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HERDING BEHAVIOUR AND INVESTMENT DECISION IN NIGERIAN STOCK AMONG RETAIL INVESTORS IN SOUTH WEST NIGERIA: DOES RISK TOLERANCE MATTER?

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ABSTRACT

Research evidences have shown recurrent patterns of irrationality, unpredictability, and inadequacy in investors' decision-making processes when faced with market uncertainty. These irrational behaviors may have been the cause of not making the right investment decision. Previous research efforts have identified a number of behavioural factors that may affect investment decision, though results produced over the years have not been consistent. Consequently, literature has suggested risk tolerance as a possible contingent factor in the relationship between behavioural factors and investment decision. Hence, this study examined the effect of herding behaviour on investment decision among retail investors in stock market in South West Nigeria using risk tolerance as a moderator. The study employed sample of 538 investors and cross-sectional research survey design through questionnaire items adapted from past studies. The study employed Partial least square structural equation modeling using Smart PLS 4.0. The results showed that herding behaviour and risk tolerance were significant in predicting investment decision. However, the study discovered that risk tolerance failed to significantly moderate the relationship between herding behaviour and investment decision. In line with the findings of this study, it is concluded that investment decision is affected by herding behaviour and risk tolerance. The study also concluded that risk tolerance failed to significantly moderate the relationship between herding behaviour and investment decision. The study

therefore recommended that retail investors should be more tolerance to risk and imbibe herding attitude but exercise care on every actions of the major participants in the market

Keywords: *Herding Behaviour, Risk Tolerance and Investment Decision*

1.0 INTRODUCTION

Capital market may be seen as a barometer to measure the performance of any economy both in developed and developing economy. The state of a country's stock market is very important to policymakers since it can either support or inhibit economic growth depending on the outcome of the performance (Nwakoby, Manasseh, Abada, Samson, Akamike & Oko, 2021). In other words, the financial health of any nation can easily be mirrored by the activities in the capital market. Because the stock market and the economy have a positive relationship, the increase in stock market performance will have a positive impact on the economy and vice versa (Ghalandari & Ghahremanpour, 2013). Stock market is one of the major determinants of economic growth and development hence, every kind of market disruption is felt automatically by the economy. The capital market stands as a fundamental pillar of any economy. Consequently, the investment decisions made by investors within the capital market hold immense significance. In order to embark on investment in stock market, investors need to make investment decision either to raise their current investment volume or to change investment channels or options. The decision to invest in capital market determines the level of funds that can be mobilized by the market.

Investment decision is the process of choosing between alternative stocks in the market and when to trade by individual investors. Investment decisions encompass a series of processes through which both companies and individuals gather or generate investment choices based on their available resources, including capital, and the information at their disposal (Ardini, Achani & Si, 2023; Ongeta & Nasution, 2021). Making investment decisions involves crucial steps that hold significant importance for investors (Ardini, Achyani & Si, 2023). Making investment decisions is of utmost importance, demanding careful consideration due to the significant, limited, and hard-earned resources at stake. These

decisions are irreversible, entail risks, and carry long-term implications that no investor wishes to face in the event of unfavorable outcomes (Patrick, Tavershima & Eje 2017).

The global financial crisis of 2008 affected all capital market across the globe. As a matter of fact, Nigerian stock market has not recovered fully from the setback occasioned by the world wide crisis. All share index of Nigerian stock market which is one of the key indicators of measuring the health of the market dropped from all time high of 66,121.93 to 29,551.84 accounting for 48.1% lost within a period of ten months. As a result of the 2009 market meltdown, both market operators and professional organizations have branded the Nigerian stock market security market as illiquid. This is because many of the market's stock broking firms accumulated massive debt as a result of the stock market's crash, and they are no longer able to trade as actively as they once did (Akinkoye & Bankole, 2020).

The Nigerian stock market has seen an increase in the number of public companies listed on its securities exchange after Covid-19 pandemic (Nwakoby et al., 2021). As of the first half of 2023, the NGX market experienced a notable surge, with a remarkable 18.93% increase, reaching ₦33.19 trillion compared to the ₦ 27.92 trillion recorded in December 2022. Additionally, in June 2023, the NGX achieved its highest index since 2008, reaching an unprecedented 60,968 points, reflecting an 18.96% uptick from the index observed in December 2022 (PWC, 2023). Oversubscription of shares and other financial instruments revealed a statistically significant growth in individual investors over time in Nigeria. However, herd instinct, and overconfidence have caused some stockholders poor investment performance (Ani & Özarı, 2020). The Nigerian Stock Market hit an all-time high of N13.5 trillion in March 2008 before collapsing as a result of the global catastrophe brought on by the U.S. sub-prime mortgage crisis that spread to other nations. Since then, Nigerian stock market investors' fortunes have been continuously dropping, and it has been noted that the country's equity culture is weak (Ogunlusi & Obademi, 2019; Ogbebor, Siyanbola, Alalade & Awonuga, 2020).

Investors in Nigeria stock market exhibit emotional sentiment in a way that suggest human being are irrational (Evbayiro-osagie & Chijuka, 2021; Ilesanmi et al.,

2022).These irrationality account for inefficiency in the market (Akinkoye & Bankole, 2020). Atif (2014), Kengatharan and Kengatharan (2014), Dhingra and Bhattacharjee (2019), Hallale and Gadekar (2019), Bokhari, Sulehri, Hassan and Aziz (2023) and others in the behavioural finance field argued that emotional aspects can impact investment decisions of individual investors in capital market. This implies that there are irrational investors' behaviours that may influence the decision processes of how to invest, where to invest and when to invest that go beyond rational market factors. A good understanding of emotional factors would guide the investors in making a superior investment decision and try not to repeat the mistakes earlier made in future by carefully making decisions that will lead to optimal investment option (Keswani, Dhinda & Wadhwa, 2019).

Herding is an important influential factor which impact on the decision of investors while trading securities. It is the principles where one investor follows the action of other investors (Pratiwi, Mustaruddin & Wendy, 2020). According Kengatharan and Kengatharan (2014), in the financial market, the herding effect is the propensity of investors' behavior to imitate that of others. In the securities market, herding investors make their investment choices based on the collective actions of buying or selling stocks. On the other hand, informed and rational investors typically avoid blindly following the crowd, contributing to the market's efficiency.

Analysis of the influence of herding behaviour on investing decision indicates lack of consistency (Armansyah, 2022; Marbun et al., 2020; Panjaitan & Simbolon, 2020; Tamara et al., 2022; Warganegara & Warganegara, 2022). As such, in line with Baron and Kenny (1986) who opined that where there is inconsistency in relationship, there is a need to test for moderator. Individual risk tolerance, or how much risk an individual can endure while making an investment, influences investment decision. Considering the volatility of stock market all over the globe, investors risk tolerance cannot be over emphasized. A higher risk tolerance means being more daring and willing to accept risks that may result in losses (Septi et al., 2019). When faced with an ambiguous or uncertain scenario, investors exhibit behavioral biases such herding, regret aversion, loss aversion, overconfidence. Considering the importance of making right decision as

explained above, this study seeks to determine the moderating role of risk tolerance on the relationship between herding behaviour and investment decision among retail investors in the Nigerian Stock market.

2.0 LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1 Concept of investment decision

Investment decision making refers to the thought process of selecting a choice from the available financial investment options (Wanyoike, 2016). It is the decision to invest the available savings in the wide range of investment options available before investors. Investors made decision with various objectives in minds and such objectives include: safety of principal amount, earning good returns, and high liquidity. An investment decision is a cognitive process undertaken by humans, wherein they select a course of action from a range of choices available within the financial market. Investment decisions encompass the choices made by investors regarding the type of investments they pursue and the allocation of their funds into potentially profitable investment avenues (Halim & Pamungkas, 2023).

2.2 Concept of Herding Behaviour

According to Mahmood et al., (2016), herding is defined as the tendency of individuals to follow the actions of others. According to Hirshleifer & Teoh (2003), this is a bias that causes investors to copy one other, resulting in a convergence of action. It is a typical investment bias in which people are influenced by peer pressure to make a majority judgment. One reason for this is people's social nature which leads them to seek mental acceptance and acknowledgement from one another rather than standing out. Herding is characterized by individuals' inclination to mimic the judgments, both rational and irrational, made by others. As a consequence, the herding behavior of investors is identified as a principal factor behind financial bubble. The concept of herding traces its roots back to Kynes (1936), who postulated that humans, being social creatures, possess inherent animal instincts. This fundamental instinct drives individuals to follow the same direction as their peers, akin to animals forming groups,

hence the term "herd.", (Wulandari & Puspawati, 2023).

In the context of investments, herding behavior suggests that investors often base their decisions on the actions of others rather than conducting independent analysis. Investors are inherently social beings, intricately connected to the influence of others. Consequently, the actions of one person are consistently shaped by those of their peers. In the realm of social interactions, when individuals are faced with decision-making, they frequently emulate the behaviors of their counterparts (Rahayu et al., 2021). According to Kengatharan and Kengatharan (2014), in the financial market, the herding effect is the propensity of investors' behavior to imitate that of others. Practitioners usually take the possibility of herding into account since investors rely more on collective knowledge than on private information.

2.3 Concept of risk tolerance

Risk tolerance essentially represents how wiling an individual is to accept the possibility of not achieving certain less crucial objectives in exchange for the potential of not attaining more significant ones. In other words, it reflects a person's readiness to embrace added risk that could diminish their future wealth, which, in turn, might affect their ability to finance essential upcoming financial obligations. Risk tolerance encompasses an investor's holistic, comprehensive, reflective, and long-term readiness to make trade-offs among potential future outcomes, rather than their immediate inclination to take risks (referred to as risk appetite) or their perceptions of risk. It pertains to the extent to which someone can endure assuming financial risk (Davies & Brooks, 2013). Every investor has a unique amount of tolerance (Sorongan, 2022).

2.4 Herding behavior and investment decision

Halim and Pamungkas (2023) carried out a study on the impact of risk perception, overconfidence, and herding behavior on investment decisions in Indonesia. The study's population consisted of all stock investors residing in Riau. Purposive sampling was employed to select 152 respondents. The study utilized Structural Equation Modeling (SEM) with Smart PLS software 3.2.9 to analyse the cross-sectional data collected from the respondents. The findings of the study showed that

overconfidence and herding behavior have significant and positive on investment decisions. The study used purposive sampling wish may introduce selection bias, as it relied on the researcher's judgment to select participants. This could affect the representativeness of the sample and raise questions about the broader applicability of the findings. Current study used random sampling method that would enhance the validity of the study. Wulandari and Puspawati (2023) used TPB (Theory of Planned Behaviour) model to on assess the determinants of investment decisions from a behavioral perspective in Indonesia. Primary data were obtained directly by distributing questionnaires. The study used a purposive sampling method to gather data from 135 respondents through an online survey. The data were analysed using smartPLS. The findings indicate that financial literacy and herding behavior significantly influence investment decisions. Current study examined the effect of herding behaviour on investment decision using a larger sample size. The current study use random sampling method that would enhance the study's validity.

Arriqoh and Zoraya (2024) investigated if herding behavior acts as a mediator in the connection between financial literacy and cryptocurrency investment choices among Gen Z individuals. The research was carried out specifically among crypto investors living in Bengkulu city, with a sample size of 156 individuals. The data collected underwent analysis using the Smart PLS 3 software. The results revealed a notably positive correlation between financial literacy and herding behavior, as well as a positive influence of financial literacy on Gen Z's decisions regarding crypto currency investments. Furthermore, the study found that herding behavior serves as a mediator in the relationship between financial literacy and Gen Z's choices regarding crypto currency investments. The study only considered crypto investors who are Gen Z.

Falah and Haryono (2023) carried out empirical study to examine the effect of herding behaviour, disposition, anchoring, personal income on investment decisions in Indonesia. Purposive sampling may introduce bias, as the participants are selected based on specific criteria. This could limit the generalizability of the findings to the broader Generation Z population. Current study examined the moderating role of risk tolerance of the relationship between herding behaviour and

investment decision in South West Nigeria. Enow (2023) conducted a study aimed to examine the existence of herding behavior in the South African stock market and its potential consequences. By employing the cross-sectional absolute deviation (CSAD) model, the research findings highlighted the occurrence of herding behavior during the COVID-19 pandemic in the JSE (Johannesburg Stock Exchange). Based on the results, it can be inferred that investors might be disregarding crucial fundamental signals and instead, blindly following the actions of other investors. The study only focused on behavioural factor during Covid -19 periods. The study did not examine the effect of herding behaviour on investment decision. Current study considered risk tolerance as a moderating variable on the relationship between loss aversion and investment decision.

Rahim et al., (2024) investigated how the herding effect bias, particularly before and after the Covid-19 pandemic, influenced Pakistani stock investors' choices to invest in Shariah-compliant stocks.. The study utilized systematic sampling techniques, focusing on Shariah-compliant stocks, among Pakistani stock investors due to the study's quantitative nature. The finding of the study showed that herding effect bias notably influences individual investor decisions within the PSX, particularly concerning Shariah-compliant stocks. The focus of the study was specifically on Shariah-compliant stock companies within the Pakistani stock market. Hence the finding cannot be generalized. Current study examined the extent of the effect of herding behaviour on investment decision taking into consideration all categories of investors.

Apochi, Okpanachi and Agbi (2023) conducted a study to explore the moderating impact of financial literacy (FL) on the relationship between prospect factor (PF) and herding effect (HE) on investment performance. The population of interest consisted of 3,706 individuals, and the sample size included active investors residing in Kaduna metropolitan during the first quarter of 2023. The respondents were selected using a convenient sampling technique. The data collected from 460 individual investors was analyzed using the Partial Least Square - Structural Equation Model (PLS-SEM) technique. Additionally, SPSS 20 software was utilized to examine and present the demographic characteristics of the respondents. The results of indicate that both prospect factor and financial

literacy positively and significantly influence individual investment performance. On the other hand, the herding effect was found to have a negative and statistically insignificant influence on individual investment performance. The use of a convenience sampling technique in the study may introduce selection bias, as it relies on the accessibility and willingness of participants. This might affect the generalizability of the findings to the broader population of investors.

Hirdinis (2021) examined the impact of herding behavior and overconfidence on investment decision-making by investors in the Jakarta area of the Indonesia Stock Exchange. The research population includes investors who have invested in instruments listed on the Indonesia Stock Exchange in Jakarta, with the total population size being unknown. The sample consists of 100 investors. For data analysis, the researcher utilized an alternative method of Structural Equation Modeling (SEM) with Wrap PLS 5.0 data processing tools. The study's findings indicate that herding behavior has a significant positive influence on investment decisions made by investors in the Jakarta area. A large sample size may provide better more reliable result hence this study examined the effect of herding behaviour on investment decision with larger sample size and the moderating role of risk tolerance in the relationship. Panjaitan & Simbolon (2020) in their study provide evidence related to the development of financing and herd behaviour in financial crisis arranging investment decision. The methodology employed involves descriptive research, incorporating theories and findings from prior studies as supporting evidence. Finding of the study showed that during financial crises, capital structure significantly influences investment decisions and herd behavior. The study did not examine the influence of herding behaviour on investment decision.

Adielyani and Mawardi (2020) conducted a study to establish the relationship between herding factors, risk tolerance, overconfidence and investment decision. The study only considered direct relationship between herding and investment decision using a small population. Current study examined the role on risk tolerance on the relationship between herding behaviour and investment decision. Herlina, Hadianto, Winarto and Suwarno (2020) investigated the impact of herding factor and overconfidence on investment decision in

Indonesia. The population of the study comprised investors in the investment gallery at Maranatha Christian University. Primary data were collected from 50 investors with the aid of structured questionnaire. Structural equation model (SEM) was used to analyse the data obtained through the use of questionnaire. The finding of the study revealed that only overconfidence has positive impact on investment decision. Current study will examine the effect of herding behaviour on investment decision using a larger sample size. This study also examined the moderating role of risk tolerance on the relationship between herding factors and investment decision.

Dungarwal and Tollawala (2022) assessed the impact of behavioral biases on Investment decision. Primary data was collected through questionnaire administered through survey to 105 investors. Exploratory research design and descriptive research design were used for the study. The findings of the study showed that herding has significant effect on investment decision. Current study considered a larger sample size on the relationship between herding and investment decision using risk tolerance as a moderating variable.

Goel (2014) carried out a study in Delhi on the relationship between herding factor and investment decision. Primary data used for the study was gathered through the use of questionnaire distributed to 124 investors in Indian capital market. The study adopted survey analysis and the result of the analysis showed that herding behaviour is common among investors in stock market and that herding behaviour affect investment decision. The study will consider large sample size to have more robust analysis. The scope of the study is narrowed to a city.

Ghalandari and Ghahremanpour (2013) investigate the effects of market variables and herding effect on investment decision as factors influencing investment decision in Iran. 275 questionnaire responses from investors were used for the final analysis. Structural equation modeling (SEM) with Lisrel software was used for the data analysis. The results confirmed that the herding behavioural has high impact on investment decision making in Iran. However, the study's weakness is that it only considered the effects of market variables and herding effect on investment decision as factors influencing investment decision in Iran. Current study built on this

study by investigating the moderating role of risk tolerance on investment decision.

Pratiwi, Mustaruddin and Wendy (2020) studied the influence of behavioural factor on perceived stock investment decision at Indonesia Stock market. The result of the findings of the study showed that herding factor has no significant effect on investment decision in the stock market. The result of the findings further showed that financial literacy moderates the effect of herding behaviour on the relationship between herding factor and investment decision. Current study examined the moderating effect of risk tolerance on the relationship between herding behaviour and individual investment decision.

Wali, Rehman and Zahid (2022) carried out a comparative study on behavioural factors and investors behaviour between two cities of Islamabad and Peshawar in Pakistan. The major objective of the study was to examine behavioural factors that influence individual investors which in turn affect their investment return in capital market. The result of further showed that there is no significant difference between the behaviour of investors in Islamabad and Peshawar. Current study also introduces risk tolerance as a moderate so as to test the indirect relationship between behavioural factors and investment decision. Ong'eta (2019) carried out a study on behavioural factors and investment decision among teachers that invest in stock market in Nairobi securities exchange. The result of the analysis showed that herding factor, and loss aversion have influence on teachers' investment decision. This current study introduces risk tolerance and a moderating variable between behavioral factors and investment decision in stock market taking return on investment unlike only investment decision consider in the study. Sabir, Mohammad and Shahar (2019) carried out a study in Pakistan Stock Exchange to shows how overconfidence and prior investment experience play a role in herding behavior, with financial literacy acting as a moderator. The study discovered a link between overconfidence and stock market investors' herding behavior. Experience of investors in the past has a positive link with herding behavior, according to the study. It was discovered that financial literacy had a positive impact. The study is limited to the effect of overconfidence and past experience on investor's participation in stock market. The study did not consider the effect of

overconfidence on investment decision. This current study filled the gap by examining the moderating role of risk tolerance in the relationship between overconfidence and investment decision among investors in South West Nigeria

The first null hypothesis is:

H_{O1}: Herding behavior does not significantly affect investment decision

2.5 Risk tolerance and Investment decision

Kanagasabai and Aggarwal (2020) examined the mediating role of risk tolerance in the relationship between financial literacy and investment in India. Primary data was collected through a standardized questionnaire administered to 203 individual investors in Chennai, India. The findings reveal a substantial positive correlation between financial literacy and investment performance, with the level of risk tolerance playing a partial mediating role in this connection. Current study examined the moderating role of risk tolerance in the relationship between behavioural factors and investment decision. Nguyen *et al*., (2016) examined the influence of risk tolerance with a focus on the key expected risk tolerance determinants: client overconfidence bias, trust in the financial advice service, and relationship length with the service.

Results revealed a positive relationship between client risk tolerance and investment decision-making. Similar finding was reported in the study by Septi et al. (2019) who examined the effect of risk perception, risk tolerance, overconfidence, and loss aversion on investment decision. Primary data was collected from 400 investors through the uses questionnaire through the survey method in Surabaya and Jombang, East Java. The analysis technique employed in this study was PLS-SEM, which stands for Partial Least Squares-Structural Equation Model. The results showed that risk tolerance and overconfidence have a significant and positive effect on investment decision making. Current study however will examine the moderating role of risk tolerance in the relationship between overconfidence and investment decision.

Sivasankaran and Selvakrishnan (2023) studied how spouses and family members, along with financial advisors, impact the risk tolerance and investment decision of women employed in the IT industry in

Chennai city. The study gathered primary data using a structured questionnaire administered to 604 women. 442 individuals were deemed appropriate for the study and subsequently analyzed using SPSS. The findings indicated that financial advisors play a crucial role in ensuring reliable and secure investments, particularly concerning risk tolerance and investment choices among women. The study is limited to women investors who worked in information technology sector, hence the study cannot be generalized to all category of investors.

Ferli, Ambarwati & Mutiaraet (2022) examined how financial literacy, investment experience, and risk tolerance impact the investment decisions of students who are part of the Investment Gallery in Jakarta Selatan. Primary data were collected through the use of structure questionnaire A total of 101 samples were included in the study. The findings indicate that risk tolerance has significant effect on investment decisions. The study is only limited to students who are investors hence the study cannot be generalized to all categories of investors. Current study also examined the moderating role of risk tolerance in the relationship between over confidence and investment decision.

Kusumaningrum, Isbanah & Paramita (2019) explored the determinants of investment decisions. This study considers financial literacy and investment experience as independent variables, with risk tolerance acting as an intervening variable and investment decisions as the dependent variable. It adopts a quantitative approach, gathering primary data through questionnaires. The target population comprises novice investors from the Economic faculty. Data analysis was conducted using partial least squares analysis. The findings of the study showed that risk tolerance has no significant effect on investment decision. The study however cannot be generalized as it considered only young investors. Current study however examined the effect of risk tolerance on investment decision taking into consideration all categories of investors.

Ravikumar et al. (2024) examined the factors that influence investors' risk tolerance and how these attitudes influence their decisions in the stock market. The finding of the study showed that risk tolerance has significant effect on investment decision. The study used small sample size. The convenience sampling may introduce bias into the sample, as it may not

represent the entire population accurately. Hence current study examined the effect of risk tolerance on investment decision using a larger sample size wit probability sampling technique.

Praba (2016) examined investors' risk tolerance and assess how socio-demographic factors, including age, gender, marital status, family type, life cycle stage, and income, influence their risk profile.. The research employed a multi-stage random sampling technique, selecting 405 samples for the study. The research findings revealed that a mere 15% of investors exhibited a high level of risk tolerance, while 31% fell into the above-average risk category. In contrast, the majority of retail investors, comprising 45% of the total, were classified as having an average level of risk tolerance. The research indicates that age does not have a notable correlation with the risk profile of retail investors. However, there is a significant relationship between gender and the risk tolerance profile of these investors. The analysis further demonstrates that out of the six socio-demographic factors studied, including age, gender, and income, only age, gender, and income show a significant association with the financial risk tolerance of individual investors. Although the study examined various factors that affect investors risk profile, it did not consider the effect of risk tolerance investment decision.

Onsomu, Kaijage, Aduda and Iraya (2017) carried out and empirical research on investment decision, risk tolerance and demographics in Kenya. The main objective of the study was to see if risk tolerance differed between investors based on their demographics (age, gender, education, and experience), as well as to see if there was a link between risk tolerance and portfolio performance. Data was extracted from a sample of 279 investors. The data were analysed using ANOVA and regression. The study found that female investors, experienced investors, those with little academic degrees, and older investors were more risk tolerant. The study further shoed that that risk tolerance has significant positive effect on portfolio returns. The study also revealed that demographic did not moderate the relationship between risk tolerance and investment return. Current study will examine the moderating role of risk tolerance in the relationship between behavioural factors and investment decision. Mohammadi and Soroushyar (2021) examined the influence of financial literacy on risk tolerance in Iran. Primary data were

collected from a sample of 384 investors through the use of structured questionnaire. The data were analysed using Smart PLS. The findings of the study showed that investment literacy, borrowing literacy, financial risk literacy and earning money literacy have significant positive effect on risk tolerance. Current study will examine the moderating role of risk tolerance in the relationship between behavioural factors and investment decision. Ogalo (2019) examined the effect of risk tolerance and risk aversion on financial performance Bahrain. Primary data were collected were collected from a sample of 450 professionals through the use of questionnaire.

The data were analyses using structural equation modelling. The finding of the study showed that risk tolerance has significant positive effect on financial performance. The study exclusively examined the role and influence of risk tolerance and aversion within retail and financial sector employees, thereby restricting the causal inferences that can be drawn from the findings. Consequently, current study examined the moderating role of risk tolerance in the relationship between behavioral factors and investment decision.

Sutejo, Sumiati, Wijayanti & Ananda (2023) investigated how positive and negative emotions influence investment decisions during the Covid-19 pandemic, with a focus on testing risk tolerance as an intervening variable in Indonesia. Data collection involved distributing questionnaires to 180 young investors using a 5-point Likert scale. Structural equation model (SEM) was used for analysis. The results revealed a significant impact of positive emotions on investment decision-making, with financial risk tolerance mediating this relationship. However, the role of financial risk tolerance in moderating the relationship between negative emotions and investment decisions remains uncertain, and the influence of negative emotions on investment decisions appears insignificant. The study is limited to Generation Z investors, so its findings cannot be generalized to encompass all types of investors.

Baruah and Parikh (2018) examined the effect of risk tolerance on investment decision in Gujarat. Primary data were extracted through the use on questionnaire administered to a sample of 320 investors. The data were analysed by with the use of SPSS (Software Package for Social Science)

20.0. The findings of the study showed that risk tolerance has significant positive effect on investment decision. The sampling units comprised households in the major cities of Gujarat, and investors were enlisted through convenience sampling. Current study examined the moderating role of risk tolerance in the relationship between behavioural factors and investment decision.

Lin (2012) examined the link between investor personality types, risk tolerance, and herding tendency. Data were collected from a sample of 600 investors out of which 389 were analsysed using SEM. The findings revealed that more impulsive investors are not directly prone to herding bias, but rather have a higher risk tolerance. Risk tolerance, on the other hand, would fully mediate between the level of confidence (i.e., confident or nervous) and herding bias for individual investors, but not between the style of action (careful or impulsive). Current study will examine the moderating role of risk tolerance in the relationship between behavioural factors and investment decision.

Leon and Angie (2019) examined the influence of self-esteem, personality, and sensation seeking on financial risk tolerance in Indonesia. Data was collected directly through questionnaire administered to 323 young investors between the age of 16 and 30 years. Data were analsyed with the use of structural equation model (SEM) and the AMOS program. The findings of the study showed that self -esteem has significant positive effect of risk tolerance. The study further showed personality and sensation-seeking have significant positive influences financial risk tolerance. The study is limited to young investors. The current study considered all categories of investors in examining the effect of risk tolerance on investment decisions

Pak and Mahmood (2015) assessed the influence of personality on investment decision and risk tolerance among teachers and students in Kazakhstan. Primary data were collected through the use of questionnaire administered to 160 students. The data were analyzed using SPSS and E Views. The finding of the study showed that extraversion, agreeableness, consciousness, neuroticism and openness to the experience have significant positive effect on risk tolerance behaviour and investment decision. Current study considered the effect of overconfidence on

investment decision with a larger sample size.

Rushdi and Sushma (2019) examined the relationship between behavioural biases and risk tolerance among investors in Indian. Data were collected from a sample of 487 individual investors. The finding of the study revealed that representativeness, overconfidence and gamblers fallacy have link with risk tolerant investors. The findings of the study however showed that loss aversion, mental accounting and herding behaviour have low link with low risk tolerant investors. Current study examined the moderating role of risk tolerance in the relationship between behavioural factors and investment decision

The second null hypothesis is:

H_{O2}: risk tolerance does not significantly affect investment decision

2.6 Risk tolerance as a moderator

Risk tolerance refers to an individual's preparedness to admit the risks associated with their investments, encompassing their reactions and decisions regarding investment risk (Rajeshwaran, 2020). Risk tolerance, according to Grable (2008), refers to a person's willingness to engage in financial behavior in which the outcome is unknown. Investors with a high risk tolerance are more willing to take chances that could result in losses, making them more risk-averse. Investors with a lower risk tolerance, on the other hand, have a lesser tolerance for risk, therefore they choose to avoid risk (Adiputra, 2021)**.** The level of risk exposure that an individual finds comfortable; a determination of the amount of risk a portfolio investor is willing to accept; according to Dalton & Dalton (2004). When making an investing decision, risk is a crucial factor to consider. When the likelihood of real return on investment is smaller than the predicted return, risk exists.

Some investors are risk seekers while some are conservative such that they invest in stocks that are less risky. Every investor has a unique amount of tolerance (Sorongan, 2022). When making an investing decision, risk is a crucial factor to be considered. Investors with high risk tolerance may be more willing to embrace short-term losses in order to pursue long-term gains. In this situation, loss aversion might not have as much of an impact on investment decision. On the other hand, people who are less risk tolerant might be more heavily influenced by loss aversion. They may be more inclined

to sell investments as soon as a decrease is detected in order to limit prospective losses. Tariqul and Khan (2022) observed that investors with high risk tolerance may continue to invest to earn a higher expected return even though they experienced losses in their previous transaction in the stock market.

Similarly, investors who are less risk-tolerant are more susceptible to herding behavior's effects. Since adopting popular financial methods lowers the perceived risk of making individual judgments, investors might feel more at ease in following decision of others. Nath and Pradeep, (2008) in a study discovered that herding behavior among investors is influenced by various factors, including emotions, risk tolerance, fear of missing out. Risk tolerance may in these situations enhance the influence of herding behavior on financial decisions. On the other hand, investors with a high tolerance for risk are more likely to avoid following the herd and make individual investing choices based on their risk tolerance. When investors are less influenced by other people's behavior, they might be more willing to take on greater risks in exchange for possibly greater rewards. In this case, risk tolerance reduces the impact of the herding effects on investment decisions, which in turn reduce the herding effects.

The third null hypothesis is:

H_{O3}: risk tolerance does not significantly moderate the relationship between herding behaviour and investment decision

2.7 Theoretical framework

Simeon Theory of Bounded Rationality

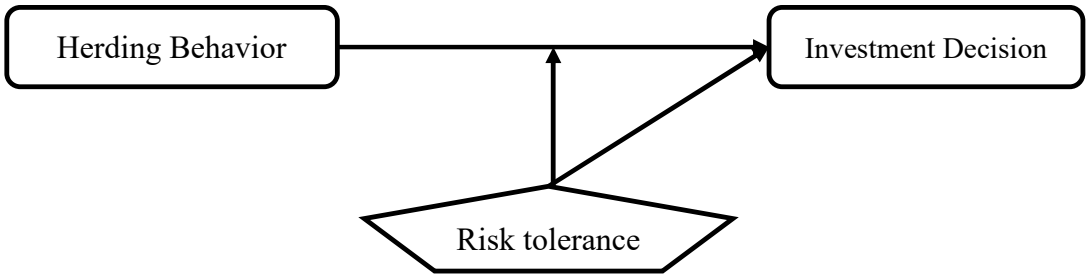
Bounded rationality theory, developed by the American behaviorist Herbert Simon (1916-2001), is a framework for understanding decision-making that acknowledges the inherent cognitive limitations in an individual's knowledge and capacity to act rationally. It suggests that due to lack of information and memory errors people make irrational decision. Bounded rationality is the more realistic theory of the human decision making.

Bounded rationality explains herding behavior as a response to cognitive limitations, where individuals rely on the information and actions of others as a heuristic to make decisions in ambiguous situations. Bounded rationality recognizes that individuals have limited cognitive

resources and rely on heuristics to assess their own competence and the validity of their beliefs. Bounded rationality suggests that overconfidence arises from cognitive biases and the simplification of complex information processing. Individuals may become overconfident to reduce the cognitive effort required to evaluate their own abilities and beliefs.

Herding behavior, where individuals follow the crowd without thoroughly evaluating information, can be seen as a consequence of bounded rationality. People may use the choices of others as a shortcut to decision-making, especially in complex or uncertain situations. Bounded rationality acknowledges that people have difficulty accurately assessing probabilities and potential outcomes. Loss aversion, the tendency to fear losses more than equivalent gains can be tied to Simeon bounded rationality theory. Individuals may overestimate the potential losses due to cognitive biases, leading to suboptimal decisions.

2.8 Research model



3.0 METHODOLOGY

The research design that was employed for the study is cross-sectional. The population of this study comprised of all the retail investors in South West Nigeria. The investors are numerous (infinite) and scattered all over Nigeria. This mean the actual number of individual investors in Nigeria is not known, thus the population here is treated as infinite. All investors in South West Nigeria make up the research's study population. In the Nigerian capital market at the moment, there are roughly three million investors (Chiemeka, 2019). Scales were adapted to measure the

variables of the study. In order to measure herding behaviour, this study adapted four items from Jain, Walia, Kaur and Singh (2021), Five items were used to measure risk tolerance, which were adapted from Grable and Joo (2004) and four items were adapted from (Natasya et al., 2022) to measure investment decision. The study employed partial least square structural equation modelling through SMartPls 4.0.

The study provided participants with google link for their responses. The researcher only provided a timeline of December 2023 to March 2024 within which investors were to fill and submit the survey. This timeline is sufficient to generate sufficient responses to be employed in the analysis. The sample size is computed using sample size determination formula by Cochran (1977) where the population is greater than 50,000 and is given as follows:

$$n = \frac{Z^2 \times (p) \times (1-p)}{C^2}$$

Where: n is the sample size,

Z= Confidence level at 1.96 for 95% confidence level

P = Percentage of population picking a choice, expressed as decimal (0.5 used for sample size needed)

C = the error limit (0.05 on the basis of 95% confidence level)

Therefore, $n = \frac{1.96^2 \times (0.5) \times (1-0.5)}{0.05^2} = 384$

Based on the calculation, the sample size of 384 investors was obtained for this study. However, due to the constant nature of low response rate in survey studies, it is quite important for any researcher to take all necessary measures to mitigate non-response rate as much as possible, in order to deal with the possibility of non-response error that often render research invalid (Groves, 2006). Thus, in order to reduce the non-response rate, the present study adhered to the Salkind's view (1997) for adjusting sample size, which is commonly used in

survey research (Bartlett, Kotrlik & Higgins 2001). This view suggested that a sample size could be increased by 40 percent to 50 percent in order to cover off the possibility of lost questionnaire and uncooperative subjects. Hence, in the present study the number of sample size was increased by 40 percent. A total number of 538 copies (140% of 384) of the questionnaire were distributed.

After the expiration of the time, 420 responses were recorded resulting in 118 shortages. It was also discovered that three of those responses were invalid as they were submitted without filling. The study coded the returned questionnaires into SPSS using abbreviation of the construct and subjected the data to preliminary analysis, for which missing values, outliers and normality test were assessed. Three 3 missing values were discovered and replaced using serial mean, no case of outlier and the normality bench mark was met. Afterwards, the study proceeds to major analysis using partial least square structural equation modelling version

4.0 RESULTS AND DISCUSSION

4.1 Measurement model

The study assessed the loading, validity and reliabilities of all the constructs of the study. The average variance extracted (AVE) was used to measure the convergent validity of the constructs of the study, whereas Fornel Lacker criterion, HTMT and cross-loadings were employed for discriminant validity. To determine the internal consistency reliability and validity of all the constructs of this study and composite reliability (CR) was used.

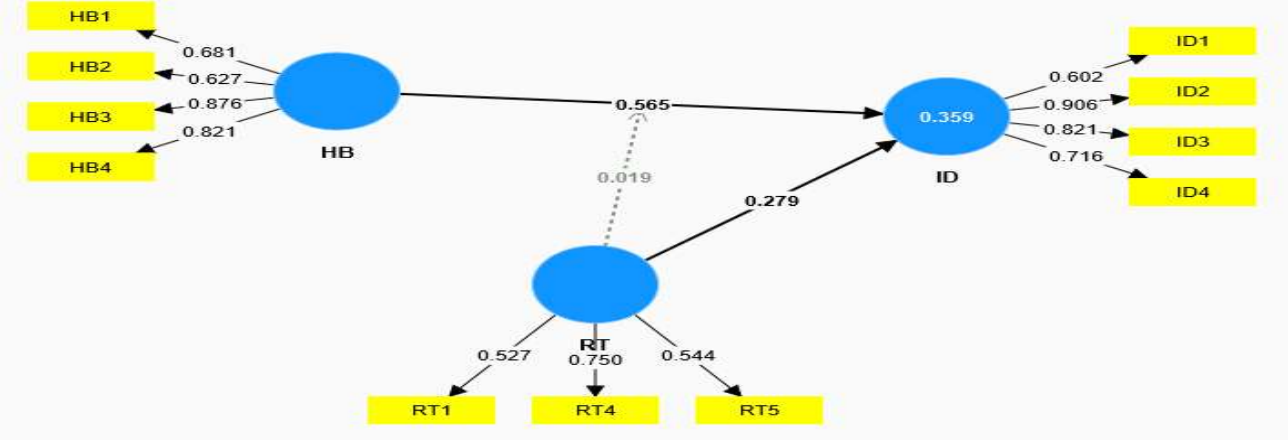


Figure 1: Measurement model

Table 1 showed the construct reliability and validity. All items measuring the various construct of the study loaded above 0.5 which is the minimum loading recommended by Hair, Black, Babin, Anderson and Tatham (2013).

Table 1: Loadings, construct reliability and convergent validity

Construct	**Item**	**Loadings**	**CR**	**AVE**
Investment decision	ID1	0.602	0.850	0.592
	ID2	0.906		
	ID3	0.821		
	ID4	0.716		
Herding behaviour	HB1	0.681	0.841	0.574
	HB2	0.627		
	HB3	0.876		
	HB4	0.821		
Risk tolerance	RT1	0.527	0.701	0.503
	RT4	0.750		
	RT5	0.544		

Note: CR=Composite reliability, AVE=Average variance extracted

From the table 1, All the constructs in the study met the composite reliability

benchmark of .7 and average variance extracted of .5. Some items failed to meet 0.5 loadings and they were deleted. The items affected are RT3 and RT2 for risk tolerance.

Also, for discriminant validity the study utilized the Fornell and larker criterion which states that the square root of AVE must be greater than the correlation with other variable in the study. This is as presented in table 2 below

Table 2: Discriminant Validity

Construct	ID	RT	HB
ID	**0.770**		
RT	0.205	**0.709**	
HB	0.534	-0.121	**0.758**

Source: Author's computation 2024

The square roots of AVE are presented in bolded font on the diagonal and it can be observed that the values are greater than the correlations among the constructs, thus this criterion is satisfied.

4.2 Structural model (Inner model)

The structural model or inner model is the second part of the PLS-SEM. Hair et' al. (2013) identified four key criteria for assessing the structural model in PLSSEM. These include assessments of significance of the path coefficients, coefficient of determination (R^2), the effect size (f^2), and lastly (4) predictive relevance (Q^2). However, to ascertain the moderating effect risk tolerance on the relationship between herding behaviour and investment decision, it is important to carry out a bootstrapping analysis. Bootstrapping was done by using 5000 subsamples using 429 cases. Figure 4.1 presented the structural model of the direct effects.

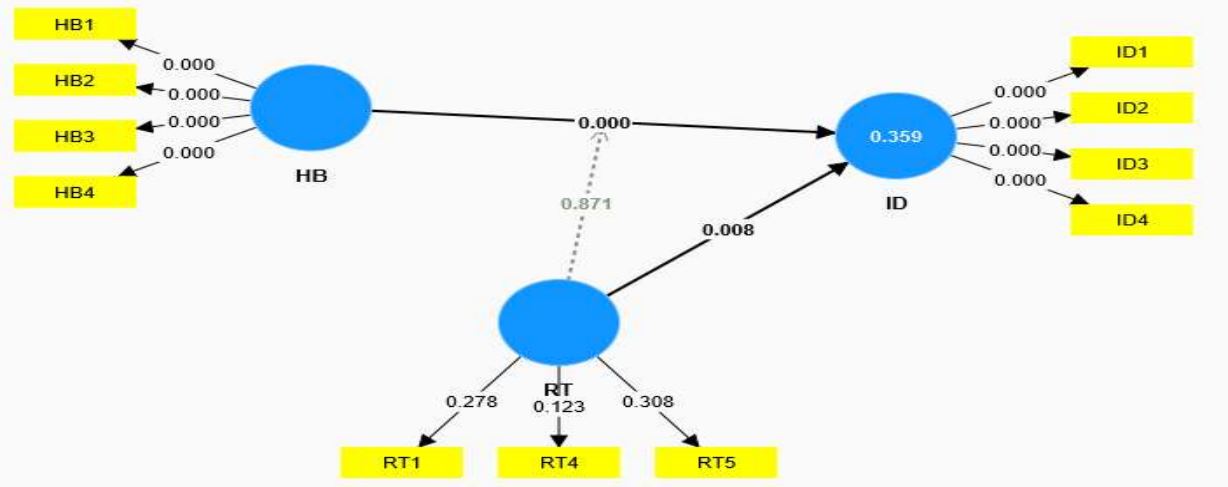


Figure 2: Structural model

4.2.1 Assessment of Path coefficient and structural model

On this section, the study tested for all the three hypotheses and table 3 presented the results of the structural model with the beta value of the relationships, t-statistic and p-value.

Table 3: Path coefficients

Hyp	Relationship	Beta	Std Error	T-value	p-value	Decision
H1	HB->ID	0.565	0.076	7.480	0.000	Rejected
H2	RT->ID	0.279	0.105	2.656	0.008	Rejected
H3	RTxHB->ID	0.019	0.114	0.163	0.871	Fail to Reject
R square						**0.359**

Source: Author's computation 2024

Three hypotheses were formulated for testing, they were tested using the path coefficients from the structural model. From Table 3, it can be seen that herding behavior has a positive and significant effect on investment decision (β = 0.565, t-value = 7.480, p-value = 0.000). With this result, the first hypothesis (H_1), herding behaviour does

not significantly affect investment decision was rejected. Similarly, risk tolerance has significant effect on investment decision (β = 0.279, t-value = 2.656, P-value = 0.008), the study rejected the second hypothesis. Finally, it was discovered that risk tolerance does not significantly moderates the relationship between herding behaviour and investment decision (β = 0.019, t-value = 0.163, p-value = 0.871). Consequently, the study failed to reject the third hypothesis of the study.

The R square stood at 0.359 which implies that 35.9% variation in the dependent variable is explained by herding behavior, risk tolerance and the interaction of HB and RT. The remaining 64.1% is explained by variables not captured in this model

4.2.2 Effect size and Predictive relevance

The effect size of the model is presented in the table 4. The study assessed the effect size of the exogenous variables (herding behaviour and risk tolerance) on endogenous variable (investment decision) using the F^2. Cohen (1988) recommended that f^2 values of 0.02, 0.15, and 0.35, to represents small, medium, and large effects respectively.

Table 4: Effect size (f^2)

Construct	F square	Effect size
HB	0.487	Large
RT	0.112	Small
HB x RT	0.001	Small
Q^2	**0.194**	

Source: Author's computation 2024

From table 4, herding behaviour had large effect on investment decision while risk tolerance had small effect on investment decision. The study also utilized Q^2 to assess the predictive relevance of the exogenous variables on the endogenous variable. Q^2 shows how well the data collected empirically can be reconstructed with the help of model and the PLS parameters. From Table 4.4, it is seen that the Q^2 values of investment decision is 0.194. This value is greater than 0. This also means that all the exogenous variables have 19.4 relevance in predicting investment decision.

4.3 Discussion of findings

Herding behavior had significant positive effect on investment decision. This finding is in line the position of the study of Falah & Haryono (2023), Halim and Pamungkas (2023)**,** Falah and Haryono (2023) , Rahim et al., (2024) and Hirdinis (2021) that indicate that herding have a significant positive effect on investment decisions.

Risk tolerance was discovered to have significant positive effect on investment decision. The results of this study are in accordance with the research conducted by Adielyani and Mawardi (2020), Jain and Kesari (2020) and Aini and Lutfi (2019) and Praba (2016), the study contradicts the finding of (Kusumaningrum et al., 2019) who employed mostly students as respondents to their survey and this may be the reason for such contradiction. Prospect Theory as developed by Daniel Kahneman and Amos Tversky explains how people make decisions involving risk and uncertainty, emphasizing that people value gains and losses differently. Investors with higher risk tolerance might construct more diversified portfolios that include higher-risk assets, potentially leading to higher returns.

Drawing from the result of the PLS-SEM analysis, it was found that the association between herding behavior and investing decision is not significantly moderated by risk tolerance. This suggests that people who are willing to accept more risk are ready to mimic others when making investment decisions. Following the dictates of the participants in the market is another risk-taking decision. This finding is in line with expectation of the study.

5.0 Conclusion and Recommendations

The purpose of this study was to examine the moderating effect of risk tolerance on the relationships between herding behavior and investment decision. The findings did not support the first two null hypotheses and third hypothesis failed to be rejected. The study, based on the findings, concludes that risk tolerance failed to significantly moderate the relationship between herding behavior and investment decision. The study therefore recommends that imitating the actions of the major market participants while making investing decision may be good but with a careful assessment of the environment. Portfolio managers should assist their investors in planning their investments based on risk tolerance level so that the investors can earn maximum return

for their investment and attain sustainable wealth

5.1 Limitations and Direction for future studies

Regardless of several contributions, this study also has some limitations too. Firstly, this study focuses on retail investors only, so future research should consider larger corporate investors. Secondly, the utilized survey questionnaire technique for the collection of the data, future researchers can also include interview techniques also so to better insight on the relationship among HB, RT and ID. Thirdly, this study was cross-sectional, i.e., collected the data once; therefore, future researches should be focused on a longitudinal study.

References

Adielyani, D., & Mawardi, W. (2020). The Influence of Overconfidence, Herding Behavior, and Risk Tolerance on Stock Investment Decisions: The Empirical Study of Millennial Investors in Semarang City. *Jurnal Maksipreneur: Manajemen, Koperasi, Dan Entrepreneurship*, *10*(1), 89. https://doi.org/10.30588/jmp.v10i1.691

Adiputra, G. (2021). The Influence of Overconfidence, Representative Bias, and Risk Tolerance in Investment Decision Making: Evidence on Stock Investors in Indonesia. In *Journal of Hunan University（Natural Sciences）* (Vol. 48, Issue 4).

Akinkoye, E. Y., & Bankole, O. E. (2020). Effect of Emotional Biases on Investor ' s Decision Making in Nigeria. *International Journal of Business and Management Future*, *4*(1), 33–39.

Ani, N. C., & Özarı, Ç. (2020). Behavioral Finance: Investors Psychology. *IOSR Journal of Economics and Finance*, *11*(1), 46–50. https://doi.org/10.9790/5933-1101024650

Apochi, J. G., Ahmed, Nma, M., Okpanachi, J., & Agbi, E. S. (2023). Effect of Prospect Factor and Herding Effect on Individual Investment Performance in Nigeria : Moderating Role of Financial Literacy. *European Journal of Accounting, Auditing and Finance Research*, *11*(7), 1–15.

Ardini, F., Achyani, F., & Si, M. (2023). The Influence of Overconfidence, Regret Aversion, Loss Aversion, and Herding Behavior on Investment Decision in the Capital Market With the Moderating Role of Risk Perception in Generation Z Students. *International Journal of Social Science & Economic Research*, *08*(05), 936–950. https://doi.org/10.46609/ijsser.2023.v08i05.001

Armansyah, R. F. (2022). Herd Instinct Bias, Emotional Biases, and Information Processing Biases in Investment Decisions. *Jurnal Manajemen Dan Kewirausahaan*, *24*(2), 105–117. https://doi.org/10.9744/jmk.24.2.105-117

Arriqoh, D., & Zoraya, I. (2024). The effect of financial literacy on Gen-Z crypto investment decision through herding behavior as mediator. *Manajemen Dan Bisnis*, *23*(1), 1.

https://doi.org/10.24123/mabis.v23i1.737

Baruah, M., & Parikh, A. K. kumar. (2018). Impact of Risk Tolerance and Demographic Factors on Financial Investment Decision. *GIS Business*, *13*(5), 31–40. https://doi.org/10.26643/gis.v13i5.3270

Bokhari, U., Sulehri, F. A., Hassan, N. ul, & Aziz, B. (2023). Impact of Allied Factors on Investment Performance, Mediating Role of Investment Decision: Evidence from Investors in Lahore. *Journal of Education and Social Studies*, *4*(1), 27–46. https://doi.org/10.52223/jess.20234103

Davies, G., & Brooks, P. (2013). Risk tolerance: Essential, behavioural and misunderstood. *Journal of Risk Management in Financial Institutions*, *7*(2), 110–113.

Dungarwal, H., & Tollawala, M. N. (2022). A Study on Impact of Behavioral Biases on Investment Decision. *International Journal of Research Publication and Reviews Journal*, *3*(4), 697–703.

Enow, S. T. (2023). Detecting the Herding Behaviour in the South African Stock Market and its Implications. *International Journal of Economics and Financial Issues*, *13*(2), 88–92. https://doi.org/10.32479/ijefi.13996

Evbayiro-osagie, E., & Chijuka, M. I. (2021). Psychological Factors and Investment Decisions in The Nigeria Capital Market. *Oradea Journal of Business and Economics, 5*(1). https://doi.org/10.47535/1991ojbe119

Falah, F. F., & Haryono, N. A. (2023). The Influence of Herding, Anchoring, Disposition, Personal Income, and Financial Literacy on Generation Z's Investment Decision Making in Surabaya City. *Technium Social Sciences Journal*.

Ferli, O., Ambarwati, C. T., & Mutiara, M. (2022). Investment Experience And Risk Tolerance Affect Investment Decision During Pan-demi Covid 19 in Indonesia (Case Study of Investment Gallery Students in South Ja-karta). *Jurnal Ilmu Manajemen & Ekonomika*, *14*(2), 67. https://doi.org/10.35384/jime.v14i2.276

Fitriyani, S., & Anwar, S. (2022). Pengaruh Herding, Experience Regret Dan Religiosity Terhadap Keputusan Investasi Saham Syariah Pada Investor Muslim Millennial Dengan Financial Literacy Sebagai Variabel Moderasi. *Jurnal Ekonomi Syariah Teori Dan Terapan*, *9*(1), 68. https://doi.org/10.20473/vol9iss20221pp68-77

Ghalandari, K., & Ghahremanpour, J. (2013). The Effect of Market Variables and Herding Effect on Investment Decision as Factor Influencing Investment Performance in Iran. *Journal of Basic and Applied Scientific Research*, *3*(3), 313–318.

Goel, S. (2014). Investor ' s Herding Behavior and Investment Performance : An Empirical Evidence From Delhi. *The International Journal Of Business & Management*, *2*(12), 56–59.

Halim, R., & Pamungkas, S. A. (2023). The Influence of Risk Perception , Overconfidence , and Herding Behavior on Investment Decision. *International Journal of Application on Economics and Business (IJAEB)*, *1*(1), 521–529.

Herlina, H., Hadianto, B., Winarto, J., & Suwarno, N. A. N. (2020). The Herding and Overconfidence Effect on the Decision of Individuals to Invest Stocks. *Journal of Economics and Business*, *3*(4).

https://doi.org/10.31014/aior.1992.03.04.288

Hirdinis, M., (2021). Does Herding Behaviour and Overconfidence Drive the Investor's Decision Making During the Covid-19 Pandemic. *Cognizance Journal of Multidisciplinary Studies*, *1*(8), 1–16. https://doi.org/10.47760/cognizance.2021.v01i08.001

Ilesanmi, O., Adaramola, A. O., Kayode, P. A., & Ogiamien, O. F. (2022). Investors ' Behaviour in Nigerian Stock Market : Effect of Greed and Aversion Inve. *Uniosun Journal of Banking and Financial Issues*, *1*(1).

Jain, J., Walia, N., Kaur, M., & Singh, S. (2021). Behavioural biases affecting investors ' decision-making process : a scale development approach. *Management Research Review*. https://doi.org/10.1108/MRR-02-2021-0139

Jain, N., & Kesari, B. (2020). *An Empirical Analysis of Investor Behavioral Biases , Investment Risk Tolerance and Decision-Making*. *February*. https://doi.org/10.26643/gis.v15i2.18897

Kanagasabai, B., & Aggarwal, V. (2020). The Mediating Role of Risk Tolerance in the Relationship between Financial Literacy and Investment Performance. *Colombo Business Journal*, *11*(1), 83–104.

Kengatharan, L., & Kengatharan, N. (2014). The Influence of Behavioral Factors in Making Investment Decisions and Performance: Study on Investors of Colombo Stock Exchange, Sri Lanka. *Asian Journal of Finance & Accounting*, *6*(1), 1. https://doi.org/10.5296/ajfa.v6i1.4893

Keswani, S., Dhingra, V., & Wadhwa, B. (2019). Impact of Behavioral Factors in Making Investment Decisions and Performance: Study on Investors of National Stock Exchange. *International Journal of Economics and Finance*, *11*(8), 80. https://doi.org/10.5539/ijef.v11n8p80

Khan, M. T. I. (2022). Prior perceived losses and investment objectives after stock market crisis: a moderated-mediation model of risk tolerance and loss aversion. *SN Business & Economics*, *2*(7), 1–22. https://doi.org/10.1007/s43546-022-00259-6

Kusumaningrum, T. M., Isbanah, Y., & Paramita, R. A. S. (2019). Factors Affecting Investment Decisions: Studies on Young Investors. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, *9*(3). https://doi.org/10.6007/ijarafms/v9-i3/6321

Leon, F. M. (2019). Factors Affecting Financial Risk Tolerance on Young Investors in Indonesia. *Indonesian Management and Accounting Research*, *18*(01).

Lin, H. (2012). How Herding Bias could be derived from Individual Investor Types and Risk Tolerance ? *International Scholarly and Scientific Research & Innovation*, *6*(6), 1395–1400.

Mahmood, Z., Kousaer, R., Abbas, S. S., & Saba, I. (2016). The Effect of Hueristics , Prospect and Herding Factors on Investment Performance. *Pakistan Journal of Social Sciences*, *36*(1), 475–484.

Marbun, L., Haryetti, & Fathoni, A. F. (2020). Is Herding Behaviour Really Exist? An Empirical Study On The LQ-45 And Jakarta Islamic Index. *South East Asia Journal of Contemporary Business, Economics and Law*, *21*(5),

264–272.

Mohammadi, N., & Soroushyar, A. (2021). The Effect of Financial Literacy on Investors ' Financial Risk Tolerance. *Iranian Journal of Accounting, Auditing & Finance*, *5*(3), 25–34. https://doi.org/10.22067/ijaaf.2021.40496

Natasya, N., Kusumastuti, D. H., Alifia, W., & Leon, F. M. (2022). The Effect Between Behavioral Biases and Investment Decisions Moderated by Financial Literacy on the Millennial Generation in Jakarta. *The Accounting Journal of Binaniaga*, *7*(1), 113–126. https://doi.org/10.33062/ajb.v7i1.502

Nath, Y., & Pradeep, M. P. (2008). An Empirical Study on Herding Behavior in Chinese Stock Market. *Phronimos: The Kiams Journal*, *9*, 131–133.

Nguyen, L., Gallery, G., & Newton, C. (2016). The Influence of Financial Risk Tolerance on Investment Decision-Making in a Financial Advice Context The Influence of Financial Risk Tolerance on Investment Decision-Making in a. *Australasian Accounting, Business and Finance Journal*, *10*(3), 3–22. https://doi.org/10.14453/aabfj.v10i3.2

Nwakoby, I. C., Manasseh, C. O., Abada, F. C., Samson, O., Akamike, O. J., & Oko, J. O. (2021). Overview of Stock Market Performance During Covid-19 Pandemic Overview of Stock Market Performance During Covid-19 Pandemic in Nigeria : Pre and Post Era Experience. *Economics and Social Sciences Academic Journal*, *3*(October), 1–10.

Nyaboke Onsomu, Z., Kaijage, E., Aduda, K. J., & Iraya, K. C. (2017). Risk Tolerance, Demographics and Portfolio Performance. In *Journal of Business & Economic Policy* (Vol. 4, Issue 3). www.jbepnet.com

Ogalo, H. S. (2019). Examining the Impact of Risk Tolerance and Risk Aversion on the Individual Financial Performance in the Kingdom of Bahrain. *Asian Journal of Empirical Research*, *9*(1), 16–26. https://doi.org/10.18488/journal.1007/2019.9.1/1007.1.16.26

Ogunlusi, O., & Obademi, O. (2019). The Impact of Behavioural Finance on Investment Decision- making : A Study of Selected Investment Banks in Nigeria The Impact of Behavioural Finance on Investment Decision-making : A Study of Selected Investment Banks in Nigeria. *Global Business Review*, *February 2020*, 1–17. https://doi.org/10.1177/0972150919851388

Ong'eta, J. O. (2019). Behavioural Factors Influencing High School Teachers Investement Decision in the Stcok Market in Nakuru County, Kenya. *International Journal of Social Science and Information Technology*, *v*(vi), 53–65.

Ongeta, J. O., & Nasution, E. (2021). Analysis of Behavioral Factors Influencing Investment Performance of Individual Investors in Nairobi Securities Exchange. *International Journal of Scientific and Research Publications (IJSRP)*, *11*(11), 37–51. https://doi.org/10.29322/ijsrp.11.11.2021.p11907

Pak, O., & Mahmood, M. (2015). Impact of personality on risk tolerance and investment A study on potential investors of Kazakhstan. *International Journal of Commerce and Management*, *25*(4). https://doi.org/10.1108/IJCoMA-01-2013-0002

Panjaitan, R., & Simbolon, I. P. (2020).

Financing and Herd Behaviour in Financial Crises: Investment Decision. In *International Journal of Economics and Business Administration: Vol. VIII* (Issue 4).

Patrick, Z., Tavershima, I. A., & Eje, E. B. (2017). Effect of Financial Information on Investment Decision Making By Shareholders of Banks in Nigeria. *Journal of Economics and Finance*, *8*(3), 20–31. https://doi.org/10.9790/5933-0803032031

Praba, S. (2016). Financial Risk Tolerance and the influence of Socio-demographic Characteristics of Retail Investors. *ISBR Management Journal Financial*, *1*(May).

Pratiwi, W., Mustaruddin, & Wendy. (2020). The Effect of Overconvidence and Herding on Perceptions of Investment Performance in The Capital Market With Investment Decisions as Mediation and Financial Literacy as ModeratorsInternational Conference of SEMIRATA BKS PTN Wilayah Barat. *International Conference of SEMIRATA BKS PTN Wilayah Barat*, 99.

Pratiwi, W., Tanjungpura, U., Tanjungpura, U., & Tanjungpura, U. (2020). The Effect of Overconfidence and Herding On Perceptions of Investment Performance In The Capital Market with Investment Decisions as Mediation And Financial Literacy. *Journal of Accounting and Finance in Emerging Economies*, *4*(3), 100–112.

PWC. (2023). *Nigerian Capital Market Update* (Issue August).

Rahayu, S., Rohman, A., & Harto, P. (2021). Herding Behavior Model in Investment Decision on Emerging Markets: Experimental in Indonesia. *Journal of Asian Finance, Economics and Business*, *8*(1), 053–059. https://doi.org/10.13106/jafeb.2021.vol8.no1.053

Rahim, A., Ullah, Z., Umer, Z., Khan, M., & Ullah, S. Z. (2024). Pre and Post Covid-19 Influence of Herding Effect Bias on Investment Decision of Shariah Compliant Stocks in Pakistan Stock Exchange. *Remittances Review*, *6588*(February), 1–28.

Rajeshwaran, N. (2020). The Impact of Behavioural Factors on Investment Decision Making and Performance of CSE Investors in Eastern Province of Sri Lanka. *Sri Lanka Journal of Economic Research*, *8*(1), 27–51.

Ravikumar, K., Chandrasekaran, S., Loganayagi, S., & Santhi, K. (2024). Impact on the Risk Attitude of Investors Towards Stock Market Investment. *In 3rd International Conference on Reinventing Business Practices, Start-Ups and Sustainability (ICRBSS 2023) (Pp. 437-447). Atlantis Press*, *Icrbss 2023*, 437–447. https://doi.org/10.2991/978-94-6463-374-0_38

Rushdi, N. J., & Sushma. (2019). Establishing AN Association between Risk Tolerance and Behavioral Biases among Indian Investors. *International Journal of Engineering and Advanced Technology*, *9*(2), 1378–1382. https://doi.org/10.35940/ijeat.b2637.129219

Sabir, S. A., Mohammad, H. Bin, & Shahar, H. B. K. (2019). The role of overconfidence and past investment experience in herding behaviour with a moderating effect of financial literacy: Evidence from pakistan stock exchange. *Asian Economic and Financial Review*, *9*(4), 480–490. https://doi.org/10.18488/journal.aefr.2019.94.480.490

Septi, N., Ainia, N., & Lutfi, L. (2019). The influence of risk perception , risk tolerance , overconfidence , and loss aversion towards investment decision making. *Journal of Economics, Business, and Accountancy Ventura*, *21*(3), 401–413.

Sivasankaran, R., & Selvakrishnan, A. (2023). Family Demographics Sway With a Role of Financial Advisor in Risk Tolerance and Investment Decision of Women Working in It Sector, Chennai. *International Journal of Professional Business Review*, *8*(1), 1–13. https://doi.org/10.26668/businessreview/2023.v8i1.910

Sorongan, F. A. (2022). The Influence of Behavior Financial and Financial Attitude on Investment Decisions With Financial Literature as Moderating Variable. *European Journal of Business and Management Research*, *7*(1), 265–268. https://doi.org/10.24018/ejbmr.2022.7.1.1291

Sutejo, B. S., Sumiati, A., Wijayanti, R., & Ananda, C. F. (2023). Do Emotions Influence the Investment Decisions of Generation Z Surabaya Investors in the Covid-19 Pandemic Era? Does Financial Risk Tolerance Play a Moderating Role? In *Scientific Papers of the University of Pardubice, Series D: Faculty of Economics and Administration* (Vol. 31, Issue 2). https://doi.org/10.46585/sp31021755

Tamara, D., Yudo Arianto, A., & Marzuki, E. (2022). The Effect of Financial Literacy, Herding Behavior and Risk Tolerance on Investment Decisions. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, *5*(4), 30259–30271.

Wali, S., Rehman, S. U., & Zahid, M. (2022). Behavioral Factors and Individual Investor's Behavior: A Comparative Study of Islamabad and Peshawar using Partial Least Squares Approach. *Journal of Behavioral Sciences*, *32*(1), 30–55.

Wanyoike, D. (2016). Psychological Factors and Investement Decison among Uninited State International University Students. In *Uniited State International University Africa* (Vol. 6, Issue August).

Warganegara, S. F. A., & Warganegara, D. L. (2022). Herding behavior in the indonesia stock exchange around the covid-19 pandemic. *Fair Value: Jurnal Ilmiah Akuntansi Dan Keuangan*, *4*(11), 4912–4921. https://doi.org/10.32670/fairvalue.v4i11.1822

Wulandari, I. O., & Puspawati, D. (2023). *Determinants of Investment Decisions from Behavioural Aspects with Investment Intention as a Mediating Variable*. *6*(1), 21–27.