Diversitas Journal
ISSN 2525-5215
Volume 8, Number 3 (jul./sept. 2023) p. 2748 – 2761
https://diversitasjournal.com.br/diversitas_journal

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A B S T R A C T

A survey was conducted amongst a sample of Filipino retail investors residing in NCR. All at the ages of 21-60 with at least 1 year of investing experience in the Philippine stock market and cryptocurrency market. Risk Aversion, Long Term Investment Intention (LTII), and Short Term Investment Intention (STII) are the variables that were measured using Risk Aversion Scale and Investment Intentions Scale and moderation analysis of the setting of stocks and cryptocurrency was done. The study showed significant correlation of Risk Aversion and STII in the setting of cryptocurrency. The data manifested significant moderation in Risk Aversion and LTII in the setting of stock investing and Risk Aversion and STII in the setting of cryptocurrency investing.

ARTICLE INFORMATION

Article process:
Submitted: 11/05/2023
Approved: 26/06/2023
Published: 03/07/2023

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Keywords:
Investment, risk aversion, stock market, cryptocurrency

RESUMO

Uma pesquisa foi realizada entre uma amostra de investidores de varejo filipinos residentes na NCR. Todos com idades entre 21 e 60 anos, com pelo menos 1 ano de experiência em investimentos no mercado de ações filipino e no mercado de criptomoedas. Aversão ao Risco, Intenção de Investimento de Longo Prazo (LTII) e Intenção de Investimento de Curto Prazo (STII) são as variáveis que foram medidas usando a Escala de Aversão ao Risco e a Escala de Intenções de Investimento e foi feita análise de moderação da configuração de ações e criptomoeda. O estudo mostrou correlação significativa de aversão ao risco e STII no cenário de criptomoeda. Os dados manifestaram moderação significativa em Aversão ao risco e LTII no cenário de investimento em ações e Aversão ao risco e STII no cenário de investimento em criptomoeda.

DOI: 10.48017/dj.v8i3.2676

Introduction

The Stock Market refers to a place or a platform where investors trade stocks, which are representations of proportionate ownership of a company (Cagan, 2016). Investors put their money in the stock market to get some profit (Chandra, 2008). Nowadays, there are transactions in the stock market that happen online. The online accounts in the Philippine stock market rose to almost 20% in 2020 according to the data of the Philippine Stock Exchange (PSE) (Cabuag, 2020). The PSE has been gaining popularity from retail investors. They are the non-professional traders in the stock market that trade through brokerage firms.

These investors make up around 98% of the stock market (Almazan, 2021). As of 2020 around 45% of stock market accounts are made up of people from ages 30-44, around 22% of it are made up of ages 18-29, and the rest of the accounts are held by people from ages 45 and above (Royandoyan, 2021). Hence, this is the perfect time to see through the psychological constructs that retail investors experience when trading in the stock market. Literature has been written that suggests the key to winning in investing is psychology as we control what matters the most: our beh avior (Crosby & Housel, 2021). Investors can never lose money in the stock market if they don't sell the stocks they have been holding; they can only lose money if they sell at a lower price and this decision may have stemmed from psychological factors. Experts in behavioral finance suggest that there is an unequivocal truth that investor behavior is a better predictor of profits than market timing or fund selection (Crosby & Housel, 2021). We concur considering it is a widely known fact that the price volatility of assets such as stock and cryptocurrency prices are not coherently based on the economy. Rather, it is based on market sentiment. The more investors buy an asset, the price goes up, the more investors sell an asset, the price goes down. Each piece of information can be used to provide surfeit solutions in managing investor behavior, particularly their own behavior in investing. For example, if a positive correlation between Risk Aversion and Investment Intentions of investors has been established then that piece of information can be used to come up with a practice to which it can address circumstances in which risk averse investors can have more initiative in doing investing. If it's proven in this study that stocks and cryptocurrency moderate the relationship of Risk Aversion and Investment Intentions, then it will increase the validity of the instruments used. We can also come up with surfeit solutions such as programs that address circumstances fit for specific personality traits and their level of "risk aversion" in long-term and short-term investments. This isn't the first time that psychologists tried to address certain impulses in investing. There are pieces of literature already written by psychologists that uses behavior as a defensive strategy in investing such as the "Laws of Wealth" (Crosby & Housel, 2021) wherein it addresses how to control overconfidence or aggression, considering that it was found to be the main variable of why male investors often trade more and therefore lose more often compared to their female counterparts (Barber &

Odean, 2001). Any piece of information that we can gather is vital to making practices as psychologists, not as finance experts or business experts, to help everyday retail investors (non-professional investors) in making extra profits and minimizing their losses.

This study aims to understand how "investing in stocks" and "investing in cryptocurrencies" moderates the relationship between Risk Aversion and Investment Intentions of Filipino Investors. We refer to "Investing in stocks" as a setting of investors that put their money in the stock market, and we refer to "Investing in Cryptocurrencies" as a setting of investors that put their money in the cryptocurrency market. Risk Aversion relates to the inclinations of investors in avoiding taking risks in their investments. Investment intentions refers to the short-term and long-term approach of investors when it comes to managing their assets. It is not dichotomous as an investor can have both inclinations to long term and short term as shown in the results of previous studies (Nandan & Saurabh, 2016; Lathif, 2019; Sadiq & Khan, 2019; Aren & Nayman Hamamci, 2020). The following are the research gaps that the researcher wants to address:

There are many studies in finance and business institutions about investor behavior. Personalities and its aspects have already been established as having a significant correlation to investment decisions such as extroverts with high self-control are more likely to make investments (Gambetti & Guisbetti, 2019) or individuals that are risk averse tend to have less likelihood of attending to long-term and short-term investing (Mayfield et al., 2008). However, Filipino investor behavior has lacked studies in psychology in terms of the depth in which we can utilize and link aspects of personality to a good investment.

There is a lack of studies in the psychological aspect of local stocks and cryptocurrencies as moderators of risk aversion and investment intentions.

Establishing this study will add literature that strengthens personality and its connections to investing.

Previous studies have established Risk Aversion as a mediator of personality and investment intentions (Mayfield et al, 2008; Nandan & Saurabh, 2016). However, they were mostly done with students of business or finance. This research will focus on retail investors as participants.

Whilst Risk Aversion has been already correlated with investment intentions (Mayfield et al., 2008), the type of financial investment such as cryptocurrency is yet to be researched as a moderator of Risk Aversion and Investment Intentions.

There are no suggested programs, as our current review of RRL shows, in the field of psychology that have been addressing the management of investor behavior particularly in how to manage their own behavior. Perhaps, it is because we lack understanding in this field as

investing is not a popular choice for Filipinos as the statistics show only 1.6 million Philippine stock market accounts as of 2022 (Rivas, 2022).

Generally, this study explores the correlation of Risk Aversion and long-term and short-term investment intention. The researchers also tried to see how the relationship of the variables in the different settings of stocks and cryptocurrency investing. Thus, the following hypothesis is proposed.

H1: There is a significant correlation between Risk Aversion and Long-Term Investment Intentions.

H2: There is significant correlation between Risk Aversion and Short-Term Investment Intentions.

H3: Stock investing affects the relationship of Risk Aversion and Long-Term Investment Intentions.

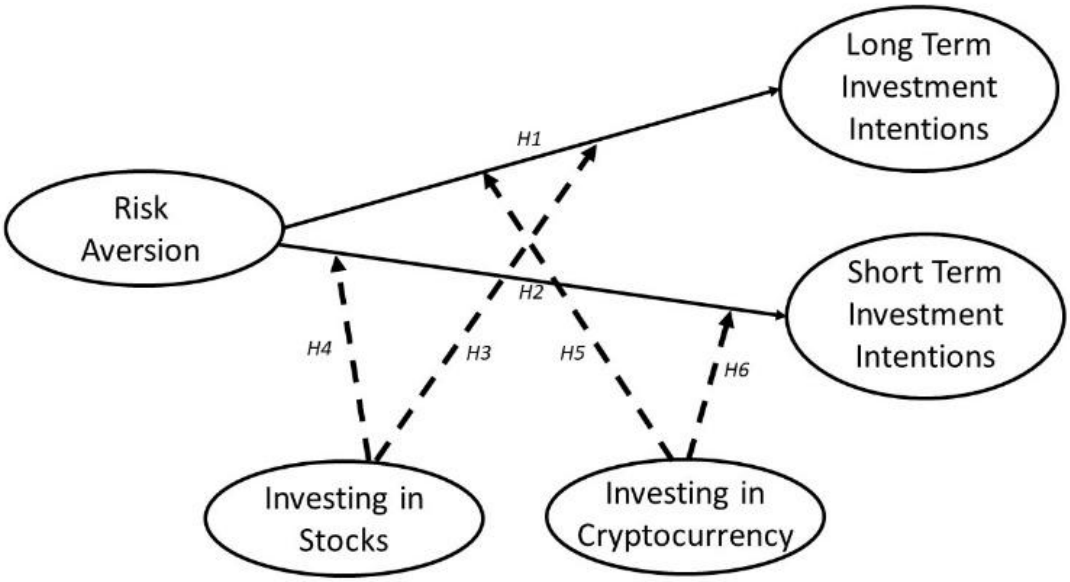
H4: Stock investing affects the relationship of Risk Aversion and Short-Term Investment Intentions.

H5: Crypto investing affects the relationship of Risk Aversion and Long-Term Investment Intentions.

H6: Crypto investing affects the relationship of Risk Aversion and Short-Term Investment Intentions.

Figure 1.

Hypothesized Conceptual Framework

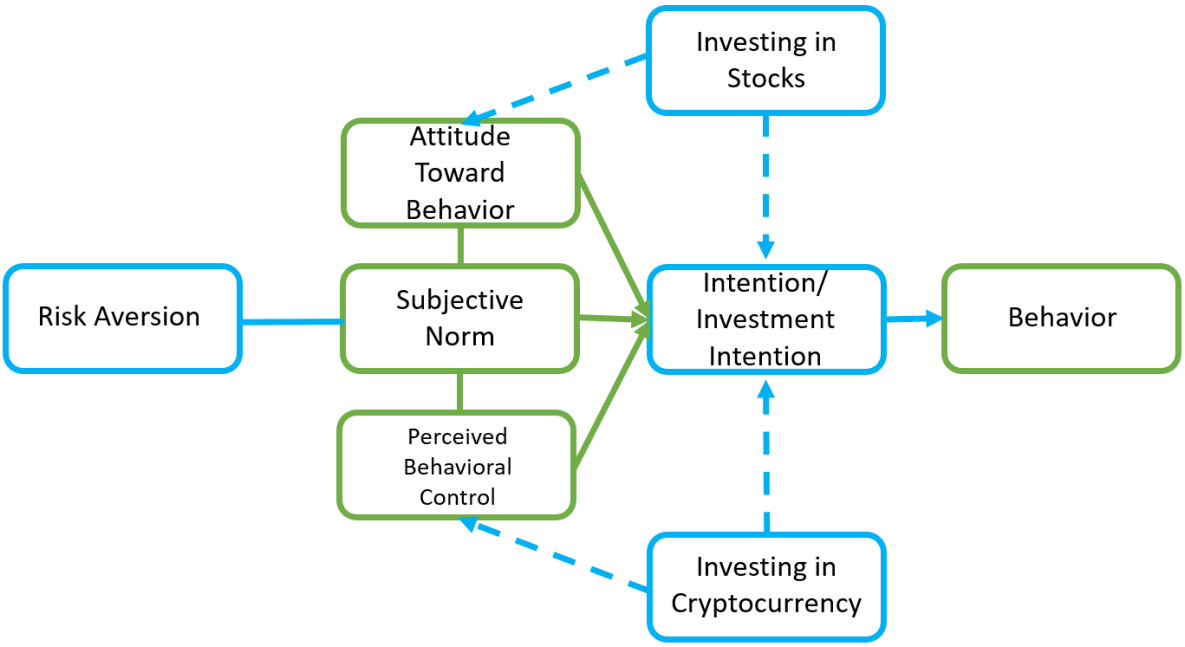


Source: Own authorship.

The conceptual framework shown above describes the relationship of each variable with the dashed line representing moderators. Risk Aversion, long-term, and short-term Investment Intention are variables. The researchers have considered "investing in stocks" and "investing in cryptocurrency" as moderators since they are different platforms and settings of investing. Stocks and cryptocurrencies have a huge gap in their characteristics. Hence, investors behave differently on each platform as stock and cryptocurrencies have a weak correlation in their indices (Larsson & Johansson, 2022). To establish that even further, the data that will be gathered from the respondents are those that are investing in stocks, and those that are investing in cryptocurrency, or both.

Figure 2.

Theoretical Framework



Source: Own authorship.

The Theory of Planned Behavior (Ajzen, 1991)

The basic premise of the theory of planned behavior is that behavioral intentions stemmed from three main constructs which are attitude, subjective norm, and perceived behavioral control. Attitude refers to a person's consideration of their evaluation of outcomes of behavior. Subjective Norm refers to a person's belief in norms wherein they take into consideration the reactions of their peers. Perceived Behavioral Control refers to a person's point of view on how easy or difficult you can do a certain behavior. A rule in this theory

suggests that the greater the attitude, the subjective norm, and the perceived behavioral control; the greater the outcome will be which is behavioral intention (Mayfield et al., 2008). The stronger the intention, the more likely its performance should be (Ajzen, 1991). To encompass this research, there have been previous studies in behavioral finance wherein they applied the theory of planned behavior and have linked psychological and finance constructs. Hessing, Elffers and Weigle (1988) studied tax evasion behavior through the lens of this theory. They found that attitudes and subjective norms towards taxes are highly correlated to self-reported behavior of those who evaded taxes. There's also a study that investigated how risk avoidance affects behavioral intentions (Bolton et al., 2006). They found that marketing techniques that remedy debt consolidation, a marketing technique that rolls credit card bills to one payment, leads to risky behavioral intentions as they found that credit card use increases. Lastly, there's the study of Sadiq & Khan (2019) wherein they found that financial literacy moderates the relationship of the Big Five Personality traits and Investment Intention. The theoretical framework shows how variables of this research are connected to the theory. Risk Aversion is an aspect of Personality which connects us to the theory's main constructs. The constructs Attitude Toward Behavior, Subjective Norm, and Perceived Behavioral Control are facets which lead to Intention which is affected by the setting of "Investing in Cryptocurrency" and "Investing in Stocks." These settings are hypothesized to affect intention which in turn causes behavior.

Materials and methods

This section includes the research design, the criteria for the sampling of the participants, the descriptions of the instruments used, the data gathering procedure, and the ways to get the statistical analysis.

Research Design

This research has a cross sectional explanatory quantitative design with a moderation research approach. Data was collected via Microsoft Forms from a sample population of Filipino retail investors. This moderation approach was chosen for this study to explain the statistics from the data gathered through scales. How "Investing in Stocks" and "Investing in Cryptocurrency" moderates Risk Aversion and Investment intentions was also analyzed for this study as previous literatures have already showed significant correlations between Personality, Risk Aversion, and Investment Intentions, and this was established in the previous chapter. The data includes scores of each respondent from the questionnaires Risk Aversion Scale and Investment Intentions scale. Respondents answered all questions within the given questionnaires which had a total of 14 items. The platform of investment of the respondents was also noted considering that it tells if the respondents invest in stocks or if they invest in crypto or if they invest in both. The result of this study was offered to respondents as an

additional incentive. Moderation analysis of Investment Intentions and Risk Aversion was done after all the variables were correlated.

Participants

The researcher used purposive sampling to choose 57 respondents for this study. Participants are Filipino retail investors, both male and female, that reside in Metro Manila and are using an online account as a platform for investing stocks or an online account as a platform for investing in cryptocurrency. 28 of those participants are investing in stocks and the rest are investing in cryptocurrency. The samples were also required to have at least 1 year of experience in investing and an age of 21-60 years old. The following are the measures used in this study and are shown in the Appendices.

Instrumentation

Risk Aversion Scale

This scale by Mayfield et al. (2008) only has four items and uses a Likert scale: 1 = "Strongly Disagree", 2 = "Disagree", 3 = "Neutral", 4 = "Agree", and 5 = "Strongly agree". It was adapted from a study of Gomez-Mejia and Balkin (1989) but it was reworded by Mayfield, Perdue, and Wooten to make it specific for investing behavior. A higher score, which is 14 or above, indicates a stronger inclination to avoid risk in their personal investments.

Investment Intentions Questionnaire

Investment Intentions by Mayfield et al. (2008) has 10 items that determine an investor's inclinations if it's long term or short-term. It is split in two parts although it is not indicated in the questionnaire which one is the intention. There are 5 items for short-term and 5 items for long term. Each of those items gave the respondent one point to long term or short term if they answered "yes" on a certain question that is either about long-term or short-term investment intention. The investment intentions are not dichotomous in its scoring as it is possible for an individual investor to have two intentions to a similar degree.

Data gathering procedure

Confidentiality, risks, and benefits had been established first to each participant. After the informed consent has been agreed to, the respondents were asked to answer questionnaires via MS forms which took around 10 minutes to finish. The scores from the rest of the questionnaire were then gathered and the researcher and the statistical treatment which is the regression to test if there is a significant relationship between the variables in favor of the previous research (Mayfield et al., 2008; Nandan & Saurabh, 2016; Sadiq & Khan, 2019) that used multiple correlation. This is to reinforce the validity of the relationship between risk

aversion, and investment intentions as well as establish the relation of investment type(stocks or cryptocurrency) in those variables.

Statistical Analysis

After all the scores of personality risk aversion and investment intentions have been collected and sorted, the researcher used the statistical treatment of Pearson R to get their correlation and then Regression to disprove the null hypothesis in which there is no significance in their relationships. The mean and the standard deviation were also computed. Programs such as SPSS and Microsoft Excel were used as a tool for efficient computation and data analysis. Once the correlations showed significant relationships, regression analysis was done to give insight to how these variables affect each other.

Results and Discussions

Table 1.

Descriptive Statistics and Correlations in Investing in Stocks

	Mean	Std. Deviation	N
RiskAversionStocks	14.0714	2.60951	28
STII	17.2143	2.97343	28
LTII	19.9286	2.82749	28

		RiskAversion Stocks	STII	LTII
RiskAversionStocks	Pearson Correlation	1	.175	.362
	Sig. (2-tailed)		.374	.058
	N	28	28	28
STII	Pearson Correlation	.175	1	.376*
	Sig. (2-tailed)	.374		.048
	N	28	28	28
LTII	Pearson Correlation	.362	.376*	1
	Sig. (2-tailed)	.058	.048	
	N	28	28	28

Source: Own authorship.

Table 2.

Descriptive Statistics and Correlations in Investing in Cryptocurrency

	Mean	Std. Deviation	N
RiskAversionCrypto	13.7931	2.45501	29
STII2	16.3103	3.58672	29
LTII2	17.8621	2.93652	29

		RiskAversion Crypto	STII2	LTII2
RiskAversionCrypto	Pearson Correlation	1	.369*	.011
	Sig. (2-tailed)		.049	.956
	N	29	29	29
STII2	Pearson Correlation	.369*	1	.282
	Sig. (2-tailed)	.049		.138
	N	29	29	29
LTII2	Pearson Correlation	.011	.282	1
	Sig. (2-tailed)	.956	.138	
	N	29	29	29

Source: Own authorship.

Table 3.

Regression Long Term Investment Intentions with Moderator

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	18.971	2.495		7.603	.000
	RiskAversion	.211	.152	.174	1.384	.172
	InvestmentType	-2.008	.759	-.333	-2.646	.011

Table 4.

Regression Short Term Investment Intentions with Moderator

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	12.932	2.792		4.632	.000
	RiskAversion	.361	.170	.275	2.121	.039
	InvestmentType	-.803	.849	-.123	-.946	.348

Source: Own authorship.

Table 1 shows the descriptive statistics and the grouped correlations of Risk Aversion, Long Term Investment Intentions (LTII), and Short Term Investment Intentions (STII) in the setting of investment in stocks. With a mean of 14.07 for Risk Aversion, 17.21 for STII, and 19.92 for LTII. The spread of scores is not as wide as the Standard Deviation shows 2.60 for Risk Aversion, 2.97 for STII, and 2.87 for LTII. The table showed no significant correlation between STII and Risk Aversion as the Sig value shows a score of 0.37. There is a strong positive correlation of Risk Aversion to LTII; however, it is not significant enough as it showed the sig. value of 0.58.

Table 2 shows the descriptive statistics and the grouped correlations of Risk Aversion, LTII, and STII in the setting of investing in cryptocurrency. With a mean of 13.79 for Risk Aversion, 16.31 for STII, and 17.86 for LTII. The spread of scores is not as wide as the Standard Deviation shows 2.45 for Risk Aversion, 3.58 for STII, and 2.93 for LTII. The table showed a significant correlation between STII and Risk Aversion as the sig. value shows a score of 0.049. There is a positive correlation between Risk Aversion and LTII in the setting of investing in cryptocurrency; however it lacked significance as it shows a sig. value of 0.95.

Table 3 shows the regression results of LTII with Investment Type referring to the moderators investing in stocks and investing in cryptocurrency. It showed a significant value of .011 that implies it has a moderating effect between the variables. With the results shown in Table 1 and Table 3, LTII has its link with Risk Aversion in the setting of investing in stocks although not significant; however, it is moderated by its investment type which is stock investing. Table 4 shows the regression results of STII with Investment Type referring to the moderators investing in stocks and investing in cryptocurrency. It showed a significant value of .039 that implies it has a moderating effect between the variables. With the results shown in Table 2 and Table 4, STII has its significant link with Risk Aversion in the setting of cryptocurrency and it is moderated by its investment type that has a stronger link to it.

The investment intentions of Filipino investors in this study is apparent that it is linked to risk aversion in both stocks and cryptocurrency. Stock investing moderates LTII and Risk Aversion and cryptocurrency investing moderates STII and Risk Aversion. Despite the lack of respondents in this research compared to other related literature, it still supported previous results from other studies relating psychological factors to finance. The financial behavior of an individual depends on many factors. It could be environmental or personal factors. Environmental factors include prices, inflation, interest rates, market volatility, and market sentiment. Personal factors can include an individual's attitude towards risk. How an individual handles risk differs from each person, and it ubiquitously affects their decision

making in the financial world. Studies have classified risk aversion or attitude towards risk as behavioral anomalies (Mayfield et al., 2008; Nandan & Saurabh, 2016; Sadiq & Khan, 2019). Particularly, the study of Nandan & Saurabh found that the relationship of neuroticism, extraversion, and openness with short-term investment intentions is fully affected by the individual level of Risk Aversion (2016). This study was done through a survey of 313 Gen Y finance students and again had served as a research gap since most of these studies are done with students of business and finance. Thus, cannot be generalized to a wider population. Suggestions for future researchers is to utilize research with random sampling to increase its external validity and extend the study to more segments of individuals such as professionals or retail investors. Investment intentions was a concept made to compartmentalize the short-term and long-term approach of investing. Mayfield et al. constructed exploratory items to reflect the inclinations of participants to short-term or long-term investing (2008). A short-term investing approach includes strategies such as managing portfolio and trading stocks at least once a week. A long-term investing approach includes strategies such as holding stocks and being voluntarily inaccessible for years until it can give based on the investor's notion of hefty profits. Their study examined the psychological antecedents of investment intentions. They specifically chose generalized items to measure Risk Aversion as their related literature already associated it with behavioral intentions. They also chose to measure the Big Five, through the 60-item inventory NEO-FFI (Costa & McCrae, 2003), as the researchers hypothesized some of those traits to be the antecedent and to further explore and understand investor psychology in the field of finance. The researchers of this study believed that characteristics can be utilized to effectively plan and manage finances. The findings of this study indicated that high neuroticism and high-risk aversion avoids short-term investing, high extraversion have higher inclinations to low-risk aversion and can lead to short-term investing intention, and high openness have inclinations to long-term investing. However, the researchers had only done their study with business school undergraduates, and they had found conflicting results from a previous study as its results indicated that extraverted personality have no significant impact on individual attitude towards risk (Filbeck et al., 2005). This is due to the difference in the personality and attitude towards risk measures. Filbeck et al. used the Myer-Briggs Type Indicator (MBTI) test for measuring personality and more specific items in calculating risk. With that said, the researchers call for identifying specific individuals and specific interventions for those individuals especially those that are at risk in needing to attend to their financial needs.

Conclusion

The evidence suggests that there is an association between the variables Risk Aversion and STII in investors in the cryptocurrency setting and the link between Risk Aversion and LTII is not significant. The researchers had expectations to link Risk Aversion and LTII in the

setting of stock investing. It is possible that the small sample of respondents affected the results from the data analysis. Although, the data is apparent that the type of investment strengthens the link of Risk Aversion and Investment Intentions despite the limited number of respondents.

Consider this research as a pilot testing in finding the link between aspects of personality and the decision-making process of Filipino investors with the hopes of establishing a fresh perspective. It will be beneficial to investors, finance experts, and psychologists that have a keen interest in behavioral finance to serve as a starting point or as a reference for future research.

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