Factors Influencing Individuals' Short-term Investment Intentions

Suné Ferreira-Schenk[1], Zandri Dickason-Koekemoer[1]*, Naveed Hussain Shah[2]

[1]North-West University, South Africa, [2]University of Swabi, Swabi, Pakistan. *Email: 20800274@nwu.ac.za

ABSTRACT

This article aimed to determine what drives investors short-term intention to invest following a more sociological and behavioural approach by including investor personality traits, behavioural finance biases these investors could be subject towards, and their risk tolerance behaviour. Based on the complexity of the variables a multivariate statistical approach was preferred. Therefore, a structural equation model (SEM) was employed and proved to be a good model for the data. Secondary data was obtained from a pre-collected survey by a private investment firm for research purposes. The results indicated that investors who have strong extraversion, agreeableness and openness to experience personality traits will be more likely to invest in short-term investment portfolios. From the nine behavioural finance biases, one bias significantly explained investors short-term investment intentions. Investors who are overconfident in their investment skills tend to invest more in the short-term. It is therefore recommended to portfolio management companies that several sociological and behavioural variables do explain whether investors will be willing to invest in short-term or more long-term investment portfolios.

Keywords: Risk Tolerance, Behavioural Finance Biases, Personality Traits, Short-term Investment
JEL Classifications: A14, G11, G41

1. INTRODUCTION

Short-term investments are perceived to indemnify a happy life because their early return can protect investors from a possible financial crisis. Short-term investment intentions are where investors are willing to invest in products that can be converted into cash in the next 3 to 12 months (Sashikala and Chitramani, 2018). The intention of investors to invest in short-term investment products depend on several psychological factors, to name a few, personality traits, behavioural finance biases and risk tolerance. Various researchers such as Brajša-Žganec et al. (2011), Bakar and Yi (2016) and Aren and Nayman Hamamci (2020) have focused their research on exploring/proving the importance of these factors.

Risk tolerance is a single factor that may determine the suitable asset mixture in a portfolio, which is the optimum regarding risk and return when compared to the requirements of an investor

(Hallahan et al., 2004). The level of risk tolerance is a vital portion of distinct choices about accumulating wealth, retiring, insurance, investing in human capital, and portfolio allocation, together with policy decisions that are reliant on this behaviour (Hanna et al., 2001). A significant facet of the investment decision-making process is to gain an understanding of a client's risk tolerance level as well as risk perception. Risk perception integrates numerous subjective and objective factors that affect how people make judgements about financial products and investment services (Baker and Ricciardi, 2015). Financial risk tolerance is referred to as the amount of uncertainty that an individual is prepared to take when making a financial decision (Grable, 2000).

Cobb-Clark and Schurer (2012) indicated the personality traits from the Big Five Personality Traits framework are grouped as agreeableness, conscientiousness, extraversion, neuroticism, and openness to experience. Typically, individuals that obtained a

high score in the openness to experience category are creative, thrive on innovative ideas and knowledge, are imaginative, open-minded and intelligent (Costa and McCrae, 1992; Becker et al., 2012). Individuals with an extraversion personality trait are social, cooperative, assertive, optimistic, innovation seekers and engaged in the external world rather than their inner world (Becker et al., 2012; Pinjisakikool, 2017; Tauni et al., 2017). Individuals who possess the agreeableness personality trait are helpful, sympathetic, avoid conflicts in arguments, respect, harmonious and have successful social relations (Becker et al., 2012; Tauni et al., 2017; Pinjisakikool, 2017). The conscientiousness personality trait is characterized by careful, responsible, disciplined, goal-oriented and organized (Costa and McCrae, 1992; Becker et al., 2012; Pinjisakikool, 2017). Lastly, individuals having a neuroticism personality trait are emotionally unstable, anxious, and pessimistic and have a lack of self-confidence (Charles and Kasilingam, 2014).

Another influencing factor of investment decision-making is behavioural finance biases that originated as a result of market inefficiencies and investors' irrational behaviour. Behavioural finance is concerned with understanding the reasoning of investors during the investment decision-making process (Chaudhary, 2013). The main behavioural finance biases are anchoring, mental accounting, gambler's fallacy, overconfidence, representativeness bias, loss aversion, self-control, regret aversion, and availability bias (Isidore and Christie, 2019).

The study is exhibiting the association between personality traits, behavioural finance biases and risk tolerance. The objective of this paper is to determine which behavioural finance biases are associated with a certain risk tolerance level and investor personality. Furthermore, the study aims to indicate how these behavioural finance biases can influence investment decisions.

2. LITERATURE REVIEW

Risk tolerance ought to be measured because of emotional risk tolerance and financial risk tolerance, which are directly allied with the financial well-being of an individual (Louw, 2017). Moreover, risk tolerance and risk perception can autonomously contribute to risk-taking behaviour, even though they are related and at times mystified constructs. Risk perception is considered to be a cognitive activity entailing the precise evaluation of internal and external situations, whereby risk tolerance is conceptualised as a personality trait (Roszkwoski and Davey, 2010).

Risk tolerance is defined and utilised in numerous manners. In general, risk tolerance is the willingness to partake in risky behaviour where there is a possibility that the expected outcome may be unfavourable (Irwin, 1993; Davey and Resnik, 2008; Grable, 2017). In the financial industry, risk tolerance can be briefly defined as an individual's attitude towards risk (Sahin and Yilmaz, 2009). Financial risk tolerance is defined by Grable (2000) as the highest level of uncertainty or volatility in investment returns that individuals are prepared to tolerate when making an investment decision. Grable (2017) further stated that financial risk tolerance is the trade-off that an investor is willing to make between the perceived risk and expected return of different investment choices.

This definition is derived from a psychological understanding of the traditional portfolio theory framework (Markowitz, 1952). It views risk tolerance as an attitude towards risk and differentiates this attitudinal variable from the perceptions of risk and return (Weber and Milliman, 1997).

Investors are affected by different behavioural and psychological factors. Ricciardi and Simon (2000) stated that individuals who invest in stocks should implement safeguards to manage mental errors and produce effective investment strategies. Behavioural finance explains how investors are influenced by cognitive errors and emotions and the investment decision-making process (Muhammad, 2009). Muradoglu and Harvey (2012) argue that investors will become conscious of how possible biases may affect their investment intentions and consequently their investment decisions. Therefore, they can avoid such errors when they gained knowledge of behavioural finance. In Table 1 the behavioural finance biases are listed with their descriptions.

Personality can be defined as how a person interrelates, responds and how he/she conduct himself/herself around others and

Table 1: Behavioural finance biases and description

Behavioural finance bias	Description
Representativeness	Individual investors classify new information and make investment decisions based on their perceptions of past experiences or known events
Overconfidence	Individual investors tend to overestimate their investment capabilities
Anchoring	Individual investors tend to rely on a single piece of information when making investment decisions, regardless of the fathomless information available
Gambler's fallacy	Individual investors inaccurately predict financial market movements as they base their investment decisions on future market trends
Availability bias	Individual investors base their investment decisions on the most recently available information
Loss aversion	Individual investors have a greater inclination to avoid losses rather than to achieve gains and therefore, have a tendency to hold onto non-performing investments with the anticipation that investments will produce positive returns in the future
Regret aversion	Individual investors tend to manage situations to avoid feelings of regret or embarrassment of reporting a loss as a result of poor investment decisions
Mental accounting	Individual investors group information regarding particular events and keep track of gains and losses concerning investment decisions in separate mental compartments
Self-control	Individual investors exercise self-control to lessen the temptations of taking bigger financial risks to avoid large financial losses and to protect their investments

Source: Kannadhasan (2006); Byrne and Brooks (2008); Mazzoli and Marinelli (2011); Singh (2012); Pompian (2016); Dickason (2017); Ferreira (2018)

is frequently displayed through measurable traits (Dickason-Koekemoer et al., 2020). It influences the risk-taking attitudes in diverse areas of a person's life (i.e. investment decisions, social and gambling) (Crysel et al., 2013). Personality traits measure the marked changes in typical response to the setting that differentiates one person from another. The stable and sustaining characteristic reaction of the person in dissimilar situations is known as personality traits (Roberts et al., 2006). These characteristics are regarded as personality traits if they seem to sustain in different situations. Thus, personality traits are stable as well as tremendously imperative compositions in the life of people. There has been a wide recognition and acceptance of the personality traits' five factors of classification. They have been applied widely to sociology, management, pedagogy, and psychology (Chen, 2008).

Investors having neuroticism and openness in their personality traits and the emotions of fear and sadness leads to risk aversion (Aren and Nayman Hamamci, 2020). Neuroticism is one of the main factors that explain the positive emotional state of an investor. An investor that is high in neuroticism may be encouraged to make biased decisions. Likewise, investors with low neuroticism tend to take error-free decisions (Charles and Kasilingam, 2014). In a financial context, Oehler et al. (2018) found that investors who are high on neuroticism invest less in foreign equities and debt securities. Additionally, investors who are more neurotic want to circumvent uncertainty, which is correlated with foreign investments. Individuals who are high on neuroticism are likely to overestimate the risk when the market crashes while underestimating the profit under a favourable market. Furthermore, neuroticism was found to have a significant influence on both short-term and long-term investment intentions (Lathif, 2019).

Extraverts frequently react more positively to social situations than introverts, and extraverts are happier than introverts even when they are on their own. Magnus et al. (1993) found that people who scored high in extraversion revealed more favourable life events. Extraversion displayed the strongest correlation to positive events. The correlation between life events and personality appears to be an asymmetrical personality. There may be more correlation between extraversion and good events due to the social nature of extraversion, extraverts may interact positively with others. Otherwise, extraverts may search for positive events to a greater degree due to them having an active system. In any case, extraverts do not appear to have more or less negative events. Among the Big Five personality traits, extraversion has steadily been found to be the most significant personality trait that predicts the usage of Social Networking Sites (Ong et al., 2011). Extraversion is also related to the transmission of disease. Higher levels of disease occurrence are expected to be correlated with extraversion's lower levels (Schaller and Murray, 2008).

Openness to experience refers to the degree to which people are sensitive to aesthetics, think independently, curious, imaginative, open to new experiences and ideas, as well as unconventional perspectives (Kaufman, 2013; Mohan and Mulla, 2013). The trait differentiates among those who are open to variety, novelty, and experiences depth and those who have a preference for the conventional, routine, and accustomed (Simmons, 2011). Individuals with high openness to experience possess greater entrance to a range of perspectives, feelings, ideas, and thoughts (Schwaba et al., 2018). These individuals are more adaptable to varying circumstances that change as a result of the experiences that they encounter. Additionally, people with an openness to experience are more likely to be prepared and able to bring up as well as think about new ideas that have the capability of challenging the status quo (Woods et al., 2018). Even though openness to experience is when an individual becomes more inclined to be creative (Kaufman et al., 2016), at times people face strong situations within an organisation that shape their behaviour. For employees with high openness to experience to display creative behaviour in a work environment, the work environment should allow for and inspire the manifestation of their predisposition to be creative.

Conscientiousness refers to individuals' differences in the tendency to pursue socially pre-arranged standards for impulse control, to direct tasks and goals, to plan and delay pleasure, and to follow set norms and rules (Bogg and Roberts, 2004). Traits that relate to conscientiousness have been revealed to correlate to additional social environmental factors that contribute to healthy outcomes, for example, marital stability, greater religiosity, and high socioeconomic status (Bogg and Roberts, 2004). Conscientiousness is made up of two domains: dependability and achievement. Dependability reflects a component that is more interpersonal and is evident in dutifulness and responsibility traits. However, achievement characterises the capability to work hard and withstand challenges. On the other hand, the aspects of conscientiousness may be categorised into proactive and inhibitive groupings. In this taxonomy, achievement and dutifulness can be grouped under proactive, whereas self-control and orderliness, would be grouped under inhibitive (Roberts et al., 2005).

Agreeableness concentrates on reasons for sustaining positive relationships with others. Agreeableness can allow people to lessen the negative impact associated with conflicts and discuss outcomes that will be beneficial for group living. An individual high on agreeableness can cope with an aggressive adversary during a family conflict and negotiate a solution strategy for the conflict (Jensen-Campbell and Graziano, 2001). Specifically, trait words related to agreeableness comprises forgiving, helpful, and generous. Individuals who possess this trait are more likely to have a close connection with communion and the desire to contribute to something bigger than oneself (Graziano et al., 2007).

Individuals with high agreeableness are more cooperative, polite, sympathetic, and trustworthy. Conversely, high scores on agreeableness may also be dysfunctional. Individuals high on agreeableness may be too dependent. A secure orientation towards agreement and aspiration for social approval in situations that necessitate firmness and individuality for successful resolution would likely raise the need to avoid social conflict and possibly have a contribution towards rating elevation. Therefore, individuals high in agreeableness are inclined to yield additional elevated ratings (Bernardin et al., 2000).

3. METHODOLOGY

3.1. Research Purpose and Design
Given that this study analyses the factors that impact the investment intentions of investors in South Africa, a descriptive quantitative research approach was followed by implementing a positivistic paradigm. A descriptive research design was followed as it is used to explain the personalities, biases, investment intentions and risk behaviours of investors (Malhotra et al., 2017. p. 73). Generally, the objective of a positivist study is to test theory and try to enhance the predictive understanding of the phenomena in question for which in this case was the short-term investment intention of investors (McKinney, 1966. p. 68; Myers, 2013). Positivistic research depends mainly on quantitative research approaches where data encompass numbers and analysis and are conducted by statistical methods rather than verbal methods (Saunders et al., 2009. p. 119). Therefore, for this research article, secondary data analysis was the most appropriate method to achieve the primary research question. Which factors drive investors intention to invest in the short-term?

3.2. Study Area and Sample
For this research article, secondary data from an investment company client base were used where the primary data was sources from an electronic survey sent to the clients. This sample was selected based on purposeful sampling since individuals had to classified as investors based on their investment knowledge and experience. From the 3 000 surveys initially sent out by the investment firm a total of 593 was selected for this study. As a result, the determination of the sample size was consistent with Avkiran (1994) who recommended that empirical, consumer-based studies should use a sample size that ranges from 200 to 500. Given that maximum likelihood estimation, which assumes multivariate normal data, was used to estimate the model, the sample size of 463 individual investors was considered adequate for conducting SEM with IBM SPSS® Amos™, Version 26.

3.3. Survey Design and Procedure Method
3.3.1. Section 1: Short-term investment intentions
A five-item six-point Likert scale was used to determine the intentions of investors to invest in the short-term.

3.3.2. Section 2: Risk tolerance behaviour
To measure the risk tolerance behaviour of investors the survey of consumer finance (SCF) was utilised in the primary data collection. The SCF does not fully incorporate all of the variables of financial risk tolerance (four-item scale) but is a comprehensive measure for investment choice behaviour and experience (Grable and Lytton, 2001).

3.3.3. Section 3: Investor personality traits
In order to measure personality, the Big Five Personality Traits were used as a measuring instrument. Each trait has two extremities (extraversion versus introversion), which summarises several more specific facets (i.e. sociability) (Gosling et al., 2003). The scale used to measure personality is valid and verified. Three subscales form part of the personality measure, known as short-term investment intentions, long-term investment intentions and risk aversion (Mayfield et al., 2008).

3.3.4. Section 4: Behavioural finance biases
Section 4 included a nine-item behavioural finance scale in the primary survey from Ferreira (2019), which included statements aimed to elucidate the biases on which individual investors base their financial decisions. Individuals had to relate their investment decisions to the behavioural finance biases using the six-point Likert scale (1 = strongly disagree, 6 = strongly agree).

This research article conformed with the ethical standards of academic research approved by the North-West University (NWU, 2016). The sample was collected from the nine provinces in South Africa and is, therefore, representative of South African investors. Written gatekeeper permission was obtained to use the secondary data of the investment company. The investment company delivered only the final data set and provided permission for publication on the condition that the name of the company is not revealed.

3.4. Reliability of Scales
The data gathered by the investment company were obtained by using an existing questionnaire that was administered to separate investors from a South African investment company. In order to measure risk tolerance, personality traits and behavioural finance biases of individual investors, a verified questionnaire was used. The questionnaire's reliability and validity will be reported on to ensure the reliability of the secondary data used. Cronbach (1951) exerted that the reliability of a scale is reliant on the number of scaled items, hence an α-value around 0.7 is acceptable in terms of internal reliability consistency for continuous variables. However, in fields where human behaviour is measured and human responses are collected using categorical variables, a value of α of 0.6 or more may still be acceptable (Malhotra et al., 2012). The Cronbach α-value for the personality traits scale was larger than 0.6. The behavioural bias scale obtained a Cronbach α-value of 0.69 also making it reliable. The risk tolerance scale SCF was a validated single question scale that was used and hence reliability could not be performed.

3.5. Data Analysis
Data analysis was conducted after the data were coded through the use of the Statistical Packages of Social Sciences (IBM SPSS) version 25 and AMOS. Based on the categorical data, a structural equation model (SEM) was deemed the best model to represent the data. The SEM, provided multivariate statistical analysis to demonstrate the complex relationship between the dependant and independent variables to facilitate the attainment of the primary objective of this paper. The implementation of a SEM allows for the combination of multiple statistical techniques (factor analysis and regression) and is used to observe structural relationships between variables that can be observed or measured (Hox and Bechger, 1998; Kaplan, 2009). Furthermore, SEM facilitates the analysis of a series of dependent relationships concurrently, while also analysing multiple dependent variables simultaneously (Shook et al., 2004). Furthermore, it also enables researchers to test and investigate the model fitness based on a particular dataset

(Urdan, 2011). Based on the noteworthy benefits above mentioned, a SEM provided the researcher with the most advantageous statistical approach for the model data.

4. RESULTS

This section reports the results of the collected and analysed data on investor intentions to invest in the short-term. This section provides the validity and reliability of the structural model as well as the influence of the variables explaining the dependant variable.

4.1. Structural Model and Model Fit Assessment

The structural model is indicated and laid out for specification in the section below. The section below established the validity of the structural model and the corresponding hypothesised theoretical relationships between the dependant and independent variables (Kline, 2011). To assess the validity of the specified structural model illustrated in Figure 1, the appropriate model fit indices as indicated in Figure 2 were utilised (CMIN/DF, CFI, RMSEA):

The chi-square value was obtained by dividing the minimum sample discrepancy with the degrees of freedom (CMIN/DF).

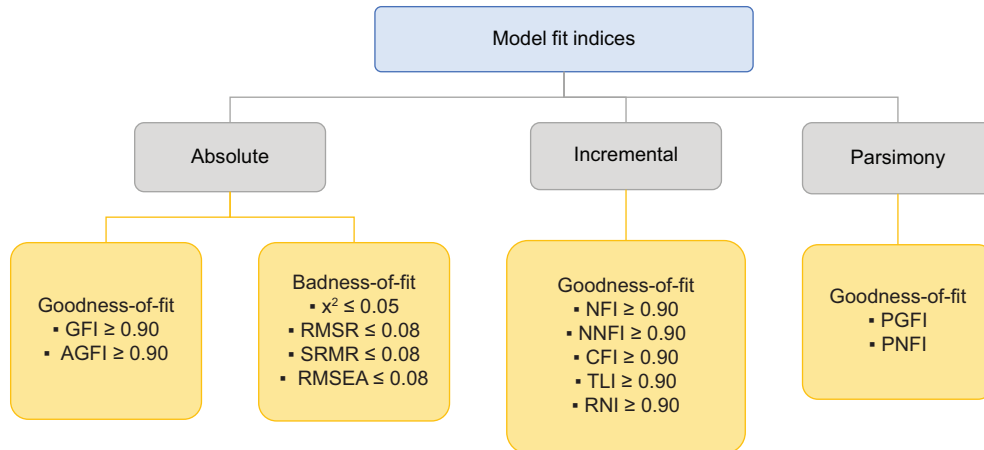**Figure 1:** Determining model fitness for a structural equation model

Figure 1 indicates the structural relationship between the dependant variable short-term investor intentions and investor personality (extraversion, openness and agreeableness) risk tolerance and behavioural finance bias (overconfidence)

Figure 2: Structural model of short-term investment intentions, investor personality traits, risk tolerance and investor behavioural finance biases
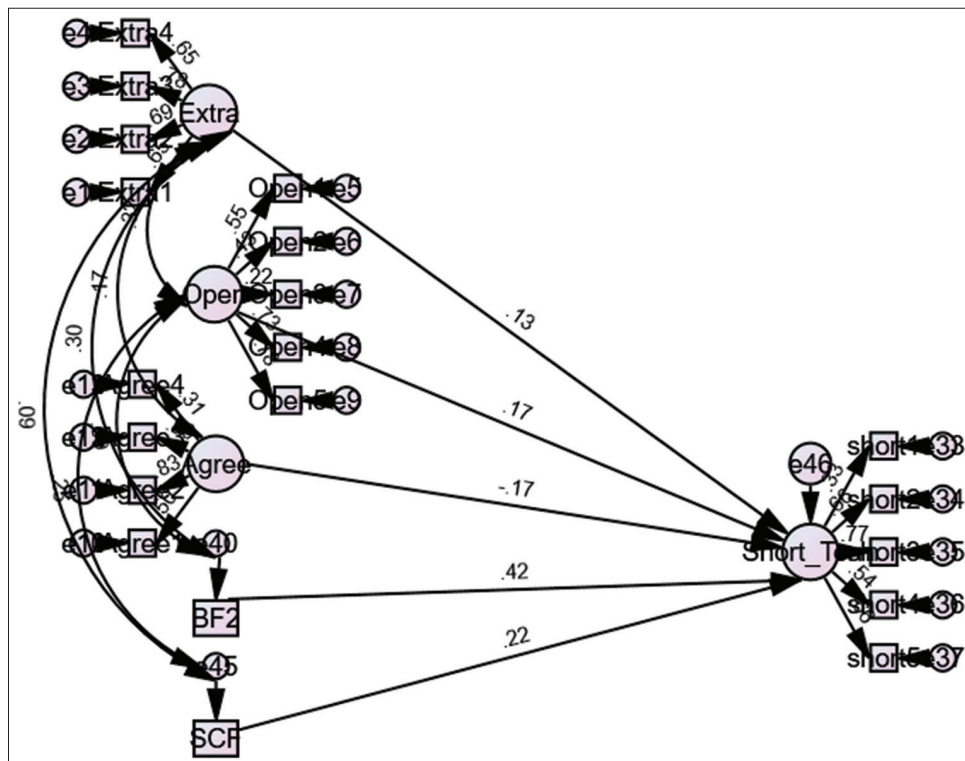

Figure 2 indicates the structural relationship between the dependant variable short-term investor intentions and investor personality (extraversion, openness to experience and agreeableness) risk tolerance and behavioural finance bias (overconfidence)

Mueller (1996) argues that ratios between three and five are still acceptable as a good model fit. The CMIN/DF value of 3.665 represents a good model fit, since a standard for good fit criteria requires values between 3.0 and 5.0 (Mueller, 1996; Plucker, 2003). A comparative fit index (CFI) value of 0.856 was obtained. CFI varies from 0─1, with values closer to 1, preferably greater than 0.90, indicates good model fit (Malhotra et al., 2017). Values that are closer to one indicates a better fit whereas those closer to zero indicated that the data do not fit the model (Mueller, 1996; Hox and Bechger, 1998; Gefen et al., 2000; Malhotra et al., 2012).

Absolute badness-of-fit indices require values that are lower since these measures measure error or deviation, for example, the chi-square test X^2, the root mean square residuals (RMSR the standardised root mean square residuals (SRMSR) and the root mean square error of approximation (RMSEA) (Malhotra et al., 2010. p. 874). The RMSEA value of 0.067, with a 90 per cent confidence interval [0.061; 0.073], indicates a good model fit, as values of 0.08 or less indicate good model fit (Schreiber et al., 2006; Blunch, 2008, Malhotra et al., 2017).

Even though the CFI value was slightly below the ideal value of greater than 0.9, both the CMIN/DF and RMSEA values showed a good model fit. For that reason, the specified structural model is a good fit for the data and proved satisfactory in terms of construct validity and is therefore deemed valid.

Table 2 exemplifies the standardised regression weight results for the specified structural model.

In terms of personality traits, extraversion (standardised coefficient = 0.126), openness (standardised coefficient = 0.167) and agreeableness (standardised coefficient − = 0.167) all contributed significantly (P < 0.05) towards explaining investors intention to invest in the short-term. This concurs with previous research done by Mayfield et al. (2008) and Mankuroane (2020) who revealed that extraversion positively correlate with investor decisions to invest over the short run. Dickason et al. (2020) also found a negative relationship between risk aversion and the extraversion personality trait, this further substantiated the positive relationship which was found between the extraversion personality trait and investors intention to invest in the short-term. The significant standardised coefficient for openness, therefore, implies that investors who are very sociable, active and energetic, tend to invest in portfolios that provide favourable yields in

Table 2: Standardised weights of short-term investment intentions

Constructs			Estimate	P-value
Short-term investment intentions	<---	Extraversion	0.126	0.021**
	<---	Openness	0.167	0.003**
	<---	Agreeableness	-0.167	0.001**
	<---	Overconfidence and over-optimism	0.418	***
	<---	Risk tolerance behaviour	0.223	***

Table 2 indicates the structural model, which indicates the influence of investor personality traits, investor risk tolerance and overconfidence as a behavioural finance bias on investors intention to invest in the short-term ***Significant at 0.01 level; **Significant at 0.05 level *Significant at 0.1 level

short-term (Lathif, 2019). Their research results also indicated a positive association between investors with an openness personality trait and an agreeable personality trait and the intention to invest in the short-term. This indicates that investors that have intentions to invest in the short term are high on openness to experience scale. These results are similar to those of Dickason et al. (2020) who also found a positive relationship between openness, agreeableness and investors intention to invest in the short-term. Therefore, investors who are based on their high level of intellectual curiosity are likely to invest in short-term portfolios. The significant standardised coefficient for agreeableness, therefore, implies that investors who are generous, sympathetic and considerate are likely to invest in short-term portfolios (Lathif, 2019).

Considering behavioural finance, the overconfidence construct (standardised coefficient =0.418) contributed significantly (P < 0.01) towards explaining short-term investment intentions. These results are similar to those of Mankuroane (2020) who had a positive relationship between these variables. Therefore, investors subject to the overconfidence bias are expected to have short-term investment intentions.

Taking into consideration the risk tolerance behaviour variable (SCF), it can be seen from Table 1 that this variable (standardised regression coefficient = 0.223) contributed significantly towards explaining investors intention to invest in the short-term positively at the P < 0.001 level. This is consistent with Mankuroane (2020) who found a positive correlation relationship between investors risk tolerance and their intention to invest in the short run.

Figure 1 illustrates the structural relationship between the dependant variable short-term investor intentions and investor personality (extraversion, openness and agreeableness) risk tolerance behaviour and behavioural finance bias (overconfidence).

5. CONCLUSION AND RECOMMENDATIONS

The main objective of this research article was to analyse the factors that influence the short-term investment intentions in South Africa. Limited research has been done on the factors that could influence investors intentions to invest in short-term and long term investment portfolios. This article aimed to determine what drives investors intention to invest in the short-term following a more sociological and behavioural approach by including investor personality traits, behavioural finance biases these investors could be subject towards and their risk tolerance behaviour. Based on the complexity of the variables a multivariate statistical approach was preferred. Therefore, a SEM was employed and proved to be a good model for the data. The secondary data was obtained from a pre-collected survey by a private investment firm for research purposes.

The results indicated that investors who have strong extraversion, agreeableness and openness to experience personality traits will be more likely to invest in short-term investment portfolios. From the nine behavioural finance biases, one biases significantly explained

investors short-term investment intentions. Investors who are overconfident in their investment skills tend to invest more in the short-term. This would explain some investors who like to actively trade equity stocks. Investors risk tolerance behaviour was also found to significantly explain investors intention to invest in the short-term indicating that higher risk tolerant investors are more likely to invest in the short-term.

The last step in conducting SEM comprises valuable conclusions and recommendations on the structured model for future research. The empirical results provided an overview of the variables that could explain investors intention to invest in the short-term. However, this also provided some opportunity for further recommendations to investment companies. In addition to investor personality traits, investor behavioural finance biases and investor risk tolerance behaviour, the following recommendations for further research can be identified:

- A complete demographic profile could be included to determine whether there is a difference between male and females, age categories or racial groups in their intention to invest in the short term
- Not only a demographic profile but also a psychographic profile could also contribute towards a more comprehensive investment intention profile
- A full behavioural segmentation could be completed to profile investors investment intentions based on all relevant behavioural variables.

Since only a large investment firm representative of the South African population was used it might be worthwhile to test whether the same results will be found in other financial advisory firms as well as smaller broker firms.

It is therefore recommended to portfolio management companies that several sociological and behavioural variables do explain whether investors will be willing to invest in short-term or more long-term investment portfolios.

REFERENCES

Aren, S., Hamamci, H.N. (2020), Relationship between Risk aversion, Risky Investment Intention, Investment Choices: Impact of Personality Traits and Emotion. Kybernetes.

Avkiran, N.K. (1994), Developing an instrument to measure customer service quality in branch banking. International Journal of Bank Marketing, 12(6), 10-18.

Bakar, S., Yi, A.N.C. (2016), The impact of psychological factors on investors' decision making in Malaysian stock market: A case of Klang Valley and Pahang. Procedia Economics and Finance, 35, 319-328.

Baker, H.K., Ricciardi, V. (2015), Understanding behavioral aspects of financial planning and investing. Journal of Financial Planning, 28(3), 22-26.

Becker, A., Deckers, T., Dohmen, T., Falk, A., Kosse, F. (2012), The relationship between economic preferences and psychological personality measures. Annual Review of Economics, 2012, 110922.

Bernardin, H.J., Cooke, D.K., Villanova, P. (2000), Conscientiousness and agreeableness as predictors of rating leniency. Journal of Applied Psychology, 85(2), 232-234.

Blunch, N.J. (2008), Introduction to Structural Equation Modelling Using SPSS and AMOS. London: SAGE.

Bogg, T., Roberts, B.W. (2004), Conscientiousness and health-related behaviors: A meta-analysis of the leading behavioral contributors to mortality. Psychological Bulletin, 130(6), 887-919.

Brajša-Žganec, A., Ivanović, D., Lipovčan, L.K. (2011), Personality traits and social desirability as predictors of subjective well-being. Psychological Topics, 20(2), 261-276.

Byrne, A., Brooks, M. (2008), Behavioral finance: Theories and evidence. Research Foundation Literature Reviews, 3(1), 1-26.

Charles, A., Kasilingam, R. (2014), Do investors' emotions determine their investment personality? Parikalpana: KIIT Journal of Management, 10(2), 45-60.

Chaudhary, A.K. (2013), Impact of behavioral finance in investment decisions and strategies-a fresh approach. International Journal of Management Research and Business Strategy, 2(2), 85-92.

Chen, L.S.L. (2008), Subjective well-being: Evidence from the different personality traits of online game teenager players. Cyberpsychology and Behavior, 11(5), 579-581.

Cobb-Clark, D.A., Schurer, S. (2012), The stability of big-five personality traits. Economics Letters, 115(1), 11-15.

Costa, P.T., McCrae, R.R. (1992), Normal personality assessment in clinical practice: The NEO personality inventory. Psychological Assessment, 1992, 3590.

Crysel, L.C., Crosier, B.S., Webster, G.D. (2013), The dark triad and risk behaviour. Personality and Individual Differences, 54(1), 35-40.

Davey, G., Resnik, P. (2008), Risk Tolerance, Risk Profiling and the Financial Planning Process. Available from: http://www.riskprofiling.com/www_riskp/media/riskprofiling/downloads/pr_rt.pdf. [Last accessed on 2019 Aug 15].

Dickason, Z. (2017), Modelling Investor Behaviour in the South African Context. Vanderbijlpark: North-West University. (Thesis PhD).

Dickason-Koekemoer, Z., Makhubu, S., Ferreira, S.J. (2020), Personality traits and investment decisions in South Africa. Gender and Behaviour, 18(2), 15364-15371.

Ferreira, S.J. (2018), Reputational Risk: Depositor Behaviour in South Africa. Vanderbijlpark: North-West University. (Thesis PhD).

Ferreira, SJ. (2019), Reputational Risk: Depositor Behaviour in South Africa. NWU: Vanderbilpark (PhD Thesis).

Gefen, D., Straub, D., Boudreau, M.C. (2000), Structural equation modelling and regression: guidelines for research practice. Communications of the Association for Information Systems, 4(7), 1-77.

Gosling, S.D., Rentfrow, P.J., Swann, W.B. Jr. (2003), A very brief measure of the big five personality domains. Journal of Research in Personality, 37(6), 504-528.

Grable, J.E. (2000), Financial risk tolerance and additional factors that affect risk-taking in everyday money matters. Journal of Business and Psychology, 14(4), 625-630.

Grable, J.E. (2017), Financial risk tolerance: A psychometric review. Research Foundation Briefs, 4(1), 1-27.

Grable, J.E., Lytton, R.H. (2001), Assessing the concurrent validity of the SCF risk tolerance question. Financial Counseling and Planning, 12(2), 43-53.

Graziano, W.G., Habashi, M.M., Sheese, B.E., Tobin, R.M. (2007), Agreeableness, empathy, and helping: A person situation perspective. Journal of Personality and Social Psychology, 93(4), 583-599.

Hallahan, T.A., Faff, R.W., McKenzie, M.D. (2004), An empirical investigation of personal financial risk tolerance. Financial Services Review, 13(1), 57-78.

Hanna, S.D., Gutter, M.S., Fan, J.X. (2001), A measure of risk tolerance based on economic theory. Association for Financial Counseling and Planning Education, 12(2), 53-60.

Hox, J.J., Bechger, T.M. (1998), An introduction to structural equation modelling. Family Science Review, 11(1), 354-373.

Irwin, C.E. (1993), Adolescence and risk taking: how are they related? In: Bell, N.J., Bell, R.W., editors. Adolescent Risk Taking. Newbury Park, CA: SAGE. p7-28.

Isidore, R., Christie, P. (2019), The relationship between the income and behavioural biases. The Bi-Annual Academic Publication of Universidad ESAN, 24(47), 127-144.

Jensen□Campbell, L.A., Graziano, W.G. (2001), Agreeableness as a moderator of interpersonal conflict. Journal of Personality, 69(2), 323-362.

Kannadhasan, M. (2006), Role of Behavioural Finance in Investment Decisions. Available from: https://www.researchgate.net/profile/manoharan_kannadhasan/publication/265230942_role_of_behavioural_finance_in_investment_decisions/links/55ac75b608ae481aa7ff5a80.pdf. [Last accessed on 2020 Jan 04].

Kaplan, D. (2009), Structural Equation Modeling: Foundations and Extensions. 2nd ed. Thousand Oaks, CA: SAGE.

Kaufman, S.B. (2013), Opening up openness to experience: A four□factor model and relations to creative achievement in the arts and sciences. The Journal of Creative Behavior, 47(4), 233-255.

Kline, R.B. (2011), Principles and Practice of Structural Equation Modeling. 3rd ed. New York, NY: The Guilford Press.

Lathif, A.S. (2019), The impact of investor's personality types on investment intentions. Journal of Composition Theory, 7(15), 1078-1088.

Louw, S. (2017), How to Determine your Risk Tolerance. Finweek. p23.

Magnus, K., Diener, E., Fujita, F., Pavot, W. (1993), Extraversion and neuroticism as predictors of objective life events: A longitudinal analysis. Journal of Personality and Social Psychology, 65(5), 1046-1053.

Malhotra, N.K. (2010), Marketing Research: An Applied Orientation. 6th ed. New York: Pearson Education Limited.

Malhotra, N.K., Birks, D.F., Wills, P. (2012), Marketing Research: An Applied Approach. 4th ed. England: Pearson.

Malhotra, N.K., Nunan, D., Birks, D.F. (2017), Marketing Research: An Applied Approach. 5th ed. New York: Pearson Education Limited.

Mankuroane, E. (2020), Analysing the Factors that Influence Investment Intentions in South Africa. NWU: Vanderbilpark (MCom Dissertation).

Markowitz, H. (1952), Portfolio selection. Journal of Finance, 7(1), 77-91.

Mayfield, C., Perdue, G., Wooten, K. (2008), Investment management and personality type. Financial Services Review, 17(3), 219-236.

Mazzoli, C., Marinelli, N. (2011), The role of risk in the investment decision process: traditional vs behavioural finance. In: Lucarelli, C., Brighetti, G., editors. Risk Tolerance in Financial Decision Making. Hampshire: Palgrave Macmillan. p8-66.

McKinney, J.C. (1966), Constructive Typology and Social Theory. New York: Ardent Media.

Mohan, G., Mulla, Z.R. (2013), Openness to experience and work outcomes: Exploring the moderating effects of conscientiousness and job complexity. Great Lakes Herald, 7(2), 18-36.

Mueller, R.O. (1996), Basic Principles of Structural Equation Modeling: An Introduction to LISREL and EQS. New York: Springer.

Muhammad, N.M.N. (2009), Behavioural finance vs traditional finance. Advanced Management Journal, 2(6), 1-10.

Muradoglu, G., Harvey, N. (2012), Behavioural finance: The role of psychological factors in financial decisions. Review of Behavioural Finance, 4(2), 68-80.

Myers, M.D. (2013), Qualitative Research in Information Systems. http://www.misq.org/skin/frontend/default/misq/MISQD_isworld/index.html. [Last accessed on 2017 May 12].

Oehler, A., Wendt, S., Wedlich, F., Horn, M. (2018), Investors' personality influences investment decisions: Experimental evidence on extraversion and neuroticism. Journal of Behavioral Finance, 19(1), 30-48.

Ong, E.Y., Ang, R.P., Ho, J.C., Lim, J.C., Goh, D.H., Lee, C.S., Chua, A.Y. (2011), Narcissism, extraversion and adolescents' self-presentation on Facebook. Personality and Individual Differences, 50(2), 180-185.

Pinjisakikool, T. (2018), The influence of personality traits on households' financial risk tolerance and financial behaviour. Journal of Interdisciplinary Economics, 30(1), 32-54.

Plucker, J.A. (2003), Exploratory and confirmatory factor analysis in gifted education: Examples with self-concept data. Journal for the Education of the Gifted, 27(1), 20-35.

Pompian, M.M. (2016), Risk profiling through a behavioral finance lens. Research Foundation Briefs, 2(1), 1-26.

Roberts, B.W., Chernyshenko, O.S., Stark, S., Goldberg, L.R. (2005), The structure of conscientiousness: An empirical investigation based on seven major personality questionnaires. Personnel Psychology, 58(1), 103-139.

Roberts, B.W., Walton, K.E., Viechtbauer, W. (2006). Patterns of mean-level change in personality traits across the life course: A meta-analysis of longitudinal studies. Psychological Bulletin, 132(1), 1-25.

Roszkwoski, M.J., Davey, G. (2010), Risk perception and risk tolerance changes attributable to the 2008 economic crisis: A subtle but critical difference. Journal of Financial Service Professionals, 64(4), 42-53.

Sahin, S., Yilmaz, Ö. (2009), Measuring Risk Tolerance: Does the Methodology Matter? Eskişehir, Turkey: Paper Presented at the Anadolu International Conference in Economics. Available from: https://www.researchgate.net/publication/241921171. [Last accessed on 2019 Aug 15].

Sashikala, V., Chitramani, P. (2018), The impact of behavioural factors on investment intention of equity investors. Asian Journal of Management, 9(1), 183-188.

Saunders, M., Lewis, P., Thornhill, A. (2009), Research Methods for Business Students. 5th ed. Harlow: Pearson Education Limited.

Schaller, M., Murray, D.R. (2008), Pathogens, personality, and culture: disease prevalence predicts worldwide variability in sociosexuality, extraversion, and openness to experience. Journal of Personality and Social Psychology, 95(1), 212-221.

Schreiber, J.B., Nora, A., Stage, F.K., Barlow, E.A., King, J. (2006), Reporting structural equation modeling and confirmatory factor analysis results: A review. The Journal of Educational Research, 99(6), 323-338.

Schwaba, T., Luhmann, M., Denissen, J.J., Chung, J.M., Bleidorn, W. (2018), Openness to experience and culture-openness transactions across the lifespan. Journal of Personality and Social Psychology, 115(1), 118-136.

Shook, C.L., Ketchen, J.D., Hult, G.T.M., Kacmar, K.M. (2004), An assessment of the use of structural equation modeling in strategic management research. Strategic Management Journal, 25(4), 397-404.

Simmons, A.L. (2011), The influence of openness to experience and organizational justice on creativity. Creativity Research Journal, 23(1), 9-23.

Singh, S. (2012), Investor irrationality and self-defeating behaviour: Insights from behavioural finance. The Journal of Global Business Management, 8(1), 116-122.

Tauni, M.Z., Rao, Z.U.R., Fang, H., Mirza, S.S., Memon, Z.A., Jebran, K. (2017), Do investor's Big Five personality traits influence the association between information acquisition and stock trading behavior? China Finance Review International, 7(4), 450-477.

Urdan, T.C. (2011), Statistics in Plain English. 3rd ed. New York: Routledge.

Weber, E.U., Milliman, R.A. (1997), Perceived risk attitudes: Relating risk perception to risky choice. Management Science, 43(2), 123-144.

Woods, S., Mustafa, M., Anderson, N.R., Sayer, B. (2018), Innovative work behavior and personality traits: examining the moderating effects of organizational tenure. Journal of Managerial Psychology, 33(1), 29-42.

Zikmund, W.G., Babin, B.J. (2010), Essentials of Marketing Research. 4th ed. Mason, OH: Cengage Learning.