Analysing the Factors Affecting the Long-term Investment Intention of Investors

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ABSTRACT

The intention of investors to invest over a long term is generally aimed toward stable returns and low liquidity. The framework of this article looks at the theoretical concepts, investor characteristics and investor bias in a risk profile that could influence investors' intent to invest over the long term. Based on traditional investment theory, investment companies acknowledge the impact of risk tolerance on the desired investment horizon of investors. However, traditional risk assessments are limited since they omit variables like personality measures and behavioural finance biases which could affect an investor's long-term investment intentions. The unfavourable results might be less accurate investor profiles and an investment portfolio not meeting the required return objective. This study included a sample size of 593 private investors. The results indicated that personality traits (extraversion, openness to experience), risk tolerance, and behavioural biases (overconfidence bias) significantly influence long-term investment intentions. By incorporating the above-mentioned factors, financial planners and institutions can more accurately profile their clients and offer financial products that are more suitable for the investor's needs.

Keywords: Behavioural Finance, Portfolio Management, Investment Intentions, Personality Traits; Risk Tolerance
JEL Classification: A14, G11, G41

1. INTRODUCTION

Baker and Ricciardi (2015) emphasised that a traditional risk profile includes various subjective and objective factors which ultimately impact the decisions of clients regarding financial products and investment services. These traditional risk profiles include demographics, the lifecycle of the investor, liquidity needs, desired investment time horizon and risk tolerance levels. However, the question is what characteristics does a long-term investor have? According to Pompian (2012) and Praja et al. (2020), long-term investing is dependent on individual investor characteristics and investor bias. Theory elucidates that, investor decision-making, primarily appertaining focuses on age, net worth and risk tolerance, as the investor's circumstances and resources continuously change over time (Goodall, 2005; Harty, 2014; Kellerman, 2019; Van den Berg, 2019). A heuristic belief associated with the investor life cycle is that investors become

less willing to tolerate risks as they age (Blitzstein, 2008). Theory ascribes that as investors age, their investment time horizons contract, implying that they would have less disposable time to recover from potential losses if incurred on long-term investments (Marx, 2009). Investors who choose to invest over the long-term take on the additional risk of long-term exposure and forfeit some of their current consumption behaviour for future benefit (Praja et al., 2020).

The overriding function of any investment company is to assist individual investors with their financial and investment planning (Forbes, 2019). To profile an investor, investment companies apply risk assessment tools to determine the risk profile of an investor and facilitate their investment and financial planning. According to Marx et al., (2013) such risk assessment tools (risk tolerance questionnaires) of investment companies include variables like the investors' personal investment objectives (capital accumulation,

capital appreciation or current income), preferences (these could be very personal preferences, i.e not investing in non-sustainable companies) investment time horizon (long-term or short-term), individual risk tolerance (risk aggressive or risk-averse) and risk personality (extrovert or introvert) to establish a risk profile. Nevertheless, some risk profiles are often very limited in the variables that it includes due to the type of risk assessment tools used. Taking into account risk tolerance and behavioural finance biases in risk assessments with other constructs can be advantageous to financial institutions, financial planners and individual investors to incorporate. The result will enable portfolio managers to create an accurate profile of existing and potential clients by way of offering investment products more suitable based on their risk profile.

A critical question for investment firms to ask is what variables may be contributing to changing investment decisions concerning the desired time horizon to invest. Dickason and Ferreira (2018) also previously found a relationship in investor behaviour between behavioural finance, risk tolerance and personality measures but omitted investment intentions over the short or long-term. Other studies in financial and investment management omit personality traits, risk tolerance and behavioural biases on the desired time horizon of investors. General investment and financial planning do reflect the influence of risk tolerance on the behaviour of investors (Van de Venter et al., 2010; Hanna et al., 2011). However, these risk assessments are limited. Omitting these variables during investment may lead to a less accurate investor profile and desired investment horizon. Therefore, this paper aims to answer whether the behavioural intention of private investors' time horizon (over the long-term) is influenced by personality traits, subjective risk tolerance, and behavioural finance biases.

2. LITERATURE REVIEW

The theoretical framework of this article looks at the theoretical concepts, investor characteristics and investor bias in a risk profile that could influence investors' intent to invest over the long term.

Figure 1 indicates the conceptual model of the relationship between investors' long-term investment intentions and personality traits (Neuroticism, Extraversion, Openness to experience, Agreeableness, Conscientiousness), Risk tolerance (subjective risk tolerance) and Behavioural finance biases (Representativeness, Overconfidence, Anchoring, Gambler's fallacy, Availability, Loss aversion, Regret aversion, Mental accounting, Self-control).

2.1. Theoretical and Conceptual Framework
#### 2.1.1. Risk tolerance and investment intentions
Based on traditional investment decision theories, Grable (2000) and Hallahan et al., (2015) have described risk tolerance as the level of risk that an investor will be willing to receive to attain the desired investment objective. It is therefore important to acknowledge the multidimensional risk attitude component inherent in risk tolerance. The investor's willingness to take a certain amount of risk may often be related to but not limited to variables such as their demographics, comprehension of finances and investment, liquidity needs, portfolio size, investment

horizon and perception of market volatility (Sulaiman, 2012). The influence risk tolerance can have on a client's investment decision-making process should be acknowledged when constructing a risk profile. The level of risk tolerance an investor is willing to take is a clear reflection of their decisions regarding accumulating capital, portfolio allocation, and estate planning (Grable, 2000; Hanna et al., 2001). Risk tolerance can be measured by several techniques. These techniques can include several risk assessment tools, for example where behaviour towards risk is analysed using surveys. In these assessment tools, questions are structured in such a manner to estimate the respondents' willingness to accept risk based on a set of risk scenarios (Hanna and Lindamood, 2004). Grable and Lytton (1999) shared that the continuous development and improvement of the survey can enhance the validity and reliability of the instrument which could ultimately lead to a financial risk tolerance assessment instrument for private and public entities.

2.1.2. Behavioural finance biases and behavioural investment intentions
Behavioural finance is another contributing variable toward a deviation in investment decisions throughout financial and investment markets. A phenomenon contrary to the efficient market hypothesis leads to irrational investor behaviour (Dickason, 2017). Behavioural finance encompasses the reasoning for the financial decisions investors tend to make. The foremost behavioural finance biases under the heuristic theory are anchoring, mental accounting, gambler's fallacy, overconfidence, representativeness bias, loss aversion, self-control, regret aversion, and availability bias (Dickason, 2017; Isidore and Christie, 2019). These biases establish the manner various investors understand and react to available information in the market when making financial or investment decisions. However, the reality is contrary to theory, investors rarely behave rationally or predict quantitative models in an unbiased manner, but rather tend to overreact or underreact to market information. Therefore, behavioural finance explains the behaviour of investors which results in market anomalies (Jahanzeb, 2012).

A previous research paper by Ferreira-Schenk et al. (2021) highlighted behavioural finance biases as another factor that can influence the investment decisions of clients. A study conducted by Van den Bergh-Lindeque et al. (2020), and Pak and Mahmood (2015) confirmed that investors act irrationally whereby investment decisions are driven by behavioural finance biases. Singh (2010) stated that behavioural finance biases account for the effect of psychological traits on investment decisions. Moreover, Mankuroane (2020) and Muhammad (2009) highlighted that investor behaviour is not always rational due to investment decisions being influenced by cognitive and psychological factors. Baker and Ricciardi (2014) stated that generally, factors such as personal preference, beliefs and past events influence the investment decisions of investors. These personal preferences, beliefs and past events form behavioural finance biases grouped as the availability bias, regret aversion, overconfidence bias, loss aversion bias, anchoring bias, mental accounting, self-control bias, gambler's fallacy and the representativeness bias.

Figure 1: Conceptual model of the factors influencing investors' intention to invest in the long-term
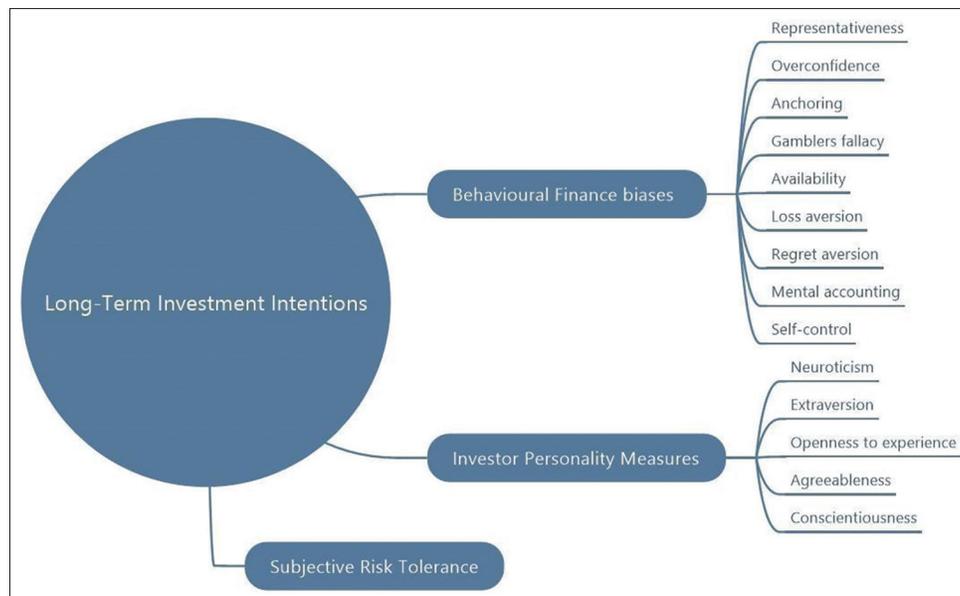
The overconfidence bias groups individuals that are likely overconfident in terms of their market and financial knowledge and skills and ignore risks related to investments (Rehan and Umer, 2017). These investors are identified as investors that tend to underreact to public information and overreact to private signals and trade excessively (Kumar and Goyal, 2015). The loss aversion bias groups investors together that prefer to make more risky financial decisions to minimise losses instead of accounting for possible positive investments (Ainia and Lutfi, 2019). Thus, investors would take on more risks when possible losses may be realised. However, investors tend to be more risk-averse when they face the possibility of making a gain (Kumar and Babu, 2018). Investor decisions are positively and significantly impacted by anchoring (Rehan and Umer, 2017). Anchoring arises when the cognitive decision-making process is controlled by certain information (Furnham and Boo, 2011; Costa et al., 2017). Importantly, Kannadhasan (2006) highlighted that investors expect historical earning trends to continue, which often leads to disappointment as trends change. The availability bias realises when investors make investment decisions and rely solely on new market information inflows to make decisions (Shah et al., 2018). Jain et al. (2015) stated that investors subject to this bias are more likely to concentrate on a certain piece of available information rather than on all available information. This bias results in investors overreacting to results in the market, either positive or negative (Bakar and Yi, 2016).

In the regret aversion bias, previous investment losses experienced in the stock market, investors' instincts prevent them from continuous investments (Beach and Rose, 2005). Moreover, investors are convinced that by holding onto the initially parched stock, no loss occurs until the stock is sold (Seiler et al., 2008). As a result, investors tend to hold onto non-performing stocks in the market to avoid the regret embedded in facing losses, even though bigger losses can be experienced in the future (Etzioni, 2014). Jordan and Kaas (2002) explained the representativeness bias where investors base their judgents on stereotypes or similarities.

Investors take into account the social pressure or the opinions of experts when making decisions (Shah et al., 2018). The mental accounting bias is prevalent when an investor views the investment worth differently when considered as a single asset as compared to when the investment is part of a whole portfolio (Seiler et al., 2012). This bias serves as a reference point to provide gains and loss determination for decision-makers (Ceren and Akkaya, 2013).

Inheritance of personality traits that includes internal conflict among rational and emotional facets is known as self-control (Sadiq et al., 2018). Lucks (2016) highlighted that when an investor lacks self-control he/she may tend to make investment decisions that are contradictory to personal goals for example overspending, procrastinating and under-saving. Another bias, the gambler's fallacy, is explained by Huber et al. (2010) as to where an outcome has remained unchanged but is believed by the investor that the outcome has changed. In an equal, statistically independent event, the fallacy assumes the outcome's current occurrence diminishes the likelihood of possible recurrence (Coleman, 2007; Jayaraj, 2013). The disposition effect explained as when an investor sells winners too early and keeps losers too long, has comparable features to the gambler's fallacy (Huber et al., 2010).

2.1.3. Personality traits and behavioural investment intention
Personality traits are becoming more acknowledged for their influence on economic outcomes such as employment status, income levels (Heineck and Anger, 2010) and wealth creation through investment (Caliendo et al., 2012). These studies found that financial decision-making by investors can be affected by personality traits (Brown and Taylor, 2014). Also, individual personality traits can influence how investments are managed by the investors themselves (Krishnan and Beena, 2009), their spending, as well as the risk tolerance of these investors (Nga and Ken Yien, 2013). The general Big Five personality traits used by many researchers in the financial industry are a reliable measure when analysing financial behaviour (Halama, 2005). This personality domain model comprises five personality traits

namely; neuroticism, extraversion, openness to experience, conscientiousness, and agreeableness (Isik and Üzbe, 2015).

Neuroticism is a personality trait that shows discomfort, dissatisfaction and distress over time. Moreover, neuroticism is typically recognised when an individual is in an emotional and negative state for a long period (Wright et al., 2006). Some common characteristics of neuroticism include anger, irritability, worry and anxiety (Lahey, 2009). Barlow et al. (2014) explained that this personality trait predicts treatment for health anxieties and mental disorders. The origin of neuroticism includes genetic factors which escalate over time and cause an individual to overreact to stress. This personality trait in terms of investors, Oehler et al. (2018) explains that investors tend to deviate from investments in equities and debt securities. Pak and Mahood (2015) highlighted that investors overestimate the risk involved in market crashes and underestimate profits that prevail from favourable market positions. According to Lathif (2019) short-and long-term investment intentions have been influenced by neuroticism.

Previous studies conducted by Crysel et al. (2013) and Pak and Mahmood (2015) opined that the level of extraversion in a certain personality can likely influence how certain individuals make investment decisions. Based on an investment perspective, due to the optimistic character of extraverted investors, they tend to overestimate a gain and underestimate a loss. Therefore, extraverted investors can miss out on investment opportunities that can be profitable. Results from the study conducted by Lathif (2019) confirmed that short-term investment intentions are significantly influenced by extraversion, however, long-term investment intentions were not significantly influenced. On the other hand, individuals that are sensitive and act with their emotions are characterised by the openness to experience personality traits. Taking into account the sensitivity aspect of these individuals, they are usually responsive to feedback obtained in a work environment (George and Zhou, 2001). Lathif (2019) indicated in their research results that individuals with openness to experience personality traits take higher risks which has a positive impact on short-and long-term investment intentions. Moreover, these investors are known to have a preference for complexity, new developments and sensations. Due to the openness of these investors, new market information and frequent adjustments in investment portfolios are accepted with ease (Pak and Mahmood, 2015).

Another personality trait, conscientiousness, is composed of two domains namely dependability and achievement. Ajzen et al. (2012) explained dependability as interpersonal and found in dutifulness and responsibility traits. On the other hand, achievement is associated with hard work and enduring challenges. Individuals who rank high on the conscientiousness spectrum are not scared to express their intentions freely and will be sure to be direct with an investment manager regarding their investment intentions. As a result, high conscientiousness can ultimately affect the final decision of an investor. Conscientious investors are characterised by high confidence, are analytical, are self-disciplined, and have well-formulated investment goals (Pak and Mahmood, 2015; Husnain et al., 2019).

The agreeableness personality trait is based on sustaining positive relationships with other individuals. This trait focuses on reducing negative impacts regarding conflicts between individuals and rather encourages outcomes that are beneficial for both parties. Jensen-Campbell and Graziano (2001) confirmed that individuals that possess a high agreeable personality trait can cope well under conflict and are good negotiators. Typical characteristics associated with agreeableness are forgiving, helpful, and generous (Graziano et al., 2007). Pak and Mahmood (2015) and later Lathif (2019) confirmed a relationship between investments and agreeableness. When an investor with an agreeable personality trait needs to make an investment decision, this investor relies heavily on the opinion of an analyst.

3. METHODOLOGY

This section represents the research design, sampling method and data collection, the research instrument, the applied hypothesis and the statistical analysis implemented.

3.1. Research Design
A positivistic paradigm was implemented using a quantitative research approach to explain the personality traits of investors, the subject level of risk tolerance behaviour as well as the behavioural finance biases. Therefore, secondary data analysis was used to answer the primary research question of this article which was to determine "*Which factors drive investors' intention to invest in the long-term?*"

3.2. Sampling Method and Data Collection
The primary data was sourced from an online questionnaire distributed by a private investment company in South Africa, having one of the largest private investor client bases in the country. The inclusion criteria required investors to be private investors and have invested more than 2 years at the private investment company. The secondary data from the private investment company were then employed in the study as this niche investor group is often difficult to reach by a single individual researcher. The study area and sample were collected from all nine provinces within South Africa. The private investment firm granted the researchers' gatekeeper permission to use the secondary data collected by the private investment firm to profile their investor client base. The investment company sent out 3000 online questionnaires and a final sample of 593 was collected for this paper. The sample was considered adequate for conducting Structural equation modelling (SEM) using statistical software, IBM SPSS® Amos™, Version 27.

3.3. Research Instrument
The questionnaire sent out by the investment company included four sections. Section 1 included the questions about the behavioural intention of investors to invest in the long term. Section 2 used a single validated scale by Grable and Lytton (2001) to measure risk tolerance behaviour. It is acknowledged that the SCF scale omitted some variables known to the financial market but is a comprehensive measure (includes a four-item scale) for measuring individual investment choices, investment behaviour and experience (Grable and Lytton, 2001). The third

section included the personality traits or measures to profile investor personalities and match that with their investment term choices. A validated personality scale developed by Mayfield et al. (2008) was used and comprised; Extraversion, neuroticism, Openness to Experience, Agreeableness and Conscientiousness. Section 4 included the behavioural finance biases that investors might consider when making decisions, where nine biases were included using a nine-item verified behavioural finance scale (using a six-point Likert) constructed by Ferreira (2018). When measuring human behaviour categorically, a Cronbach value of α of 0.6 or more is deemed to be satisfactory (Cronbach, 1951; Malhotra, 2010), therefore the α-value for the personality traits section was larger than 0.6, and the behavioural finance bias scale was also found to be reliable with an α-value of 0.69.

3.4. Data Analysis

Due to the categorical questionnaire and the nature of the secondary data obtained, SEM was considered the most suitable for the dataset. The SEM, allowed for a multivariate statistical analysis which was able to demonstrate the multidimensional existing theoretical relationship of the variables.

4. RESULTS AND DISCUSSION

Table 1 indicated that long-term investment intentions and age had a weak negative linear relationship (−0.129) with a P-value (0.002) that was significant at 1% significance level. Also for the relationship between long-term investment intentions and the highest level of annual income had a weak positive linear relationship (0.089) with a significance value of 0.031 that is significant at 5% significance level. The results reveal that younger investors, with higher annual income and higher levels of education, are more likely to have intentions to invest in the long term. For age, the results are similar to traditional investment theory where older individuals are not willing to make long-term commitments due to their low-risk tolerance and the short life cycle of the investor.

Table 2 below indicates the correlation analysis between personality traits (five personality traits, Risk tolerance behaviour (subjective risk tolerance) and behavioural finance biases (nine biases).

A weak positive relationship (0.284) between extraversion and long-term investment intentions was found which was significant. Therefore, there is a relationship between an extroverted investor personality and the intention to invest in the long term. The highest positive correlation (0.301) was found between openness to experience and long-term investment intention which was significant. For the personality trait of agreeableness, a weak positive and significant association was found (0.094) with

long-term investment intentions. A significant weak positive linear association was found for conscientiousness. The results of this study are similar to the empirical results found by Mayfield et al. (2008) who found a relationship between extraversion, openness to experience, and conscientiousness to invest in the long term. The correlation coefficient between risk tolerance indicated a significant positive linear association. Representativeness bias showed a weak but significant positive linear relationship with investment intentions. Furthermore, another significant positive relationship was found between overconfidence and the dependent variable. A small positive association was found for Gambler's fallacy indicating a relationship between the two variables. For the availability bias, a weak positive correlation was found which also proved to be significant. Self-control indicated a significant positive correlation with investors' long-term investment intentions. Therefore, the correlation analysis indicated a significant relationship between the behavioural finance biases; availability, self-control bias; representativeness, overconfidence bias, gambler's fallacy, and the behavioural intention for long-term investing.

Figure 2 indicates the behavioural intention of investors and the relationship between the latent variables and scales. The overall model proved to be significant were all the other fit indexes (CFI, TLI, CMIN/DF) criteria were satisfactory based on the convention criteria stipulated for conducting SEM. Values ranging between 3.0 and 5.0 are acceptable as that would indicate that the data fit the model well (Mueller, 1996). Therefore, the CMIN/DF value of 3.333 represents a good model fit. The comparative fit index (CFI) value of 0.902 was obtained and indicated a good model fit since it was larger than 0.9 as suggested by Mueller (1996), confirmed later by Gefen et al. (2000) as well as Malhotra et al. (2017). Therefore, the high value of 0.902 indicates a good model fit. For the IFI and the Tucker Lewis index (TLI) values of 0.90 and 0.86 were recorded also indicating a good model fit since values closer to 1.0 indicate a better (Malhotra et al., 2017). Lower values are required for a good model fit when looking at absolute badness-of-fit indices. The RMSEA value of 0.063, [0.056; 0.070] was recorded which suggests a good model fit (RMSEA <0.8) (Schreiber et al., 2006). For the absolute badness-of-fit indices, both the CMIN/DF and RMSEA indicated a good model fit.

Table 3 above, regarding the five personality traits, extraversion (0.173) and openness to experience (0.165) contributed meaningfully towards explaining the behavioural intention of investors to invest over a longer time horizon. These results are similar to previous researchers such as Mayfield et al. (2008) and recently Mankuroane (2020) who found similar results indicating that extraversion has a positive association with long-term investment and may influence their long-term investment decisions. The significantly meaningful coefficient for openness

Table 1: The relationship between long-term investment intentions and demographic variables

Items	Spearman's correlation	Demographic factors		
		Age	Annual income	Highest level of education
Long-term investment intentions	Correlation coefficient	−0.129***	0.070	0.089**
	Sig. (2-tailed)	0.002	0.088	0.031
	n	593	593	593

Table 2: The relationship between long-term investment intentions and independent variables

Influencing constructs	Long-term investment intention
Neuroticism	
P	−0.068
t	0.098
Extraversion	
P	0.284***
t	0.000
Openness to experience	
P	0.301***
t	0.000
Agreeableness	
P	0.094**
t	0.021
Conscientiousness	
P	0.108***
t	0.008
Risk tolerance	
P	0.283***
t	0.000
Representativeness	
P	0.177***
t	0.000
Overconfidence	
P	0.345***
t	0.000
Anchoring	
P	0.034
t	0.409
Gambler's fallacy	
P	0.249***
t	0.000
Availability	
P	0.151***
t	0.000
Loss aversion	
P	0.042
t	0.305
Regret aversion	
P	0.072
t	0.081
Mental accounting	
P	0.071
t	0.084
Self-control	
P	0.185***
t	0.000

***Significant at 0.01 level, **Significant at 0.05

to experience suggests that sociable, active and energetic investors are more likely to invest in portfolios that provide the required return in the long term (Lathif, 2019; Mankuroane, 2020).

Considering the behavioural finance biases, the overconfidence bias (0.249) contributed significantly meaningful toward long-term investment intention. In theory, such investors are prone to underreact to new public information, which can cause these investors to invest over longer periods. Although overconfident investors can be vulnerable to market manipulation, overconfidence will persevere in the financial behavioural intention (Dittrich et al., 2005). Gamblers' fallacy contributed significantly towards explaining investors' intention to invest over the long term. This behavioural finance bias assumes that the occurrence of the current event's outcome will minimize the likelihood of the reoccurrence of the same event i.e. the same event with the same outcome cannot happen twice (Coleman, 2007; Jayaraj, 2013). Hence, investors subject to this bias will likely invest in the long-term where they keep undesired investments for too long and sell good-performing investments too early (Huber et al., 2010). Table 2 indicates that risk tolerance also significantly contributed to the long-term investment intentions of investors (standardised regression coefficient = 0.246). This is consistent with Ferreira-Schenk et al., (2021) who found a positive correlation between investors' behavioural intention to invest in the short run and long run and the gambler's fallacy bias.

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

The last step in completing a SEM includes the composition of significant recommendations for future research on the structured model for long-term investment intention. As mentioned earlier, many risk assessments when doing financial planning omit variables that could be explanatory and are limited by not including the influence of personality traits and behavioural biases on the investment intentions of investors. These current risk assessments are limited which can often lead to a less accurate investor profile, resulting in unfavourable returns. Future models could expand on the demographic, socio-cultural and behavioural variables influencing financial behaviour.

Figure 2: Structural model of long-term behavioural intention to invest in the long-term, investor personality traits, risk tolerance and investor behavioural finance biases
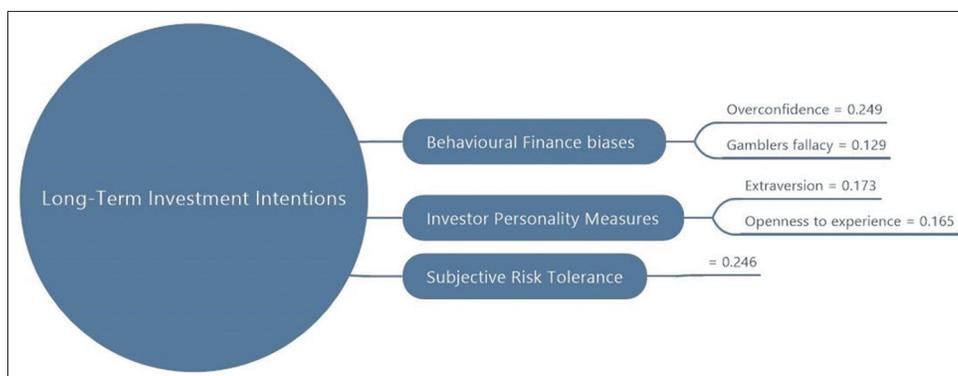
Table 3: Standardised weights: Long-term investment intentions, personality measures, behavioural finance biases and risk tolerance

Constructs			Estimate	P-value
Long-term investment intentions	Personality measures			
	<---	Extraversion	0.173	***
	<---	Openness to experience	0.165	0.002
	Behavioural finance biases			
	<---	Overconfidence	0.249	***
	<---	Gambler's fallacy	0.129	0.004
	Risk tolerance			
	<---	Subjective risk tolerance	0.246	***

***Significant at 0.01 level; *Significant at 0.1 level

5. CONCLUSION

The paper aimed to determine which factors influence the behavioural intention to invest in the long-term considering South African investors where a case of one private investment company was used. Behavioural and physiological factors have previously been omitted from research studies as possible influencing variables on the behavioural intention of investors to invest long term investments. Therefore, this article incorporated personality and behavioural variables such as risk tolerance, personality traits and behavioural finance biases.

Results indicated that extraversion and openness to experience contributed meaningfully toward the behavioural intention for long-term investing. This proved that investors who tend to be extroverts and who are very sociable, tend to invest in portfolios that provide the required return in the long term. Risk tolerance also contributed to investors' long-term investment intentions. Investors who are high risk tolerant will be willing to take on the volatility that goes along with investing in long-term investments and portfolios. Only two behavioural finance biases came out to be statistically meaningful where these included overconfidence and gambler's fallacy. Therefore, it can be suggested that overconfident investors are likely to omit new public information in their investment decisions, which can cause these investors to invest in the long-term and ignore short-term volatility. Although overconfident investors can be vulnerable to market manipulation, their overconfidence will substitute uncertainty. Gamblers' fallacy bias investors might hold onto underperforming investments for too long in the long term and sell overperforming investments too fast. Research in academia and industry in financial and investment planning is limited in terms of the various factors that could influence investment choices in the short-term and long-term. Among these factors are several behavioural and psychological factors. The results from this article could contribute to the risk assessments of investors where the factors considered in financial and investment decision-making are limited. By incorporating these factors into a more comprehensive risk profile during financial planning, financial institutions may offer financial products more suitable for their client's long-term investment needs. Future models could expand on the demographic, socio-cultural and behavioural variables influencing financial behaviour and investment decision-making.

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