research



### **Invitation for research on the factors influencing investment decision-making before and after an informative Emotional Intelligence (EQ) awareness intervention**

Dear reader

You are invited to participate in a research study on the factors influencing investment decision-making before and after an emotional intelligence intervention. **This research project has been approved by the Commerce Faculty Ethics in Research Committee of the University of Cape Town.** The approval letter is attached for your perusal.

The purpose of this study is to better understand how an awareness of the construct of emotional intelligence may influence the decisions made by investment professionals.

If you volunteer to participate in this study, you will be asked to complete the following

1. Complete two survey questionnaires, one at the inception of the study and one at the end of the study. Each questionnaire will take approximately 10 minutes to complete.
2. Participate in reading an informative publication on emotional intelligence, which references key aspects on the subject of emotional intelligence as well as the understanding and the development thereof.

You will need approximately 20 minutes to read the publication.

You will receive the article once you've completed the first survey questionnaire. You will receive your second questionnaire once you've confirmed that you've read the contents of the publication.

Your participation in this study is completely voluntary. You may choose to withdraw from the research at any time.

Should you choose to confirm your participation in this study, you may do so by completing the first questionnaire attached to this letter and/or in the body of the e-mail communication.

To enable the ability to track the responses of your survey questionnaires and the completion of the information brief, you will be asked to identify yourself by means of quoting the last four (4) digits of your mobile telephone number on both questionnaires as a form of identification. All responses will be treated with confidentiality and will only be used for the research purposes of this project. Confidentiality and anonymity is priority and will be honoured in this manner.

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of access to the survey questionnaire results that will be restricted to the researcher(s) only. This research study will not draw any affiliation to yourself and your institution of employment. When publishing any element of this study, confidentiality will be maintained as envisaged in this letter and no identifying information will be disclosed.

Should you have any questions or concerns regarding the research project, please feel free to contact me at [lwsash006@myuct.ac.za](mailto:lwsash006@myuct.ac.za) or [ashwill.ru@gmail.com](mailto:ashwill.ru@gmail.com).

Sincerely,  
Ashwill Lewis (Researcher)

## Appendix Two: Understanding and developing emotional intelligence (Serrat, 2010).



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# Understanding and Developing Emotional Intelligence

Olivier Serrat  
*Asian Development Bank*

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# Understanding and Developing Emotional Intelligence

## **Abstract**

{Excerpt} Emotional intelligence describes an ability, capacity, skill, or self-perceived ability to identify, assess, and manage the emotions of one's self, of others, and of groups. The theory is enjoying considerable support in the literature and has had successful applications in many domains.

The intelligence quotient, or IQ, is a score derived from one of several different standardized tests to measure intelligence. It has been used to assess giftedness, and sometimes underpin recruitment. Many have argued that IQ, or conventional intelligence, is too narrow: some people are academically brilliant yet socially and interpersonally inept. And we know that success does not automatically follow those who possess a high IQ rating.

Wider areas of intelligence enable or dictate how successful we are. Toughness, determination, and vision help. But emotional intelligence, often measured as an emotional intelligence quotient, or EQ, is more and more relevant to important work-related outcomes such as individual performance, organizational productivity, and developing people because its principles provide a new way to understand and assess the behaviors, management styles, attitudes, interpersonal skills, and potential of people. It is an increasingly important consideration in human resource planning, job profiling, recruitment interviewing and selection, learning and development, and client relations and customer service, among others.

## **Keywords**

Asian Development Bank, ADB, poverty, economic growth, sustainability, development

## **Comments**

### **Suggested Citation**

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# Understanding and Developing Emotional Intelligence

By Olivier Serrat

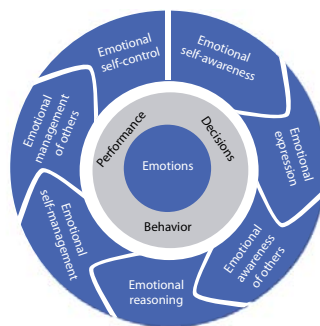
Emotional intelligence describes an ability, capacity, skill, or self-perceived ability to identify, assess, and manage the emotions of one's self, of others, and of groups. The theory is enjoying considerable support in the literature and has had successful applications in many domains.

## Introduction

The intelligence quotient, or IQ, is a score derived from one of several different standardized tests to measure intelligence.<sup>1</sup> It has been used to assess giftedness, and sometimes underpin recruitment. Many have argued that IQ, or conventional intelligence, is too narrow: some people are academically brilliant yet socially and interpersonally inept.<sup>2</sup> And we know that success does not automatically follow those who possess a high IQ rating.



**Figure 1: An Emotional Intelligence Assessment Tool for the Workplace**



Source: Genos. 2009. Available: [www.genos.com.au/home](http://www.genos.com.au/home)

Wider areas of intelligence enable or dictate how successful we are. Toughness, determination, and vision help. But emotional intelligence, often measured as an emotional intelligence quotient, or EQ, is more and more relevant to important work-related outcomes such as individual performance, organizational productivity, and developing people because its principles provide a new way to understand and assess the behaviors, management styles, attitudes, interpersonal skills, and potential of people. It is an increasingly important consideration in human resource planning, job profiling, recruitment interviewing and selection, learning and development, and client relations and customer service, among others.

<sup>1</sup> When psychologists began to think about intelligence they focused attention on cognitive aspects such as memory and problem solving.

<sup>2</sup> As early as 1920, Robert Thorndike used the term "social intelligence" to describe the skill of understanding and managing other people. In the 1940s, David Wechsler defined intelligence as the aggregate or global capacity of the individual to act purposefully, think rationally, and deal effectively with his (or her) environment. In 1943, he submitted that non-intellective abilities are essential for predicting one's ability to succeed in life. Later, in 1983, Howard Gardner wrote about multiple intelligences and proposed that intrapersonal and interpersonal intelligences are as important as the type of intelligence typically measured by IQ and related tests.

## Definition

Emotional intelligence describes the ability, capacity, skill, or self-perceived ability to identify, assess, and manage the emotions of one's self, of others, and of groups. People who possess a high degree of emotional intelligence know themselves very well and are also able to sense the emotions of others. They are affable, resilient, and optimistic. Surprisingly, emotional intelligence is a relatively recent behavioral model: it was not until the publication of *Emotional Intelligence: Why It Can Matter More Than IQ* by Daniel Goleman that the term became popular.<sup>3</sup>

## Benefits

By developing their emotional intelligence individuals can become more productive and successful at what they do, and help others become more productive and successful too. The process and outcomes of emotional intelligence development also contain many elements known to reduce stress—for individuals and therefore organizations—by moderating conflict; promoting understanding and relationships; and fostering stability, continuity, and harmony. Last but not least, it links strongly with concepts of love and spirituality.<sup>4</sup>

*If your emotional abilities aren't in hand, if you don't have self-awareness, if you are not able to manage your distressing emotions, if you can't have empathy and have effective relationships, then no matter how smart you are, you are not going to get very far.*

—Daniel Goleman

## The Model

Individuals have different personalities, wants, needs, and ways of showing their emotions. Navigating through this requires tact and shrewdness—especially if one hopes to succeed in life. This is where emotional intelligence theory helps. In the most generic framework, five domains of emotional intelligence cover together personal (self-awareness, self-regulation, and self-motivation) and social (social awareness and social skills) competences.<sup>5</sup> They are

*Emotions have taught mankind to reason.*  
—Marquis de Vauvenargues

- Self-Awareness
  - (i) Emotional awareness: Recognizing one's emotions and their effects.
  - (ii) Accurate self-assessment: Knowing one's strengths and limits.
  - (iii) Self-confidence: Sureness about one's self-worth and capabilities.
- Self-Regulation
  - (i) Self-control: Managing disruptive emotions and impulses.
  - (ii) Trustworthiness: Maintaining standards of honesty and integrity.
  - (iii) Conscientiousness: Taking responsibility for personal performance.

<sup>3</sup> Emotional intelligence draws from branches of behavioral, emotional, and communications theories. Goleman is the person most commonly associated with it. (But he is by no means the only researcher: the most distant roots of emotional intelligence can be traced to Charles Darwin's early work on the importance of emotional expression for survival and adaptation.) Wayne Leon Payne is credited with first using the term "emotional intelligence" in 1985. Soon after, in 1990, John Mayer and Peter Salovey described that as the ability to monitor one's own and others' feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and actions. In 1997, their four branch model defined emotional intelligence as involving the abilities to perceive, accurately, emotions in oneself and others; use emotions to facilitate thinking; understand the meaning of emotions; and manage emotions. They also tried to develop a way to scientifically measure differences between people's abilities in the area of emotions.

<sup>4</sup> Nor surprisingly, perhaps, Goleman published *Social Intelligence: The New Science of Social Relationships* in 2006 to illuminate theories about attachment, bonding, and the making and remaking of memory as he examined how our brains are wired for altruism, compassion, concern, and rapport. Good relationships nourish us and support our health, while toxic relationships can poison us. He proposed that social intelligence is made up of social awareness (including empathy, attunement, empathic accuracy, and social cognition) and social facility (including synchrony, self-presentation, influence, and concern).

<sup>5</sup> The material that follows comes from the Consortium for Research on Emotional Intelligence in Organizations. 1998. *Emotional Competence Framework*. Available: [www.eiconsortium.org/reports/emotional\\_competence\\_framework.html](http://www.eiconsortium.org/reports/emotional_competence_framework.html)

## Understanding and Developing Emotional Intelligence

- (iv) Adaptability: Flexibility in handling change.
- (v) Innovativeness: Being comfortable with and open to novel ideas and new information.
- Self-Motivation
  - (i) Achievement drive: Striving to improve or meet a standard of excellence.
  - (ii) Commitment: Aligning with the goals of the group or organization.
  - (iii) Initiative: Readiness to act on opportunities.
  - (iv) Optimism: Persistence in pursuing goals despite obstacles and setbacks.
- Social Awareness
  - (i) Empathy: Sensing others' feelings and perspective, and taking an active interest in their concerns.
  - (ii) Service orientation: Anticipating, recognizing, and meeting customers' needs.
  - (iii) Developing others: Sensing what others need in order to develop, and bolstering their abilities.
  - (iv) Leveraging diversity: Cultivating opportunities through diverse people.
  - (v) Political awareness: Reading a group's emotional currents and power relationships.
- Social Skills
  - (i) Influence: Wielding effective tactics for persuasion.
  - (ii) Communication: Sending clear and convincing messages.
  - (iii) Leadership: Inspiring and guiding groups and people.
  - (iv) Change catalyst: Initiating or managing change.
  - (v) Conflict management: Negotiating and resolving disagreements.
  - (vi) Building bonds: Nurturing instrumental relationships.
  - (vii) Collaboration and cooperation: Working with others toward shared goals.
  - (viii) Team capabilities: Creating group synergy in pursuing collective goals.

**Figure 2: The Domains of Emotional Intelligence**



Source: Author.

In brief, the five domains relate to knowing your emotions; managing your emotions; motivating yourself; recognizing and understanding other people's emotions; and managing relationships, i.e., managing the emotions of others.

*I respect the man who knows distinctly what he wishes. The greater part of all mischief in the world arises from the fact that men do not sufficiently understand their own aims. They have undertaken to build a tower, and spend no more labor on the foundation than would be necessary to erect a hut.*

—Johann Wolfgang von Goethe

**Table: The Personal and Social Attributes of Emotional Intelligence**

| Competence             |                          | Attribute                                                                                                                                                                                                                                                                                                                                                          |
|------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Self-Awareness</b>  |                          |                                                                                                                                                                                                                                                                                                                                                                    |
|                        | Emotional Awareness      | Individuals with this competence <ul style="list-style-type: none"> <li>• Know which emotions they are feeling and why;</li> <li>• Realize the links between their feelings and what they think, do, and say;</li> <li>• Recognize how their feelings affect their performance; and</li> <li>• Have a guiding awareness of their values and goals.</li> </ul>      |
|                        | Accurate Self-Assessment | Individuals with this competence are <ul style="list-style-type: none"> <li>• Aware of their strengths and weaknesses;</li> <li>• Reflective, learning from experience;</li> <li>• Open to candid feedback, new perspectives, continuous learning, and self-development; and</li> <li>• Able to show a sense of humor and perspective about themselves.</li> </ul> |
|                        | Self-Confidence          | Individuals with this competence <ul style="list-style-type: none"> <li>• Present themselves with self-assurance and have presence;</li> <li>• Can voice views that are unpopular and go out on a limb for what is right; and</li> <li>• Are decisive and able to make sound decisions despite uncertainties and pressures.</li> </ul>                             |
| <b>Self-Regulation</b> |                          |                                                                                                                                                                                                                                                                                                                                                                    |
|                        | Self-Control             | Individuals with this competence <ul style="list-style-type: none"> <li>• Manage their impulsive feelings and distressing emotions well;</li> <li>• Stay composed, positive, and unflappable even in trying moments; and</li> <li>• Think clearly and stay focused under pressure.</li> </ul>                                                                      |
|                        | Trustworthiness          | Individuals with this competence <ul style="list-style-type: none"> <li>• Act ethically and are above reproach;</li> <li>• Build trust through their reliability and authenticity;</li> <li>• Admit their own mistakes and confront unethical actions in others; and</li> <li>• Take tough, principled stands even if they are unpopular.</li> </ul>               |
|                        | Conscientiousness        | Individuals with this competence <ul style="list-style-type: none"> <li>• Meet commitments and keep promises;</li> <li>• Hold themselves accountable for meeting their objectives; and</li> <li>• Are organized and careful in their work.</li> </ul>                                                                                                              |
|                        | Adaptability             | Individuals with this competence <ul style="list-style-type: none"> <li>• Smoothly handle multiple demands, shifting priorities, and rapid change;</li> <li>• Adapt their responses and tactics to fit fluid circumstances; and</li> <li>• Are flexible in how they see events.</li> </ul>                                                                         |
|                        | Innovativeness           | Individuals with this competence <ul style="list-style-type: none"> <li>• Seek out fresh ideas from a wide variety of sources;</li> <li>• Entertain original solutions to problems;</li> <li>• Generate new ideas; and</li> <li>• Take fresh perspectives and risks in their thinking.</li> </ul>                                                                  |

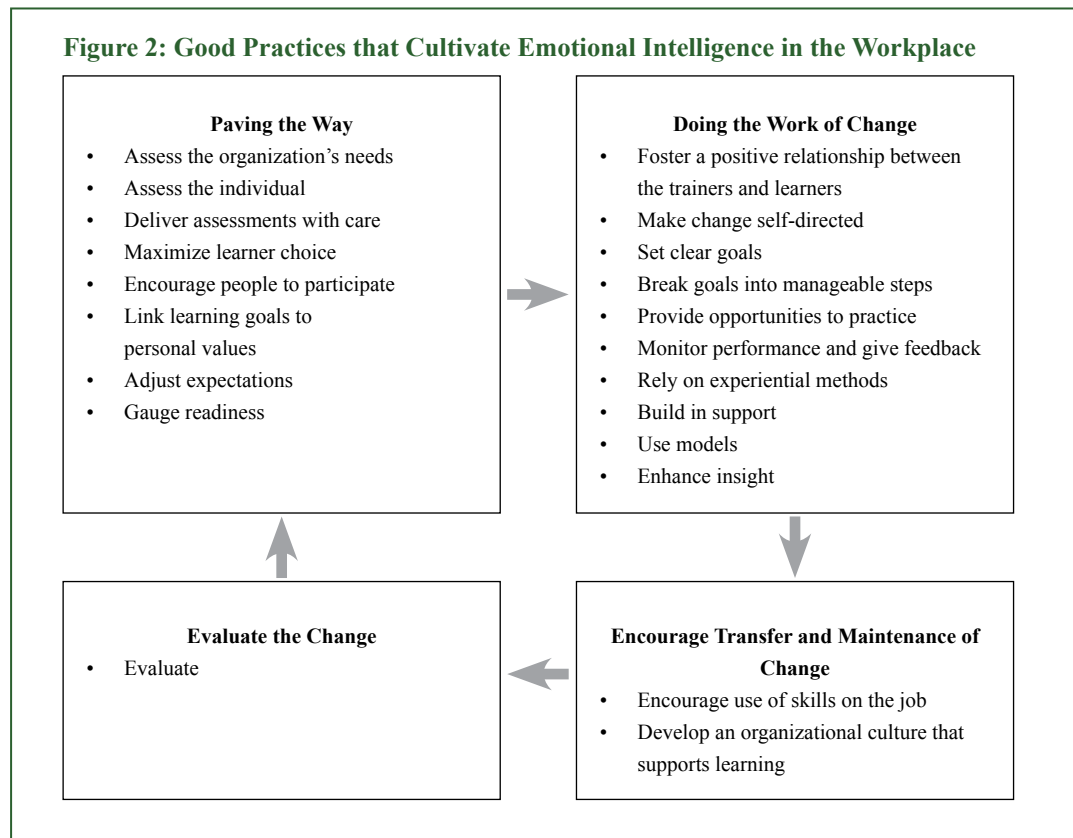
## Understanding and Developing Emotional Intelligence

| Competence              | Attribute            |                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Self-Motivation</b>  |                      |                                                                                                                                                                                                                                                                                                                                                                                                         |
|                         | Achievement Drive    | <p>Individuals with this competence</p> <ul style="list-style-type: none"> <li>• Are results-oriented, with a high drive to meet their objectives and standards;</li> <li>• Set challenging goals and take calculated risks;</li> <li>• Pursue information to reduce uncertainty and find ways to do better; and</li> <li>• Learn how to improve their performance.</li> </ul>                          |
|                         | Commitment           | <p>Individuals with this competence</p> <ul style="list-style-type: none"> <li>• Readily make personal or group sacrifices to meet a larger organizational goal;</li> <li>• Find a sense of purpose in the larger mission;</li> <li>• Use the group's core values in making decisions and clarifying choices; and</li> <li>• Actively seek out opportunities to fulfill the group's mission.</li> </ul> |
|                         | Initiative           | <p>Individuals with this competence</p> <ul style="list-style-type: none"> <li>• Are ready to seize opportunities;</li> <li>• Pursue goals beyond what is required or expected of them;</li> <li>• Cut through red tape and bend the rules when necessary to get the job done; and</li> <li>• Mobilize others through unusual, enterprising efforts.</li> </ul>                                         |
|                         | Optimism             | <p>Individuals with this competence</p> <ul style="list-style-type: none"> <li>• Persist in seeking goals despite obstacles and setbacks;</li> <li>• Operate from hope of success rather than fear of failure; and</li> <li>• See setbacks as due to manageable circumstance rather than a personal flaw.</li> </ul>                                                                                    |
| <b>Social Awareness</b> |                      |                                                                                                                                                                                                                                                                                                                                                                                                         |
|                         | Empathy              | <p>Individuals with this competence</p> <ul style="list-style-type: none"> <li>• Are attentive to emotional cues and listen well;</li> <li>• Show sensitivity and understand others' perspectives; and</li> <li>• Help out based on understanding other people's needs and feelings.</li> </ul>                                                                                                         |
|                         | Service Orientation  | <p>Individuals with this competence</p> <ul style="list-style-type: none"> <li>• Understand customers' needs and match them to services or products;</li> <li>• Seek ways to increase customers' satisfaction and loyalty;</li> <li>• Gladly offer appropriate assistance; and</li> <li>• Grasp a customer's perspective, acting as a trusted advisor.</li> </ul>                                       |
|                         | Developing Others    | <p>Individuals with this competence</p> <ul style="list-style-type: none"> <li>• Acknowledge and reward people's strengths, accomplishments, and development;</li> <li>• Offer useful feedback and identify people's needs for development; and</li> <li>• Mentor, give timely coaching, and offer assignments that challenge and grow a person's skills.</li> </ul>                                    |
|                         | Leveraging Diversity | <p>Individuals with this competence</p> <ul style="list-style-type: none"> <li>• Respect and relate well to people from varied backgrounds;</li> <li>• Understand diverse worldviews and are sensitive to group differences;</li> <li>• See diversity as opportunity, creating an environment where diverse people can thrive; and</li> <li>• Challenge bias and intolerance.</li> </ul>                |
|                         | Political Awareness  | <p>Individuals with this competence</p> <ul style="list-style-type: none"> <li>• Accurately read key power relationships;</li> <li>• Detect crucial social networks;</li> <li>• Understand the forces that shape views and actions of clients, customers, or competitors; and</li> <li>• Accurately read situations and organizational and external realities.</li> </ul>                               |

| Competence           |                               | Attribute                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Social Skills</b> |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                      | Influence                     | <p>Individuals with this competence</p> <ul style="list-style-type: none"> <li>• Are skilled at persuasion;</li> <li>• Fine-tune presentations to appeal to the listener;</li> <li>• Use complex strategies like indirect influence to build consensus and support; and</li> <li>• Orchestrate dramatic events to effectively make a point.</li> </ul>                                                                           |
|                      | Communication                 | <p>Individuals with this competence</p> <ul style="list-style-type: none"> <li>• Are effective in give-and-take, registering emotional cues in attuning their message;</li> <li>• Deal with difficult issues straightforwardly.</li> <li>• Listen well, seek mutual understanding, and welcome sharing of information fully; and</li> <li>• Foster open communication and stay receptive to bad news as well as good.</li> </ul> |
|                      | Leadership                    | <p>Individuals with this competence</p> <ul style="list-style-type: none"> <li>• Articulate and arouse enthusiasm for a shared vision and mission;</li> <li>• Step forward to lead as needed, regardless of position;</li> <li>• Guide the performance of others while holding them accountable; and</li> <li>• Lead by example.</li> </ul>                                                                                      |
|                      | Change Catalyst               | <p>Individuals with this competence</p> <ul style="list-style-type: none"> <li>• Recognize the need for change and remove barriers;</li> <li>• Challenge the status quo to acknowledge the need for change;</li> <li>• Champion the change and enlist others in its pursuit; and</li> <li>• Model the change expected of others.</li> </ul>                                                                                      |
|                      | Conflict Management           | <p>Individuals with this competence</p> <ul style="list-style-type: none"> <li>• Handle difficult people and tense situations with diplomacy and tact;</li> <li>• Spot potential conflict, bring disagreements into the open, and help deescalate;</li> <li>• Encourage debate and open discussion; and</li> <li>• Orchestrate win-win solutions.</li> </ul>                                                                     |
|                      | Building Bonds                | <p>Individuals with this competence</p> <ul style="list-style-type: none"> <li>• Cultivate and maintain extensive informal networks;</li> <li>• Seek out relationships that are mutually beneficial;</li> <li>• Build rapport and keep others in the loop; and</li> <li>• Make and maintain personal friendships among work associates.</li> </ul>                                                                               |
|                      | Collaboration and Cooperation | <p>Individuals with this competence</p> <ul style="list-style-type: none"> <li>• Balance a focus on task with attention to relationships;</li> <li>• Collaborate, sharing plans, information, and resources;</li> <li>• Promote a friendly and cooperative climate; and</li> <li>• Spot and nurture opportunities for collaboration.</li> </ul>                                                                                  |
|                      | Team Capabilities             | <p>Individuals with this competence</p> <ul style="list-style-type: none"> <li>• Model team qualities such as respect, helpfulness, and cooperation;</li> <li>• Draw all members into active and enthusiastic participation;</li> <li>• Build team identity, esprit de corps, and commitment; and</li> <li>• Protect the group and its reputation and share credit.</li> </ul>                                                   |

Source: Developed from Consortium for Research on Emotional Intelligence in Organizations. 1998. *Emotional Competence Framework*. Available: [www.eiconsortium.org/reports/emotional\\_competence\\_framework.html](http://www.eiconsortium.org/reports/emotional_competence_framework.html)





Source: Author.

Note: The four phases correspond to those of the development process, viz., preparation, training, transfer and maintenance, and evaluation. Each is important.

Source: Summarized and developed from Consortium for Research on Emotional Intelligence in Organizations. 1998. *Guidelines for Best Practice*. Available: [www.eiconsortium.org/reports/guidelines.html](http://www.eiconsortium.org/reports/guidelines.html)

## Further Reading

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## For further information

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## Asian Development Bank

ADB's vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people. Despite the region's many successes, it remains home to two thirds of the world's poor: 1.8 billion people who live on less than \$2 a day, with 903 million struggling on less than \$1.25 a day. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.

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Knowledge Solutions are handy, quick reference guides to tools, methods, and approaches that propel development forward and enhance its effects. They are offered as resources to ADB staff. They may also appeal to the development community and people having interest in knowledge and learning.

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