

## **Influences on the Stock Market Investing of Tertiary Students in the National Capital Region, Philippines**

Camille Marie R. Arena  
University of Santo Tomas, Philippines

Ace Ari S. Batac  
University of Santo Tomas, Philippines

Alyssa Mae A. Religioso  
University of Santo Tomas, Philippines

Elizabeth Vivien S. Magbata  
University of Santo Tomas, Philippines

Ma. Belinda S. Mandigma\*  
University of Santo Tomas, Philippines

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### **ABSTRACT**

An investor's attitude and knowledge may be considered determinants of a robust stock market investment. This study identified the different factors that could influence the stock market investing of 384 Filipino tertiary students within the National Capital Region (NCR), following the theory of planned behavior, financial literacy theory, and risk perception theory. Data collated from an online survey were subjected to Pearson Correlation and Stepwise Regression analyses, which showed that money attitude, financial knowledge, risk attitude, and stock market investing have significant relationships, while the latter variable, stock market investing, is positively affected by financial knowledge, but not by money attitude and risk attitude. Contributing to the field of theory on the variables that may impact stock investing, this study adds to the extant literature on this topic. Furthermore, the findings of the research would be valuable to tertiary students in that they would be able to understand their own views regarding the stock market and devise effective techniques to increase the stock market participation rate.

Keywords: Stock Market, Money Attitudes, Risk Attitudes, Financial Knowledge.

### **1. INTRODUCTION**

The emerging role of the stock market has become vital in the aspect of the financial sector in advancing economic growth performance. Several studies argue that a matured and operational stock market strengthens accumulation of capital and establishes an effective resource distribution within a country thereby maximizing productivity to progress and expand. From the perspective of the firms, large corporations were able to raise capital for their development and expansion through the stock market. Meanwhile, for individual investors, the stock market provides various opportunities through different types of securities which shapes investment into more beneficial assets (Ahinful et al., 2021). Nowadays, individuals have become more engaged with stock investing through new financial products and services. Studies have found that the rise of the pandemic has brought with it a newfound interest among the Filipino people. As per the Philippine Stock Exchange (PSE) data showed that the average daily number of

trades in 2020 soared 33.7% (Dumlao-Abadilla, 2021). Said author also said that a survey conducted by the PSE revealed that 1.27 percent of the total population of the Philippines is considered active in investing in the stock market, which may be considered a small fraction, but still an increase from only less than one 1% about 10 years ago.

Further, certain studies were completed to understand stock investing better and to examine the factors that affect individuals' attitudes towards the stock market. (Conlin, 2015) revealed that personality traits help explain stock investing. According to Musiał and Świecka (2016), most young people have low levels of financial knowledge and skills, but they are skilled in the use of technological devices. The obvious indifferent attitudes towards stock market investing have intrigued finance researchers because it is an accepted truth that the active participation of individuals in the stock market is essential to its development and growth (Ahinful et al., 2021).

To address the issue concerning the lack of understanding behind stock market investing, the researchers would like to examine the effect of money attitude, financial knowledge, and risk attitude toward stock investing. By identifying these factors that influence investing in the stock market, the researchers can contribute and provide substantial financial knowledge in the field, considering this can provide added value in terms of investment opportunity and private wealth management.

On that note, it becomes essential for this study to analyze the factors influencing the stock market investing of tertiary students. Hence, this study aims to determine the effect of money attitude, financial knowledge, and risk attitude towards stock market investing. At the end of the study, the researchers aim to answer the following research questions:

1. Does money attitude affect the student's stock market investing?
2. Does risk attitude influence the student's stock market investing?
3. Does financial knowledge impact the student's stock market investing?

The results of the study are expected to broaden the knowledge of individuals who want to invest in stocks by participating in the stock market. Moreover, it would be beneficial to the tertiary students in a way that they could recognize their attitudes and behavior toward investing. The research can also proffer support to the existing literature and give a new understanding that can be used to expand information on previous research. Given that individual stock investing in most countries is quite low, knowing the variables that could possibly influence people's decisions to invest in stocks may be beneficial in devising effective methods to encourage people towards stock investment. Further, the study results could justify the rationale behind the influences on stock market investing among tertiary students within Metro Manila.

## **2. REVIEW OF RELATED LITERATURE**

Several studies on stock market investing were reviewed and looked at what have already been written about this topic. The review is intended to highlight a gap in the relationships between some variables and investing in the stock market. The present study is intended to fill such gap or disagreement among the findings of previous studies. Indeed, some of the extant literature that were examined showed some correlation, causal or otherwise, between several factors (Vibora and Mandigma, 2022), but some showed insignificant relationships among the variables.

### ***Stock Market Investing***

According to Tan and Ilao (2021), the Philippine economy has flourished at one of the quickest rates globally by making its output double from 2010 to 2020. The authors added that the capital markets of the Philippines remain limited in contrast to other Asian countries, notwithstanding this economic development and its stock market's long history, dating back to

1927. Further, the authors said that the Philippine Stock Exchange (PSE) has only 267 listed companies by 2019 which is the fewest in Asia. They also declared that the overall market capitalization of listed businesses in the Philippines was USD324.4 billion, which is equivalent to 84% of GDP. Meanwhile, they stated that the Philippine bond market has a total value of USD131.2 billion in 2019, representing 34% of the country's GDP. In conclusion, the authors opined that the Philippines' recent rapid economic expansion has had little impact on capital markets, which remain modest compared to Asian peers, and the country is conducting measures to boost liquidity and broaden the investor base. The stock market is an integral part of the financial sector to foster economic growth. Many people invest in the stock market when it comes to money. Even a country not renowned for its complex economy relies on its stock exchange to help firms acquire funds and give investors attractive chances, which may surprise you.

Stock exchanges offer and frequently deliver more significant earnings in exchange for investors' assurance, diversity of opportunities, and flexibility. Establishing a securities market in emerging countries such as the Philippines is expected to boost savings. Investor understanding of the stock market is critical in promoting the expected increase that leads to economic growth and development. (Simbre and Barriga, 2019).

### ***Money Attitude and Stock Market Investing***

At some point in the past, individuals only considered money as a medium of exchange for transactions but currently, it has become a means and end of our satisfaction and well-being. Eventually, money became essential that is comparable to drinking water as a means of survival. Money in nature is the same but an individual's perception of it makes the difference (Taneja, 2012). Ahinful et al. (2021), claims that depending on how wealth growth is interpreted by an individual, attitudes toward money may be related to readiness to make stock investment.

According to Klontz et al. (2011) money attitudes have four elements, namely: avoidance of money, worship of money, status of money, and vigilance to money. In money worship, individuals regard money as a sign of achievement, respect, and power, thus they strongly prefer to invest in stocks to achieve their objectives. Money avoidance, on the other hand, refers to the evil idea of money, that wealthy people are greedy who do not have the right to possess money. These people do not like to disburse money even on rational or necessary purchases. People with money status dimensions also notice a noticeable gap between socioeconomic classes. Status seekers feel that owning the best and most up-to-date items confers status. Individuals who are vigilant to money believe that regardless of whether they have a lot of or less money, it is a significant cause of guilt and mystery. Also, money vigilance seems to be associated with the following constructs: attention, readiness, watchfulness, worry over money, and awareness as to possible annoyance or threat (Klontz et al., 2011).

### ***Financial Knowledge and Stock Market Investing***

Financial knowledge suggests that a person has an understanding of information and concepts that are financial in nature which supports his decision-making skills. Mandigma (2022) claimed that it is similar to financial literacy which, together with attitudes and behavior, comprise financial capability. Abdullah et al. (2020), highlight the importance of financial knowledge in making sound investment decisions, especially if the individuals are sufficiently equipped with knowhow on the stock market, industries, shares, and bonds. Further, the study by Weisfeld- Spolter et al. (2018) demonstrate that attitudes, as well as financial knowledge, relevantly affect the plans of consumers regarding their financial future. In a study conducted by Hsiao and Tsai (2018), it was found that investors could penetrate the derivatives market if they are knowledgeable in finance. On one hand, Sahi, Arora, and Dhameja (2013), found that individuals who are familiar with certain investments, prefer these certain types of investments

very much because of the feeling of comfort and security they have with these known investment products. On the other hand, Hibbert, Lawrence, and Prakash (2012) opined that people tend to be more efficient in investment allocation when they are more financially literate.

However, some studies show that most individuals in the low age bracket have low levels of financial knowledge and skills, even if they were technologically well- equipped both in terms of devices and skills (Musiał and Świecka, 2016). In addition, Krishna, Rofaida, and Sari (2010) explain that people could avoid financial problems if they could increase their know-how of personal finance. Lastly, according to Kim (2001) in Sabri (2011), financial knowledge is the fundamental acquaintance with finance that could equip individuals with principles enough to survive in this modern society. This fundamental knowledge includes being knowledgeable and experienced with the complex truth, facts and principles of spending, saving, and investing. From the foregoing discussions, we can generalize that financial knowledge is an individual's capability to comprehend finance in general, which includes understanding how to save, invest, acquire debt, buy insurance, and employ other financial instruments.

### ***Risk Attitude and Stock Market Investing***

Risk Attitude is defined as a chosen response to uncertainty, influenced by perception. There are two types of investors, namely, those who are risk seeker and those who are risk averse. A risk seeker is an individual who prefers risk, while a risk averse is an individual who is reluctant to take risks. Slovic (1972) claimed that because of the flexibility of the returns (actual or expected) on financial investments, risk becomes an inherent feature of these types of financial venture. Thus, it becomes necessary to evaluate the risk or uncertainty involved every time an investment decision is made. In addition, investors' risk attitudes affect their behavior when making financial decisions (SindhuK and Kumar, 2014). Hyll and Irrek (2015) concluded that individuals' attitudes toward risk affect their behavior in performing diversified activities.

Two analogous risk aversion concepts were advanced consecutively by Pratt (1964) and by Arrow (1965). The first concept manifests that individuals who strongly dislike risk would invest only a little chunk of their wealth in an asset that is categorized as risky. This contention is supported by the utility assumption on wealth (Pratt, 1964). In the succeeding year, Arrow (1965) refined the preceding concept into the relative risk aversion concept. This second concept proposed that individuals with more wealth will allocate a bigger portion of their wealth on risky assets, only if aversion to risk decreases with wealth. The studies of Barsky et al. (1997) and of Gron and Winton (2001) assert that the two terms, risk tolerance and risk aversion, are opposites. The authors contend that while risk aversion means risk avoidance by households, risk tolerance is a contrary term, meaning risk acceptance by households. Thus, theoretically, risk tolerance is the inverse of risk aversion. Further, Grable (2000) described tolerance towards risk as a household's ability to accept the most variability relative to a financial decision. Finally, the study by Conlin et al. (2015) disclosed that investment in stocks could be explained by the personality traits of the investors.

## **3. THEORETICAL FRAMEWORK**

Some theories and constructs contribute to the underpinnings of this research. These are the following: Theory of Planned Behavior, Financial Literacy Competencies, and Risk Perception Concept. These ideas were taken collectively in conceptualizing this research project which may fill the gap or inconclusive findings in past studies.

### ***Theory of Planned Behavior***

The researchers employed the Theory of Planned Behavior (TPB) by Ajzen (1991) to assess further the behavior and attitude relationship that influences stock market investing. This theory is an extension of the Theory of Reasoned Action (TRA) which justifies the adoption behavior. According to Ajzen, I. (1991), the theory of planned behavior states that human behavior is best predicted by motivational factors like attitudes about the behavioral; they are indicators of how people who are driven would like to try or of the extent of effort they exert to be able to carry out a particular behavior. As stated, this theory is a mix of attitudes, subjective norms, and perceived behavior. In terms of attitudes, it determines one's degree of assessing favorable or unfavorable claims of behavior. In addition, the subjective norm refers to the recognized and standard behavior accepted by society. Likewise, perceived behavioral control is associated with factors that may enable or slow down an individual's performance of a specific behavior. Furthermore, as part of behavioral finance, this theory focuses on attitude, which plays an important role in stock market involvement. This theory was discovered to be relevant in the Indian market, specifically to anticipate the attitudes of investors towards money while they are participating in the financial markets, and it also provided a foundation for applying the TPB in stock investing (Nadeem, et al., 2020). Similarly, earlier studies in the Indonesian and South Africa market utilized this theory on financial knowledge of tertiary students (Mudzingiri et al., 2018), student interest in investing (Hidayat et al., 2019), and financial management behavior (Ameliawati and Setiyani, 2018). In line with this, the researchers want to put the idea about tertiary students' stock market engagement to the test in the Philippines.

### ***Financial Literacy Competencies***

There is a contention that small investors can easily access global financial markets because of the wider availability of new financial products and services. This notion is possible depending on the investors' level of financial literacy which will enable them to understand financial products and services that tend to be dynamic and fluctuate in the context of financial literacy. According to Lusardi and Mitchell (2014), financial literacy refers to people's capacity to analyze economic data in order to decide on the following issues: making financial plans, building wealth, acquiring debt, and providing for retirement pensions. Thus, financial literacy is an essential criterion in assessing a person's ability to make more thoughtful decisions on financial matters. The Organization for Economic Cooperation and Development (OECD, 2013, 144) defines financial literacy as "the skills, motivation, and confidence to apply such knowledge and understanding to make effective decisions across a variety of economic contexts, improve individuals' and society's financial well-being, and enable participation in economic life." Therefore, financial literacy encompasses financial knowledge and financial behavior (Lusardi A., 2019). It is important to ascertain the preparedness of individuals to make sound financial decisions as they live every day amidst marked transformations and advances in the field of finance as well as the economy as a whole. In order to decide better on financial issues, it is a must to determine first what individuals already know as against what they need to know before measuring the possible gap between these two levels.

The extant literature often includes discussions on the participation in the stock market. Still, there is a dearth of studies regarding the considerable variations among the participation rates of different countries in their stock markets (Perry and Morris, 2005). According to Balloch, Nicolae, and Philip (2014), stock market knowledge is increasingly essential. Individuals with limited financial literacy are unlikely to do stock investing, and unlikely to engage in the stock market, which influence most of their decisions in the field of finance (Van Rooij, Lusardi, and Alessie, 2011). Previous research has attempted to explain why people do not invest in stocks. Several recent studies found that the stock market nonparticipation is due to a lack of awareness and a lack of sufficient knowledge of investment (Hong, Kubik, and Stein (2004), Guiso and Jappelli (2005), Campbell (2006), Calvet, Campbell, and Sodini (2007), Brown et al. (2008).

### ***Risk Perception Concept***

Scholarly research and anecdotal evidence, on the other hand, demonstrate that there is no universal notion of risk or how much danger is inherent in certain activities. According to Elmiger, Kim, and Berman (2001), the risk is defined as "Risk = Danger + Opportunity" when translated into Chinese characters. Opportunity is required to distinguish between the ideas of danger and risk. Risk is an exposure to harm that, if successfully overcome, may provide an advantage. The risk perception theory suggests that people tend to speculate more whenever they have a better feeling of security. In other words, the better safety measures are put in place, the greater are the risk-taking behavior response of people (Wilde, 1982).

Investors' capacity to make sound financial decision based on their financial knowledge is influenced by their perceived risks. Risk perception deals with an individual's ability to understand and to visualize in accordance with the acquired data. This is usually not the case with constructs like reality, thoughts, or guesses (Ainia and Lutfi 2019). The authors added that risk perception, being a cognitive bias, usually affects the behavior and decision-making capacity of individuals in ambiguous circumstances. Further, the aforementioned authors claimed that the higher a person's risk perception is, the lower is the likelihood of him investing, and vice versa. As a result, a high-risk mindset has negative consequences because it reduces the possibility of an investor allocating more funds to high-risk assets.

Phung and Nguyen (2017) found that in making successful investments, one must be mindful that perceived risks have a direct positive impact on performance as well as on investment intention, but the effect on investment intention is indirect. Thus, the study of Phung and Nguyen (2017) revealed a direct relationship with perceived risk and the satisfaction of investors with their investment decisions. Similarly, the significant profits that accrued following the investment decision would encourage more future investment. Finally, Phung and Nguyen (2017) maintained that investors should pay attention to equities tagged as 'controlled,' 'warned,' or 'halted trade'.

Investors' perceptions of the stock's dangers can trump financial knowledge and affect the investors' choices. Also, an investor's risk perception might lead them to make or refrain from decisions regarding risky investment. Investors who are highly open to experience and who did not violate the prospect theory, have the tendency to make investment decisions that are very risky (De Bortoli et al., 2019). The authors opined that performing an investor profile analysis (IPA) concerning personality openness to experience leads to investing decisions that are considered high-risk. According to prospect theory, when an investor violates stipulations in the utility theory, they are not prone to invest in risky assets.

Further, Sadiq and Amna (2019) claim that the availability of perfect information could entice investors to make rational judgments. Unfortunately, investors have little financial expertise, which caused them to decide poorly on investment selections, resulting in missed beneficial investment opportunities. Furthermore, the authors opine that both cognitive and psychological aspects an investor's personality impair his capacity to make a sound financial decision. As a result, although investors seek to make decisions that would maximize their profit, their optimal decision-making skills under the influence of uncertainty, are determined by their personalities, which are the outcome of their psychological and cognitive makeup. Finally, perceived risks and their consequences influence investor decisions. According to Ferreira (2018), various people's attitudes toward risk and their perceptions are influenced by the financial models they employ to depict perceived hazards.

## **4. THE CONCEPTUAL FRAMEWORK**

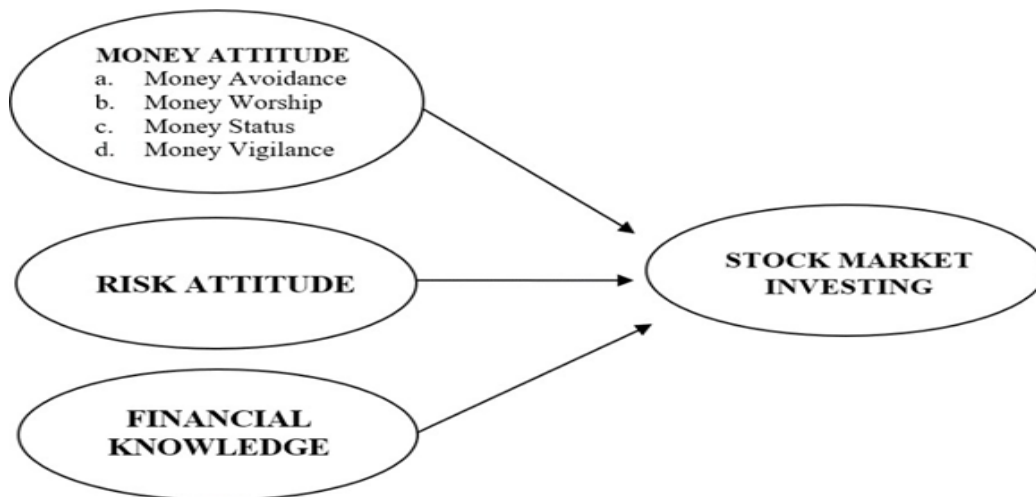
The researchers developed a conceptual framework to further analyze and examine the elements that affect student's stock market investing through the identification of the stand-

alone and the response variables. (See Figure 1). The said framework includes the hypotheses of this study, namely:

*H<sub>01</sub>: Money attitude does not influence significantly investing in the stock market.*

*H<sub>02</sub>: Financial knowledge does not influence significantly investing in the stock market.*

*H<sub>03</sub>: Risk attitude does not influence significantly investing in the stock market.*



*Figure 1. Conceptual Framework*

## 5. METHODS

The researchers investigated the phenomenon of tertiary students directly investing in the stock market using a quantitative methodology. It used a descriptive-correlational research design starting with a systematic review of documents (Mandigma, 2022). The documentary analysis, specifically content analysis of a variety of texts was employed to gain an in depth and detailed analysis of non-numeric data (Badoc-Gonzales, et al., 2021). Researchers employ this method when they are solely interested in observing and measuring the variables to do the study on those variables; they do not attempt to control any of the variables.

The research was carried out in the Philippines, particularly in Metro Manila, and included several different universities. The study was conducted predominantly in the National Capital Region, with the intended respondents being those who are presently enrolled in higher education. The participants in this research were tertiary students from around Metro Manila who directly invested in the Philippine Stock Market.

The researchers used a purposive sampling strategy since the selection of sample components had to meet certain criteria that had been established in accordance with the study's goal. Raosoft's sample size calculator was utilized to identify approximately 384 tertiary students from a population of 669,504 tertiary students with a 95% confidence level, a 5% margin of error, and a response distribution of 50%.

The online survey was able to yield 387 valid responses. The demographic profile statistics of the study are shown in *Table 1*. Evidently, most of the respondents were fourth-year students (66.67%), followed by third-year students (23.26%), second-year students (7.24%), and first-year students (2.84%) respectively. It also shows that the highest percentage of respondents are enrolled in the University of Santo Tomas (66.67%).

**Table 1. Demographic Profile***Frequency and Distribution*

	<i>f</i>	<i>%</i>
<b>Name of School</b>		
University of Santo Tomas	258	66.67
De La Salle University	26	6.72
University of the Philippines	14	3.62
Ateneo De Manila University	9	2.33
Others	80	20.66
<b>Total</b>	<b>387</b>	<b>100.00</b>
<b>Year Level</b>		
1 <sup>st</sup> Year		
	11	2.84
2 <sup>nd</sup> Year	28	7.24
3 <sup>rd</sup> Year	90	23.26
4 <sup>th</sup> Year	258	66.67
<b>Total</b>	<b>387</b>	<b>100.00</b>

The structured questionnaire for the survey was divided into two sections: the demographic profile of the respondents and the key variables for the study. As for the demographic profile, the questions are name, tertiary school, and year level. Meanwhile, the four measurement scales are the factors influencing the stock market investing such as money attitude, risk attitude, and financial knowledge. The first construct is the money attitude which consists of four sub-elements, namely, avoidance of money, money, worship of money status, and vigilance towards money. Said money attitude construct contains a total of 44 items in the questionnaire. To measure the money attitudes of the students, the researchers applied Klontz's money attitude scale (Klontz et al., 2011). The instrument for risk attitude is from the research of (Zhang et al., 2019), comprising 8 items. The financial knowledge questionnaires were integrated from the study (Perry and Morris, 2005) and consisted of 6 items. Lastly, the stock market investing includes 8 items that were adopted (Luotonen, 2009).

The questionnaire enabled the respondents to rate the different variables, as mentioned previously. The ratings were expressed through a Likert scale (Badoc-Gonzales, et al., 2020). For example, the 2 variables, attitude towards money and attitude towards risk, were assessed through a four-point Likert scale with 1 being "Strongly Disagree" and 4 being "Strongly Agree". Further, the variable, financial knowledge, was evaluated through a five-point Likert scale ranging from the lowest score of "Nothing" to the highest score of "A Lot". To achieve the objectives of this study, the researchers used 4 point-Likert scaled questionnaires that were circulated to the respondents to collect primary data and have a descriptive response about their financial behavior. The researchers opted to include close-ended questions where the respondents were given pre-coded responses in the form of a Likert scale. A Likert scale is essential in measuring a respondent's view or opinion towards the given subject by knowing how much they agree or disagree with a particular statement. The instrument was subjected to a Cronbach's alpha test in order to measure its scale reliability. The test resulted to a 0.889 score indicating that the items' internal consistency is good.

In terms of the data collection process, the researchers developed an online survey and adapted the questionnaire employed by Nadeem et al. (2020) in their study. The online survey was distributed to tertiary students within Metro Manila through various social media platforms. By applying the purposive sampling method, the researchers were able to reach the targeted participants for the study to gather a more significant number of respondents who will



meet the inclusion criteria. A sample which is derived from a non-probability purposive method is chosen based on the population's characteristics and the purpose of the study (Crossman, 2020). This sampling method may be very practical and functional in cases when there is a need to get a specific sample immediately, without overriding consideration to proportionality.

The data gathering was conducted from March 2022 to April 2022. The gathered data was collated using google forms. The data were analyzed using correlation and regression analysis to validate and assess the elements that stimulate the stock market investing of tertiary students within Metro Manila. The data gathered have undergone analysis after the administration of online questionnaires. Thus, the researchers used the information to distinguish the elements that affect the stock market investing of tertiary students and the correlation of one variable to another. Using the frequency and percentage of the demographic profile of the respondents, such as name, tertiary school, and year level the descriptive statistical findings were assessed to determine their significance. The levels of the variables, on the other hand, were determined after the survey was completed by calculating the mean and standard deviation of the responses.

The researchers took into consideration that the participant's response and demographic profile are confidential, properly consented to, and guarantee anonymity. Likewise, the Data Privacy Act of 2012 is included in the first part of the survey to ensure that all information disclosed in the survey will be used only for the sole purpose of this study.

## 6. RESULTS AND DISCUSSIONS

This study tested the elements that stimulate the stock market investing of tertiary students. To identify prospective predictors of stock market involvement, Stepwise Regression Analysis was performed, and the Pearson Correlation Coefficient was obtained to assess whether the variables were statistically correlated. The data analysis was examined in two stages: the first was to analyze the link between each variable and the second was to define and model match the structural model.

As for the stock market participation profile, it is shown in **Table 2** that most of the respondents owns stock for less than 2 stocks (43.67%), and 29.72% hold their stock investments for 2-6 months. The total investment in the stock market annually of the majority is less than 25,000 accounting to 43.67%, 25,000 to 50,00 (14.47%), 50,000 to 75,000 (4.13%), 75,000 to 100,000 (3.10%), and 100,000 above (7.24%). Lastly, the approximate dividends earned from stocks recently owned last year of the investors are as follows: less than P2,000 (28.68%), P2,000 up to P4,000 (19.12%), P4,000 up to P6,000 (10.08%), P6,000 up to P10,000(4.91%), P10,000 or more (9.82%) respectively.

**Table 2.** Stock Market Participation Profile

	<b>f</b>	<b>%</b>
<b>Number of different types of stocks owned by investors</b>		
Less than 2	169	43.67
2 - 6	115	29.72
7 - 10	10	3.36
10 - 14	2	0.52
More than 15	5	1.29
None	83	21.45
<b>Total</b>	<b>387</b>	<b>100.00</b>
<b>Total annual stock market investment</b>		
Less than P25,000	189	48.84
P25,000 up to P50,000	56	14.47
P50,000 up to P75,000	16	4.13

P75,000 up to P100,000	12	3.10
P100,000 or more	28	7.24
<b>Total</b>	<b>387</b>	<b>100.00</b>
<b>Percentage of income invested in the equity market</b>		
0 up to 10%	169	43.67
10% up to 20%	66	17.05
20% up to 30%	19	4.91
30% up to 40%	11	2.84
40% or more	18	4.65
<b>Total</b>	<b>387</b>	<b>100.00</b>
<b>Approximate dividends earned from stocks recently owned</b>		
Less than P2,000	111	28.68
P2,000 up to P4,000	74	19.12
P4,000 up to P6,000	39	10.08
P6,000 up to P10,000	19	4.91
P10,000 or more	38	9.82
<b>Total</b>	<b>387</b>	<b>100.00</b>

### *Pearson Correlation Coefficient*

Two variables have a linear link whose direction and degree can be measured with the use of the Pearson Correlation Coefficient (Schober et al., 2018). **Table 3** shows that risk attitude, money attitude, and financial knowledge are significantly correlated with stock market investing. These independent variables are mildly correlated with the dependent variable since the computed values of Pearson correlation lies below +.29. According to Nettleton (2021), the correlation between the two variables with a 2-tailed p-value that is <0.05 is statistically significant. While on the other hand, every correlation that is not statistically significant has a 2-tailed p-value that is >0.05.

**Table 3.** Pearson Correlation Coefficients among Stock Market Investing, Financial Knowledge, Risk Attitude, and Money Attitude

		<b>Stock Market Investing</b>
Financial Knowledge <sup>a</sup>	Pearson Correlation	.297*
	Significance (2-tailed)	.000
	N	387
Risk Attitude <sup>b</sup>	Pearson Correlation	.148*
	Significance (2-tailed)	.004
	N	387
Money Attitude <sup>c</sup>	Pearson Correlation	.116*
	Significance (2-tailed)	.009
	N	387

### *Stepwise Regression Analysis*

As presented in **Table 4**, stepwise regression analysis was performed to identify the effect of money attitude, risk attitude, and financial knowledge on stock market investing. This statistical tool is one of the approaches that are most appropriate for this research since it allows for a better understanding of the structure of the correlation (Cote, 2021). The computation reveals that financial knowledge makes the greatest prediction of tertiary students' stock market investing when compared to other variables. According to the results of the study, the computed R Square of financial knowledge was 8.8% in relation to stock investing. It is possible to correlate the remaining 91.2% of the variance with other predictor variables, but not with

money attitude or risk attitude. Hence, financial knowledge is regarded to affect stock market investing significantly even though it incurs very little contribution.

**Table 4. Model Summary of the Predictors of Stock Market Investing**

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of Estimate
1	.297 <sup>a</sup>	0.88	0.86	.88377
2	.148 <sup>b</sup>	0.022		
3	.005 <sup>c</sup>	0.023	0.025	0.92548

Predictors: (K = Constant), Financial Knowledge

Predictors: (K = Constant), Risk Attitude

Predictors: (K = Constant), Money Attitude

According to the results of the ANOVA calculation, the researcher determined that a regression model is a significant tool for evaluating if the dependent variable is influenced by the independent variable. The ANOVA (*Table 5*) determined that the influence of financial knowledge on stock market investing was positively significant. The ANOVA results have a substantial impact on the regression model.

**Table 5. Analysis of Variance of the Predictors of Stock Market Participation**

	Sum of Squares	df	Mean <sup>2</sup>	F	Sig
Model	3.342	1	3.342	20.80	.000 <sup>a</sup>
Regression Residual	61.857	385	.161	2	
<b>Total</b>	<b>65.199</b>	<b>386</b>			

Note: Dependent Variable: Stock Market Participation, Predictors: (Constant), Financial Knowledge

**Table 6. Stepwise Regression Analysis of the Predictors of Stock Market Participation**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Significance
	B	Std. Error	Beta		
Constant	.345	.099		3.493	.001
Financial Knowledge	.120	.026	.226	4.561	.000 <sup>a</sup>

Note: Dependent Variable: Stock Market Participation

As indicated in *Table 6*, the model for stock market investing is as follows: Stock Market Investing = 0.345 + 0.12 Stock Market Investing (Financial Knowledge). According to this model, the variability in financial knowledge of the respondents' accounts for 5.1% of the variability in stock market investing. It is possible to interpret the model as follows: an increase of 1 unit in the level of financial knowledge in stock market would result in an increase of 0.12 unit in the level of stock investing. According to Fritz (2015), stepwise regression is an automated computational process that aims to identify the ideal multiple regression model by using only statistically significant predictors from a larger collection of potentially predictive variables.

To enhance the internal validity of the study with the model for stock market investing, control variables such as the number of different types of stocks owned by investors, and the total annual stock market investment of the investors were added one by one in the multiple regression analysis. Results of the correlation test showed that at .01 significance level (2 tailed), both the number of stocks owned by investors and the total annual stock market investment are correlated to financial knowledge (p-value = .000 for both control variables)

and to stock market participation (p-value = .000 for both variables). **Table 7** presents the regression results with the number of stocks owned by investors as a control variable.

**Table 7. Stepwise Regression Analysis of the Predictors of Stock Market Participation with Number of stocks owned by Investor as control Variable**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.370	.074		5.028	.000
Financial_Knowledge	.013	.021	.024	.620	.535
Number_of_Stocks	.303	.017	.682	17.610	.000

Note: Dependent Variable: Stock Market Participation

From **Table 7**, it can be seen that the model showing that financial knowledge as a predictor of stock market investing has been negated (p-value = .535) by the addition of the number of stocks that the investors own. Thus, the original model which is Stock Market Investing = 0.345 + 0.12 Financial Knowledge as shown in **Table 7**, stays. Another control variable which is the total annual stock market investment of the investors, is tested with the results shown in **Table 8**.

**Table 8. Stepwise Regression Analysis of the Predictors of Stock Market Participation with Total Stock Market Investment by Investor as control Variable**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.401	.086		4.647	.000
Financial Knowledge	.048	.024	.090	1.991	.047
Total stocks invested	.152	.014	.499	11.096	.000

Note: Dependent Variable: Stock Market Participation

Results in **Table 8** shows that the addition of the total annual stock market investment of the investors as a control variable maintained the significance of financial knowledge (p-value = .047) as a predictor of stock market participation. Thus, the new model is: Stock Market Participation = .401 + .048 Financial Knowledge + .152 Total Annual Stocks Invested with a  $r^2 = 0.282$ .

### Discussion

The purpose of the study is to determine the factors that influence the stock market investing of tertiary students. A review of previous research shows that only a few studies investigated the effect of money and risk attitudes on stock investing (Nadeem et al., 2020). Earlier studies were conducted to try and capture the distinct psychological factors that influence stock investing (Nadeem et al., 2020). Psychology and behavioral finance have been used to explain why investors are not always rational and are swayed by emotions, intuitions, and other factors. Thus, further research is needed to understand better the influence of money attitude, risk attitude, and financial knowledge on stock market investing of the tertiary students.

The findings revealed that those in higher education, notably fourth-year students, had a greater understanding of and interest in the stock market than the general sample. Higher-year students may readily and affordably participate in the stock market, according to Pertiwi et al. (2019). Students who are interested in financial management may find this interesting since they are already familiar with financial concepts such as capital markets, investment management, and portfolios. According to Herawati, et. al. (2018), students who have financial

knowledge improve the students' ability to weigh the advantages and disadvantages of various investment options.

According to the calculated Pearson correlation coefficient, it revealed money attitude, financial knowledge, and risk attitude are the factors that have a positive relationship with stock market investing. Having a value greater than 0.05 signifies that these factors are correlated with stock market investing. This is confirmed by the findings of a research (Baihaqqy et al., 2020), which suggest that there is a correlation between the investor's knowledge of financial information and their stock market investment. Therefore, financial knowledge is necessary for students in terms of enhancing their engagement in the stock market. Similarly, the results were supported by Ahinful et al. (2021) whose study showed that financial literacy, aside from a person's ethical view of stock market investment and attitude towards financial risk, influence his willingness to invest in stocks. On the other hand, the findings of the research done by Yoong (2010) disproved the conclusion that financial knowledge is negatively correlated to stock market investing.

On the other hand, the output of stepwise regression analysis revealed that attitudes toward money do not affect significantly the stock market investing among tertiary students' investors, and as a result, Hypothesis 1 is therefore supported. Hence, this result is corroborated by the findings of the study by Nadeem, et al. (2020), indicating that stock investing is not significantly affected in a strong positive way by the money attitudes of the investors. Therefore, it shows that participation in the stock market is a decision that the investors make without regard to their attitudes toward money. Similarly, the computed results of stepwise regression analysis revealed that risk attitudes do not significantly affect investment in stocks. This study result means that persons who are highly averse to risk have a strong possibility of not investing in stocks. This contention is aligned with the finding of the study of Akhtar and Das (2019), which leads to supporting Hypothesis 3 of the present research. Further, this research found that investors' attitudes toward money and risk have no significant impact on decisions to invest in stocks.

Furthermore, hypothesis 2 indicates that investment in the stock market is significantly influenced by financial knowledge, therefore Hypothesis 2 is not supported. As a result, this study demonstrates the importance of financial knowledge among investors in implying that an investor's comprehension of financial terminology and concepts has an influence on his or her decision to make stock investment. The outcomes of this research confirmed the claim stated by Nadeem, et al. (2020) that an individual's financial know-how about investments has a positive influence on stock market investing. An increase in financial knowledge may also result in an increase in stock investing in the future. According to Hibbert, et.al. (2012), a person tends to efficiently allocate most of his investments if his knowledge of finance is higher. In addition, Moore (2003) elaborate further that sound financial literacy or knowledge of finance is achieved by earning substantial experience through practice and by integrating these acquired knowledge actively. This is substantiated by the addition of the total annual stock market investment by investors as control variable in the model where financial knowledge significantly influence stock market investing.

To sum up, the extant literature supported the theory that knowledge of finance significantly affects the decisions of investors to make investments in the stock market (Van Rooij et al., 2011). This strengthens the validity of the results of this study regarding the positive influence of financial knowledge on stock market investing. Lastly, the results of this study are in consonance with the findings of past studies, i. e., persons with sound knowledge of finance exhibit rational financial behavior, while persons with poor grasp of financial concepts and practices are risk-averse and they avoid making risky stock investments.

## **7. CONCLUSION AND RECOMMENDATIONS**

The need to investigate and find methods to expand people's financial knowledge, especially among students, is crucial in this age of globalization and financial growth. Students, after all, are regarded to be the future of every nation. The researchers were able to recognize the reason and timing of stock market investing by tertiary student investors as well as the possible influence of risk and money attitudes, and financial knowledge on their participation in the stock market. The study contributed to the extant literature regarding the influences on stock market investing. The findings of the Pearson Correlation Coefficient indicate that money attitude, financial knowledge, and risk attitude are the factors that have a significant relationship with stock market investing. Meanwhile, the Stepwise Regression Analysis states that only financial knowledge is seen to have the most significant influence on stock market investing, even with the addition of the total annual stock market investment of the investors as a control variable. Hence, two out of three hypotheses were supported. With the variables that the researchers have tested and analyzed, including the control variables, this study will be beneficial in different aspects of stock market investing. Also, the findings could help investors recognize the possible effects of the interactions among the variables on the risks and returns of their investment portfolios (Mandigma, 2019). Further, the results could set out a powerful platform for government institutions to prepare business and policy proposals on programs like financial literacy and subsequently evaluate their effectiveness (Mandigma, 2014). It is but appropriate to look into this prospect of having possible network collaboration in the aspects of both project performance and project continuity (Badoc-Gonzales, et al., 2022).

The findings of the study may show some applicability to situations in similar context, culture and political environment (Badoc-Gonzales, et al., 2021) thus, it had limitations, including the sampling procedure as well as the questions in the questionnaire, which could be disputed and improved by other researchers. Hence, the following recommendations are to be made based on the data that has been evaluated, as well as the results and conclusions of the research. Even though this research contributes to existing knowledge, financial experts and members of the academic community may make additional improvements to the study by extending the sample size and not limiting the study to only tertiary student investors in Metro Manila. In contrast to prior research that evaluated the attitudes of actual investors in India in particular, this study has specifically examined the financial knowledge, risk attitude, and money attitude of tertiary students in Metro Manila, with the goal of improving their financial decisions. As a response, other researchers may take into consideration distinct subtypes of views that may be investigated in the future. The least significant variables should be further investigated and improved in future research to know the reasons for such insignificant relationships. Some further ideas include looking into the role of socio-demographics in this connection, doing comparison research to understand variations in attitudes between countries, and including other moderating and mediating factors to increase the predictive power of the model.

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