

# Unlocking the Psychology of Retail Investor Decision-Making: An Exploratory Factor Analysis in Malaysia

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## **Abstract**

**Purpose:** When the COVID-19 outbreak hit the world in 2020, restrictions across the majority of the world have changed the whole economic climate to almost every country, including Malaysia. The retail investors possess an important role in developing and sustaining investment trading on the Bursa Malaysia. Therefore, this study aim to develop and validate an instruments for assessing psychological factors towards retail investors' decision making in Malaysia.

**Design/Methodology/approach:** In this pilot study, 30 responses from retail investor in Malaysia were collected to be analysed for exploratory factor analysis (EFA) using SPSS. EFA is aimed to analyse and interpret the data by combining factors that were correlated and to determine the underlying dimensions of each construct.

**Findings:** The results recommended that two items were deleted for final instrument. The instruments was fulfilled the requirements in EFA and substantial for measuring the psychological factors toward retail investors' decision making.

**Research limitations:** The current study contains several limitations, the pilot sample is small sample size which may not be able to capture the general picture of retail investors' decision making behaviors.

**Practical limitations:** It is crucial for investors to understand how certain aspects effect psychological factors that ultimately affect their investment decision-making. With the suggestion, this study aims to validate an instrument for assessing psychological factors, therefore retail investors can improve their investment decision making wisely.

**Originality/value:** this study contributed to assessing the psychological biases for improving the investment decision making in order to ensure the investors make their financial decision wisely.

**Keywords** Exploratory Factor Analysis, Retail Investors, Investment Decision Making, Psychological Biases

### Introduction

When the COVID-19 outbreak hit the world in 2020, restrictions across the majority of the world have changed the whole economic climate to almost every country, including Malaysia (Gamal et al., 2021; Liu et al., 2020; Mehmood et al., 2022; Naidu et al., 2021; Ramlan et al., 2021). Despite the challenges, it seems like the Malaysian investment market has reacted successfully. Healthcare, technology, and industrial goods and services were among the top three outstanding industries in Malaysia that garnered retail investors in 2020 (Mehmood et al., 2022; Nasihin et al., 2021). Throughout this period, retail investors serve an important role in Malaysia's investment industry, as they're responsible for generating, expanding, and sustaining overall investment growth (Kiong et al., 2023b). A report from Bursa Malaysia (2020) demonstrated the outcome, stating that retail average trading volume hit an all-time high of RM1.6 billion in 2020, indicating a 236 percent increase over the year prior (Sarkar et al., 2021). Malaysia was positioned as one of the top investment destinations and acknowledged as one of ASEAN's fastest-growing emerging markets (Guo et al., 2022; Kiong et al., 2023a; Ramlan et al., 2021). Retail investors possess an important role in developing and sustaining investment trading on the Bursa Malaysia, particularly when local and international institutional investors sell off their investment holding positions. Based on the data released by the Bursa Malaysia (2020) in Figure 1, during the pandemic era, the volume trading by foreign and local institutions was backed by volume trading from average retail investors. Therefore, the data indicated the significance participation of retail investors in the financial market in Malaysia.

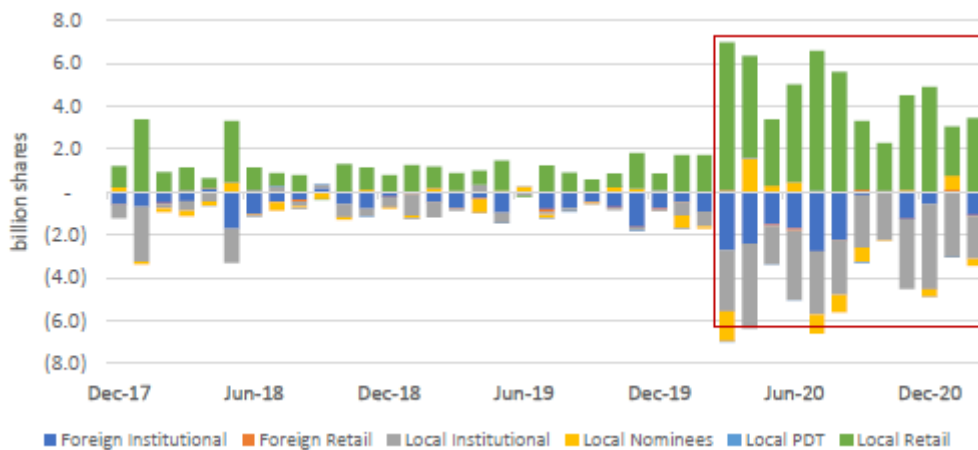


Figure 1: Bursa Malaysia Net Trading Volume by Investor  
 Source: Data Reported by Bursa Malaysia 2020

Given the data reported by Bursa Malaysia, in the situation of post pandemic, the local retail investors still play contribute significance role in financial market by injected RM2.31 billions of net capitals in 2022 compared to RM12.2 billion in 2021. Despite of the retail investors participation fell to an average of 25.7 percent in term of transaction value in 2022 as compared to 34.6 percent transaction value in 2021. However, this transaction value was still greater than before the pandemic five-year average of 18.8 percent. Hence, the contribution of retails investors is very crucial in investment market not only for Malaysia but also for other countries in the world. Many previous studies have been conducted to examined the factors that influence on the individual or retail investors in various country such as Pakistan (Ishfaq et al., 2017; Rasheed et al., 2018; Rehan et al., 2021; Sabir et al., 2019), India (Bondia et al., 2019; Goyal et al., 2021a; Gupta & Saxena, 2019; Mushinada & Veluri, 2019; Prosad et al., 2015; Subash, 2012), China (Bredin & Liu, 2015; Gui et al., 2021) and many more.

## **Psychological Biases**

The decision-making process of retail investors has been addressed in the context of behavioural finance. In reality, behavioural finance contributes an essential part in corporate finance. Behavioural finance is not a new notion in the financial and economic markets. Rasheed et al., (2018) examined the Pakistani stock market on the significance of behavioural factors which impact making investments decisions. Moreover, financial markets being inefficient with regard to concerning behavioural finance, and tactics founded on prior data might create anomalous gains. Investors usually rely on and are impacted by computational shortcuts, decision heuristics, option framing, emotional and expressive elements while making decisions (Sharma & Kumar, 2020). Moreover, Nofsinger (2014) mentioned that psychologists have critiqued the application of rationale in decision-making. Besides, in Indian stock market was indicated signs of irrationality on psychological biases (Jain et al., 2021). Behavioural finance experts have sought to shed light on numerous irrational behaviours demonstrated by investors in financial markets (Chen, G. et al., 2007). Some behavioural finance theories, namely the dual process theory, prospect theory, and many more, have been developed to clarify the human cognitive and emotional boundaries in analysing information and given the time allocated to the decision process (Galavotti et al., 2021). Additionally, it is naive to presume that investors are constantly reasonable, given their limited capacity to regulate themselves, and hence they are influenced by their own assumptions (Adil et al., 2021; Mittal, 2018; Sarkar, 2017). Additionally, Gui et al. (2021) presented strong evidence shown that a significant percentage of investors are bounded rational or naive since they are uninformed of some essential features of the financial product. Moreover, (Ritika & Kishor, 2020) discovered that while making investment decisions, investors do not always act logically. The ability of investors to digest all available information influences their financial activity. Furthermore, Cao et al., (2021) revealed that heuristic, prospect, market, and herding show an explicit and beneficial influence on investment decision-making. Similarly, the previous study conducted by Gavrilakis & Floros, (2021) mentioned that heuristic bias has a significant positive effect on the portfolio creation and degree of performance satisfaction by retail investors. Therefore, it is very important for this study to examine the psychological biases which are anchoring, herding, risk perception, emotional and financial literacy in influencing the decision making among retail investors in Malaysia. Furthermore, the aim of this study is to develop and validate an instrument for assessing psychological factors (anchoring, herding, risk perception, emotional, financial literacy) towards retail investors' decision making in Malaysia.

## **Literature Review**

### ***Theoretical Perspective***

#### ***Prospect theory.***

Kahneman, D., & Tversky, (1979) and Tversky & Kahneman, (1981)) proposed prospect theory as a best practise alternative to widely accepted wisdom. Prospect theory is a theory of ordinary behaviours. It predicts how a person or group of individuals responds in an unexpected situation on general. According to the fundamental argument of behavioural finance, individual choice behaviour often sets off substantially from popular thinking assumptions (Fama, 1970; Malkiel, 2003; Shleifer, 2000). The prospect theory highlights the retail investor's tendency for making investment decisions on earnings and losses rather than a reference point. The prospect theory investigates thoroughly into the way investors respond to risk and uncertainty in decision-making. Ricciardi & Baker (2014) observed that cognitive and emotional biases could shed light on behavioural biases in decision-making (Pompian, 2006; Ricciardi & Baker, 2014). Cognitive biases are heuristics or shortcuts in the opinions of

individuals towards thinking and responding in specific decisions (Logitama et al., 2021; Ricciardi & Baker, 2014; Sajid & Bhardwaj, 2020). Emotional biases, on the opposite, define individuals reacting to something based on their feelings rather than facts. Behavioural biases are the junction of cognitive and emotional biases (Ricciardi & Baker, 2014).

### ***Heuristic theory.***

Tversky & Kahneman (1974) examined the way of cognitive heuristics impact decision-making. Tversky defines heuristic as a method that may be applied to a wide range of circumstances and typically-but not always-results in the correct response. People frequently use heuristics (or shortcuts) to simplify complex problem solving to simpler judgement processes (Kahneman, D., & Tversky, 1979; Tversky & Kahneman, 1974). Behavioural finance gives financial professionals an eyepiece by which they can analyse, grasp, and to prevent various prominent psychological pitfalls, such as emotional and cognitive biases (Gill & Bajwa, 2018).

### **Empirical Perspective**

#### ***Retail investors' decision making***

While referring to deciding on fair or proper decisions, retail investors possess more difficulties than investment managers. This is due to retail investors have lack access to official statistics as well as all important facts for quick, sensible, or reasonable investment decisions, thus they make rash decisions (Lu, 2010; Sohail et al., 2020). As a result, people may (inadvertently) be biased during the decision-making process. This bias can lead to irrational behaviours and bad judgements, especially in the financial sector (Pompian, 2006; Septian et al., 2022). Although general theories and the securities markets presume financial markets as normal, in actuality, emotions, experience, and belief are all likely to have an impact on investing decisions (Narang & Ankit Trivedi, 2021).

#### ***Anchoring***

As an instance of anchoring bias, many investors make incorrect financial judgements, such as buying inexpensive investments or selling overpriced investments (Rehan et al., 2021). Additionally, anchoring bias is a key behavioural bias that affects investor perceived risks in an inevitable and repeating manner, as stated by Saivasan & Lokhande (2022). In the study by Siraji et al. (2021), when investors evaluate the initial value, they likely to make judgements about the possibility of unknown future events or recall previous values or prospective outcomes. Furthermore, Gavrilakis & Floros (2021) stated that anchoring is individual propensity to make investment choices particularly on a specific piece of information.

#### ***Herding***

Herding is a technique wherein the decisions, choices, and substance of other investors affects investors' investment choice and intensity decisions, as well as how rapidly they react to other investors' activities (Goyal et al., 2021b). In other words, herding refers to an investor's propensity to adhere to identical sources of information and perceive the same signals, resulting in a similar strategy and investing decisions (P.H & Uchil, 2019). Moreover, herding is another component in which investors' conduct is impacted by the purchasing and selling behaviours of others, investment choices, investment expectations, and information from credible media. (Gavrilakis & Floros, 2021).

***Risk perception.***

Though investors consider the history or how risk is related to investment, their risk perception shapes their view; as an outcome, an investor's perspective is inseparably connected to their risk perception (Daskalaki & Skiadopoulos, 2016). Investors' risk perception is a mental skill or a sense of judgement that distinguishes individual investors based on the degree of competence and inner feelings assessed in relation to experiences (Bairagi & Chakraborty, 2018). Risk perception among retail investors can possibly be handled if they are knowledgeable with the many parts of their investment behaviour as well as the rationale for the specific perceived dangers (Deb & Singh, 2018; Singh & Bhowal, 2008). Risk perception is the complicated outcome of various factors, including attitudes, personality characteristics, and heuristics (Saivasan & Lokhande, 2022). As a result, various research has revealed that risk perception influences investment decisions and recognised thresholds for risk, where investors feel safe at natural risk regardless of the degree of investment (Siraji et al., 2021).

***Emotional***

According to Jaiyeoba et al. (2020), while both Malaysian individuals and institutional investors are affected by psychological biases, the latter use more extensive measures to avoid such affects during investing choices. Additionally, it can be challenging to overcome emotional biases, therefore investors should develop and use a sound analytical approach while making investing decisions (Akinkoye & Bankole, 2020). Furthermore, Zweig (2007) noted that a probable cause exists if emotion seems to be a barrier in making wise financial decisions.

***Financial literacy***

A knowledge of numerous facets of finance, such as income, money, and investments, can be considered as having of financial literacy (Baker et al., 2019). Likewise, according to Narang & Trivedi (2021), financial literacy is vital for investors to comprehend and be knowledgeable about numerous financial concerns such as investment strategies, maintaining investments, acquiring and utilising securities, and so forth. Additionally, according to Baihaqqy et al. (2020) there is a significant correlation between financial literacy and the ability to make financial decisions.

***Investors' Experience***

Mushinada & Veluri (2019) further shown that an investor's personal attributes, including gender, age, employment, yearly income, and investment experience, had an effect on behavioural biases. Bondia et al. (2019) included such material in another study by delving into investors' personal experiences and identifying some of the indicative reasons of such shifts in investor behaviour. Despite the fact that, an investor examines before making a decision in an experimental controlled scenario, numerous assessments in the real world are based on prior experience, heuristics, and intuitive allure (Nigam et al., 2018).

Therefore, the theoretical framework (Figure 2) was developed for the objective of explaining the relationship between the identified factors that influence psychological biases in retail investors' decision-making (Othman et al., 2023), which studied independent variables such as anchoring, herding, risk perception, emotional, and financial literacy, as well as investors' experience as a mediating role. Initial constructs for each of these dimensions have been developed from existing literature and theories, and then refined using the processes described in this paper.

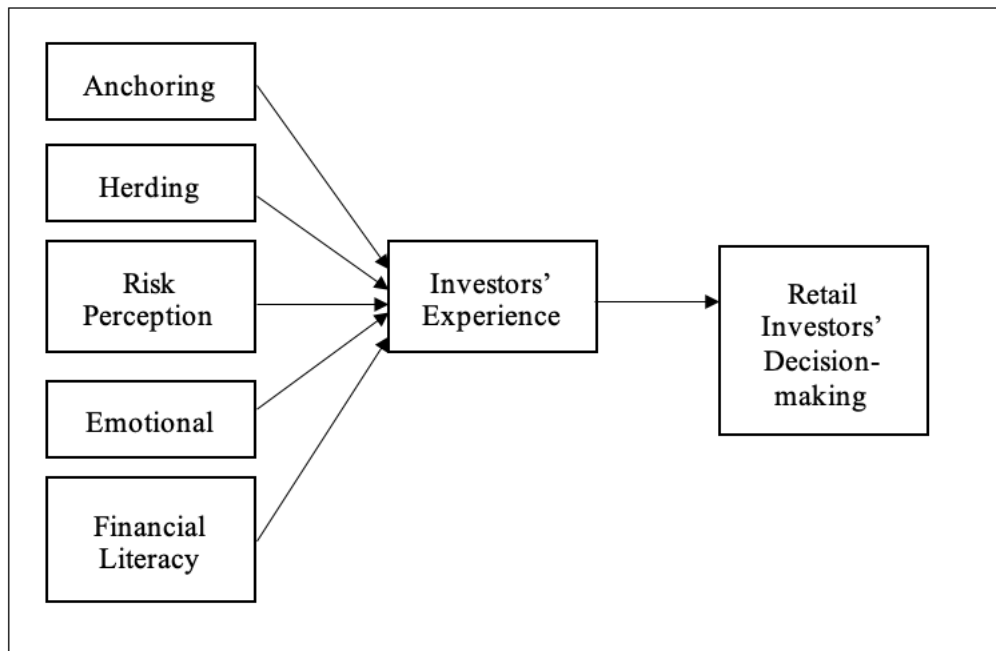


Figure 2: Theoretical Framework

Hence, the aim of this study is to develop and validate an instrument for assessing psychological factors towards retail investors' decision making in Malaysia in which this instrument could be employed to discover the psychological factors effecting the decisions made by retail investors.

### **Methodology**

Data for the pilot study was collected from retail investors in Malaysia. The items for anchoring, herding, risk perception, emotional, financial literacy, investor's experience, and retail investor's decision making were adapted from the literature. A pilot study was carried out to assure the content validity, face validity, and criterion validity and practicality of the instrument before the actual fieldwork. Two academicians with expertise in finance were verified the instruments' content validity. Meanwhile, two qualified financial advisors who frequently provide fund consulting services in Malaysia assessed the criterion validity in order to determine whether the scale items chosen were adequate. Additionally, the instrument's face validity had been verified through requesting a certified translator to transcribe it back-to-back from English into Malay. The comments and feedback from the experts and academicians were taken into consideration and the instrument was revised accordingly before pilot study was conducted from retail investors in Malaysia. In this pilot study, 30 valid responses were collected from the respondents thus satisfied the minimum required sample size of 30 (Johanson & Brooks, 2010). The pilot study data were analysed using exploratory factor analysis (EFA) prior to the actual survey will be carried out. The EFA results are reported in next section.

### **Data Analysis**

#### ***Pilot Test Result***

The relevance of a pilot test in questionnaire survey research design cannot be overstated. Proper questionnaire wording and pretesting are critical for research effectiveness (Cohen et al., 2002). According to Cohen et al., (2002), pilot testing aims to improve the reliability,

validity, and practicality of questionnaires. Piloting entails administering a questionnaire to a representative sample of respondents and using statistical analysis and feedback to limit the number of items to manageable numbers. Cohen et al 2002 mentioned the following statistical aspect are ascertained by analysing the pilot data gathered from the pilot test which are reliability, collinearity, multiple regression, and factor analysis. The need for pilot testing the questionnaire stems from the fact that most of the constructs it contained were adaptations from earlier research. The objective was to determine the validity of the various constructs and the instruments used to measure them. Using factor analysis, normality testing, and reliability analysis, the current study determines factorability and collinearity problems in the data. It becomes necessary to note that in order to fit the context of the current research, the original wordings of the items measuring the relevant constructs were changed.

### ***Descriptive Analysis***

The descriptive analysis summarised the respondents' profile. The demographic information in this study includes gender, age, education level, investment experience, income level, and investment instrument. There are 46.7 percent of respondents are between the ages of 41 to 50, while 26.7% are between the ages of 31 to 40, and 50 and above. 80 percent of the responses were male, while 20 percent were female. Regarding education, the majority of respondents (50%) have a bachelor's degree, while 20 percent have a master's degree, 10 percent have a STPM or diploma, and 20 percent have an SPM. Throughout all data collected, 98.7 percent of respondents were from the private sector, 3.3 percent were self-employed, and there were not any respondents from the public sector. According to income level, majority of respondents (56.7%) were earned monthly income of above RM10,960, while 26.7 percent of respondents have monthly income in range of RM4,850 to RM10,960, remaining 16.7 percent of respondents were in level of monthly income below RM4,849. Furthermore, to understand the general information on respondents' investment, the questions were asked in this regard. For investment allocation, majority of them (53.3%) were allocated their investment around 5 percent to 10 percent from their monthly income, followed by 20 percent of respondents were allocated less than 5 percent, and 16.7 percent of respondents were allocated around 16 percent to 20 percent, as well as 10 percent of respondents were allocated around 11 percent to 15 percent. Finally, for investment instrument, majority 60 percent of respondents were investing into unit trust/mutual fund, while 20 percent of respondents were investing in stock only. Followed by 16.7 percent and 3.3 percent of respondents were investing into unit trust/mutual fund and short-term instruments an also in stock, unit trust/mutual fund and short-term instrument respectively.

### ***Exploratory Factor Analysis***

Exploratory Factor Analysis (EFA) aimed to analyse and interpret the data by combining factors that were correlated. (Zikmund et al., 2010). EFA was used to determine the underlying dimensions of anchoring, herding, risk perception, emotional, financial literacy, investor's experience, and decision making by using the data collected from the pilot study. Related list of items are designed using Likert scale rating with 1 is for strongly disagree, 2 is for disagree, 3 is for neutral, 4 is for agree and 5 as strongly agree ((Abd Razak et al., 2021; Cohen et al., 2002)

### ***Measuring of Sampling Adequacy***

In EFA, firstly the result looked on the value of Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy (MSA) should be more than 0.5. Secondly, as recommended by Hair et al. (2014) Bartlett's test of Sphericity result should be significant at  $p < 0.001$ . In Table 1 summaries

the result of the KMO and Bartlett’s test of sphericity for anchoring, herding, risk perception, emotional, financial literacy, investor’s experience, and decision making.

Table 1: Results of KMO and Bartlett’s Test of Sphericity

Constructs	KMO (>0.5)	Bartlett’s Test of Sphericity (p<0.001)
Anchoring	0.786	0.000
Herding	0.746	0.000
Risk Perception	0.753	0.000
Emotional	0.775	0.000
Financial Literacy	0.838	0.000
Investors’ Experience	0.795	0.000
Retail Investors’ Decision Making	0.795	0.000

Table 1 shows the KMO and Bartlett’s Test of Sphericity statistics from the analysis. As revealed by the result, the KMO value for all the constructs fall within recommended threshold more than 0.5 which the result in range of 0.746 to 0.838 and the Bartlett’s Test result p value is less than 0.001.

### Factor Extraction

Using EFA, the principal component analysis was applied to assess the factor extraction and identify how many factors needed to be preserved and how many items needed to be deleted. Varimax rotation was employed as it is the most widely applied orthogonal factor rotation method and as such can make the factor analysis more understandable (Hair et al., 2014). Table 2 demonstrates that risk perception (RP) construct shows one item has been deleted after the extraction process, thus five items were reduced to four items. The item *‘I feel less risky investing in familiar investment options’* was removed by omission due to not being in the same factor. Whereas, the results also shows that retail investors’ decision making (DM) construct reduced from five to four items. The item *‘I tend to rely on my intuition in making an investment decision.’* subjected to removal since it does not have the same factor as the remainder. Therefore, the initial 36 items in the instrument were revised to 34 items.

Table 2: Item Retention Result of EFA

No.	Construct	Items before EFA	Number of Items Dropped	Number of Items Retained after EFA
1.	Anchoring (A)	5	-	5
2.	Herding (H)	5	-	5
3.	Risk Perception (RP)	5	1	4
4.	Emotional (E)	5	-	5
5.	Financial Literacy (FL)	6	-	6
6.	Investor’s Experience (IE)	5	-	5
7.	Retail Investors’ Decision Making (DM)	5	1	4



Thirdly, the Scree test and Kaiser's criterion are employed as well to identify the number of initial unrotated factors to be generated. The eigenvalues corresponding to each factor indicate the variation that can be explained by those specific linear components. The indication of any factor loadings with values less than 0.4 is disabled (Kaiser, 1970; Shrestha, 2021). Moreover, in factor analysis, notable factors with eigenvalues larger than one are maintained. A significant eigenvalue larger than one suggests that the component explains more common variance than unique variance. Therefore, the EFA result in Table 3 indicates that seven (7) components generated from eigenvalues ( $>1$ ) explained 91.052% of the common variance.

Table 3: Total Variance Explained

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	12.957	38.108	38.108
2	6.321	18.592	56.700
3	4.127	12.139	68.839
4	2.799	8.231	77.070
5	1.775	5.222	82.292
6	1.672	4.917	87.209
7	1.307	3.843	91.052

Cattell (1966) outlined the scree test, a graphical tool for determining the number of components. A scree plot shows the magnitudes of eigenvalues on the vertical axis and the numbers of eigenvalues on the horizontal axis. The eigenvalues are represented on the graph by pixels, with a line connecting subsequent values. While the plot reaches a 'elbow' or levelling, factor extraction should be halted. This test finds the appropriate number of components to extract before the quantity of unique variation begins to dominate the common variance structure (Shrestha, 2021). Hence, the scree plot result (refer Figure 3) shows the highest value started with factor 1 (12.957) followed by Factor 2 (6.321), Factor 3 (4.127), Factor 4 (2.799), Factor 5 (1.775), Factor 6 (1.672) and finally factor 7 (1.307). Therefore, the graph indicated that seven (7) factors has eigenvalue more than 1 based on Kaiser's Rule One (Kaiser, 1970).

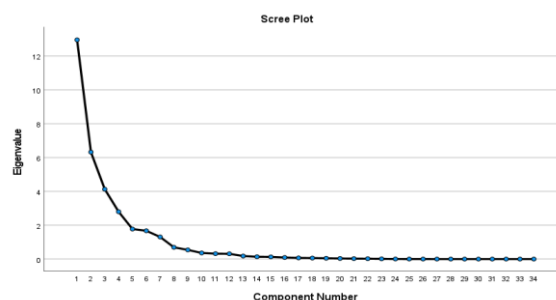


Figure 3: Scree Plot

### Reliability Analysis

The preceding section demonstrated the procedures that are adhered to in order to ascertain the data structure via factor analysis. In order to determine the validity of the questionnaire scales, it is advised that the reliability of the items and their corresponding constructs be investigated after the number of factors to be retained has been determined. In this section, the Cronbach's

Alpha method was used to test the questionnaire scales' reliability. According to Hair et al. (2014), the value of 0.70 and above is the acceptable threshold for scale reliability, however, in exploratory studies, value of 0.60 is also considered acceptable. Similarly, the corrected item total correlation is another significant statistic that is typically looked at in which this indicates the scale's internal consistency and a value of 0.30 or higher is advisable. Table 4 shows the result of reliability analysis. The reported of Cronbach's Alpha demonstrated that all the scales are reliable with anchoring ( $\alpha=0.925$ ), herding ( $\alpha=0.922$ ), risk perception ( $\alpha=0.946$ ), emotional ( $\alpha=0.935$ ), financial literacy ( $\alpha=0.961$ ), investors' experience ( $\alpha=0.928$ ), retail investors' decision making ( $\alpha=0.913$ ). the corrected item-total-correlation in respect of these scale range from 0.713 to 0.935. The result shows that the alpha values and the corrected item-total-correlations of the items satisfy the recommended threshold 0.7 and 0.3 respectively. In general, therefore it was concluded that the questionnaire scales were reliable and could be useful in measuring what it is intended to measure.

Table 4: Reliability Analysis

Constructs	Items Codes	Cronbach's Alpha	Cronbach's alpha if the items deleted	Item-to-total correlation
Anchoring	A1	0.925	0.911	0.825
	A2		0.911	0.825
	A3		0.906	0.847
	A4		0.906	0.847
	A5		0.906	0.847
Herding	H1	0.922	0.905	0.802
	H2		0.904	0.801
	H3		0.892	0.870
	H4		0.901	0.823
	H5		0.922	0.713
Risk Perception	RP1	0.946	0.925	0.901
	RP2		0.953	0.754
	RP3		0.918	0.939
	RP4		0.929	0.879
	RP5		0.942	0.814
Emotional	E1	0.935	0.907	0.896
	E2		0.907	0.896
	E3		0.959	0.614
	E4		0.912	0.888
	E5		0.912	0.888
Financial Literacy	FL1	0.961	0.960	0.830
	FL2		0.961	0.800
	FL3		0.949	0.917
	FL4		0.953	0.876
	FL5		0.948	0.925
	FL6		0.948	0.925

Investors' Experience	IE1	0.928	0.885	0.935
	IE2		0.898	0.873
	IE3		0.934	0.681
	IE4		0.921	0.758
	IE5		0.910	0.813
Retail Investors' Decision Making	DM1	0.913	0.880	0.854
	DM2		0.897	0.784
	DM3		0.911	0.752
	DM4		0.891	0.848
	DM5		0.891	0.803

### Conclusion, Limitations and Recommendations.

The analysis examines the pilot data's factorability, validity, and reliability. When the reliability test was conducted, the analysis of the pilot data showed that all the data for all seven study constructs were reliable, with Cronbach's alpha coefficients ranging from 0.749 to 0.905, all of which are above the suggested threshold. Based on an exploratory factor analysis of the constructs, all the items had good factor loadings on the constructs and Eigen values greater than 1, which allowed them to explain more than 50% of the variance in each of the constructs. Findings from the EFA also recommended the elimination of one item from risk perception construct which is '*I feel less risky investing in familiar investment options*' and one item from decision making construct which is '*I tend to rely on my intuition in making an investment decision.*' The items were eliminated for not being in the same loading factors as others items within the same construct. As a result, the draft questionnaire was changed to take consideration of the result from pilot test findings. This aim of this study was conducted to provide an extensive empirically supported instruments for assessing the psychological factors which are anchoring, herding, risk perception, emotional and financial literacy that influence the retail investors' decision making. Findings from EFA suggested that the instrument was successfully developed to investigate the psychological factors towards retail investors' decision making. In this research, the seven factors have been generated and labeled as (1) anchoring (2) herding (3) risk perception (4) emotional (5) Financial literacy (6) investors' experience and (7) Decision Making. For future work, it is suggested to apply Structural Equation Modelling (SEM) as a confirmatory approach is used to test the measurement model and the path model simultaneously. The current study contains several limitations, including a rather small sample size. This open for the potential for future research into retail investors' decision-making behaviors in relation to investment performance, as well as this study can further explore on investigation of retail investors' attitudes in relation to their decision-making. Finally, more studies have the potential to be conducted to examine the role of other mediators or moderators in the stipulated hypothesis, such as risk tolerance and gender. The scale provided and supported in this study is subject to continuous improvement based on recent discoveries and breakthroughs in the field of behavioral finance. This is to ensure the retail investors are fully aware on the psychological biases that might affect on their investment and financial decisions as retail investors play crucial role in Malaysia investment landscape.

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