

Investment Knowledge, Risk Tolerance, and Factors Influencing Investment Decisions among Intergenerational Investors

Ashna A. Rehmat^{*1}, Ma. Fara J. Magada²

¹OccamStrata Pty Ltd, Melbourne, Australia

²Business Management and Accountancy, Carlos Hilado Memorial State University, Bacolod City, Philippines

*Corresponding Author Email: ashnarehmat07@gmail.com

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Abstract. This study addresses a gap in understanding how investment knowledge and risk tolerance differ across generations and influence investment decisions. While earlier research of Finke & Huston (2014) emphasized the importance of intergenerational investing, they did not fully explore how risk tolerance evolves or how demographic profiles such as sex, gross monthly income, and educational attainment may influence it. This study aimed to bridge that gap, contributing to the academic understanding of investor behavior in the current financial environment. It investigated intergenerational investors' investment knowledge level regarding investment products' purpose, return, and risk. It also assessed the degree of risk tolerance of the participants when grouped according to sex, generation, gross monthly income, and educational attainment. Additionally, the study examined the extent to which factors influence investment decisions. A descriptive-correlational research methodology was employed. A researcher-developed questionnaire, which underwent validity and reliability tests, was administered to 60 investors from various generations in selected financial and governmental institutions in Bacolod City. Participants were chosen through purposive quota sampling. The data collected were analyzed using mean, standard deviation, Kruskal-Wallis U test, Mann-Whitney U test, and Spearman's rho. Results revealed a high level of investment knowledge and a moderate risk tolerance. Significant differences in the degree of risk tolerance were found when grouped by generation. The extent of factors influencing investment decisions was generally high, with significant differences observed when grouped by sex, generation, and income. Furthermore, a significant relationship was found between the level of investment knowledge and the extent of factors influencing investment decisions. These findings provide insights into several generations' investment knowledge, risk assessment, and decision-making approaches, emphasizing patterns influenced by socioeconomic characteristics, educational background, financial exposure, and generational experiences. The study underscores the need for targeted financial education and investment strategies considering generational differences.

Keywords: Intergenerational Investors; Investment decisions; Investment knowledge; Risk tolerance.

1.0 Introduction

In recent years, there has been growing interest in understanding how investment behavior varies across different generations (Carlin et al., 2019). Exploring these generational differences offers valuable insights into how individuals from various age groups make investment decisions. These differences highlight the importance of considering generational perspectives when creating financial strategies and policies that meet

each group's unique needs and preferences. Research suggests that economic conditions and global events during a person's formative years significantly shape their investment attitudes and behaviors (Carlin et al., 2019). Moreover, socio-economic conditions and technological advancements have increased access to financial information, especially among younger generations. This democratization of information has influenced how younger investors manage risks and make financial decisions (Lusardi & Mitchell, 2014).

Understanding investment requires more than just interest—solid knowledge, critical thinking, and business awareness. A strong foundation in investment concepts helps individuals avoid losses and make better financial decisions (van Rooij et al., 2011). Making wise investment choices is one of the most important financial actions a person may take in their lifetime (Brooks et al., 2018). Risk tolerance is another key factor that shapes investment behavior. It refers to an individual's willingness to engage in financial activities that involve uncertainty or potential loss (Kuzniak et al., 2015). Various studies have examined the factors influencing risk tolerance, which is critical in financial decision-making (Bayar et al., 2020). Individuals with lower risk tolerance prefer safer investments and are less comfortable with financial uncertainty (Grable & Lytton, 1999).

This study addresses a gap in understanding how investment knowledge and risk tolerance differ across generations and influence investment decisions. While earlier research of Finke & Huston (2014) emphasized the importance of intergenerational investing, they did not fully explore how risk tolerance evolves or how demographic profiles such as sex, gross monthly income, and educational attainment may influence it. This study aimed to bridge that gap, contributing to the academic understanding of investor behavior in the current financial environment. It investigated intergenerational investors' investment knowledge level regarding investment products' purpose, return, and risk. It also assessed the degree of risk tolerance of the participants when grouped according to sex, generation, gross monthly income, and educational attainment. Additionally, the study examined the extent to which factors influence investment decisions. It explored the significant difference in risk tolerance and the importance of factors influencing investment decisions. Furthermore, it also examined whether a substantial relationship exists between the level of investment knowledge and the extent of factors influencing investment decisions.

2.0 Methodology

2.1 Research Design

This study used the descriptive-correlational design employing a quantitative approach to determine the level of investment knowledge, degree of risk tolerance, and extent of investment decisions. This design allowed the researcher to describe trends and test relationships between the variables without manipulating them. No traditional descriptive-correlational method was modified, as the design suited the study's objectives.

2.2 Research Participants

Two hundred forty participants were selected using purposive quota sampling, with 60 investors from each generation: Baby Boomers, Gen X, Millennials, and Gen Z. Selection was based on relevant criteria, including active investment participation. This ensured a balanced representation across generations, which aligns with the study's focus on intergenerational investment behavior.

2.3 Research Instrument

The study utilized a survey questionnaire as the primary instrument for data collection. The questionnaire was designed to gather information regarding investment knowledge, degree of risk tolerance, and extent of factors influencing investment decisions among intergenerational investors. Data were collected using a structured, researcher-made survey questionnaire divided into four sections. The first part was intended to determine the participants' profiles. The second, third, and fourth parts are designed to determine the level of investment knowledge, degree of risk tolerance, and extent of factors influencing investment decisions. The second and fourth parts measured the level of investment knowledge and the extent of factors influencing investment decisions using the 5-point Likert scale. In the third part, the Grable & Lytton risk tolerance scale was used to assess the risk tolerance of investors (Grable & Lytton, 1999). The responses to the scale were then interpreted to determine their level of risk tolerance using a 5-point Likert Scale.

The questionnaire underwent content validity testing using the Lawshe method, with nine validators: four investment portfolio managers and five research experts from Carlos Hilado Memorial State University –

Fortune Towne. The overall Content Validity Ratio (CVR) was 0.98, with all 54 items rated as valid. A reliability test was conducted with 30 participants from various generations to assess the instrument's reliability. The instrument resulted in a Cronbach's alpha value of 0.97 for Investment Knowledge, 0.78 for Risk Tolerance, and 0.954 for Factors Influencing Investment Decisions, with an overall alpha of 0.90. These values confirm that the instrument was reliable for measuring the intended constructs (Taber, 2018).

2.4 Data Gathering Procedure

Before data collection, the professor in charge of the study signed an endorsement letter and gave it to the participants. Surveys were conducted from June to October 2024 through Google Forms, and some were personally distributed by the researcher to participants for flexibility and broader reach. Each participant was given 1 to 5 days to complete the survey. A total of 240 completed responses were gathered. Participants were informed about the voluntary and confidential nature of their participation. Ethical protocols were followed throughout the process, and the questionnaire included a brief introduction stating the purpose of the study and the participants' rights. Completed questionnaires were reviewed, tallied, and encoded. The researcher sought the professional assistance of a statistician in analyzing the data to ensure accuracy and methodological soundness.

2.5 Data Analysis

Data were analyzed using SPSS. Descriptive statistics such as mean and standard deviation were employed to describe the level of investment knowledge, degree of risk tolerance, and the extent of factors influencing the investment decisions. Furthermore, the Kruskal-Wallis U test was used to compare variables by sex and educational attainment, and the Mann-Whitney U test was used to compare generation and gross monthly income. Spearman's rho was employed to test the correlation between the level of investment knowledge and the extent of factors influencing investment decisions.

2.6 Ethical Considerations

This research was carried out with the highest respect for ethical standards. Participation in the study was entirely voluntary, and informed consent was secured from all participants before their involvement. They were informed of their right to refuse or withdraw from the study at any point without any consequences. All data were treated with strict confidentiality. Personal identifiable information was anonymized, and data were securely stored on password-protected devices and encrypted cloud platforms. Upon completion of the study, all digital and physical data were securely deleted or destroyed, ensuring no residual information could be retrieved or misused. Since the study did not involve a vulnerable population, sensitive personal data, or clinical interventions, oversight of the Institutional Ethics Review Committee may not be required. However, the researcher strictly adhered to established ethical research principles to safeguard all participants' privacy, dignity, and rights throughout the study.

3.0 Results and Discussion

3.1 Level of Investment Knowledge

Table 1 illustrates the level of Investment Knowledge among participants regarding investment products' purpose, return, and risk. The *Purpose of investment products* revealed the highest mean score ($M = 3.84$, $SD = 0.56$), interpreted as *High*. The *risk of investment products* got the lowest mean score among the three ($M = 3.62$, $SD = 0.62$), which was also interpreted as *high*.

Table 1. *Level of Investment Knowledge*

Indicators	Mean	Interpretation	SD
Purpose of investment products	3.84	High	0.56
Return of investment products	3.70	High	0.62
Risk of investment products	3.62	High	0.62

Note: 4.50 – 5.00 (Very High); 3.50 – 4.49 (High); 2.50 – 3.49 (Moderate); 1.50 – 2.49 (Low); 1.00 – 1.49 (Very Low)

The results indicate that participants exhibit the highest level of knowledge regarding the purpose of investment products, as reflected by the highest mean score, suggesting a strong understanding of their objectives. In contrast, while the risk of investment products scored the lowest among the three categories, it was still interpreted as high, implying that participants are substantially aware of the associated risks. This score disparity highlights that while participants are well-versed in the purpose and risks of investments, there may

be room for more profound education or understanding regarding the returns on these products.

Che Hassan et al. (2023) found in their study on investor decision-making that individuals with high levels of investment knowledge typically place greater emphasis on understanding their purpose rather than on other factors. While recognizing the importance of risk and return, the study highlighted that investors focus on aligning their investment decisions with their personal and financial goals. This trend was especially noticeable among long-term investors.

3.2 Degree of Risk Tolerance According to Participants' Profiles

Table 2 shows the degree of risk tolerance when grouped and according to sex. The interpreted score was *moderate* ($M = 3.44$, $SD = 0.82$). The male participants have higher mean scores than the female participants. The mean scores are Male ($M = 3.52$, $SD = 0.88$), interpreted as *high*, and Female ($M = 3.41$, $SD = 0.79$), interpreted as *moderate*.

Table 2. Degree of Risk Tolerance when grouped according to Sex

Indicators	Mean	Interpretation	SD	Indicators
Male	63	3.52	High	0.88
Female	177	3.41	Moderate	0.79
As a whole	240	3.44	Moderate	0.82

The analysis indicates that males typically display a higher risk tolerance than females in investment decisions. Overall, investors generally exhibit moderate risk tolerance when engaging in investments. The findings are supported by Lusardi & Mitchell (2011), who revealed that, on average, men had higher scores in investment literacy than women. The study attributed these differences to factors such as greater confidence in financial decision-making, a stronger tendency for men to actively participate in financial markets, and societal norms influencing gender roles in finance. Additionally, men were more likely to engage in riskier financial activities like stock trading, while women preferred safer investments like bonds or savings accounts.

Table 3 presents the degree of risk tolerance when grouped as a whole and according to generation. The interpreted score was *moderate* ($M = 3.44$, $SD = 0.82$). The Millennials are the highest generation ($M = 3.70$, $SD = 0.83$), interpreted as *high*, and the lowest mean score was Baby Boomers ($M = 3.28$, $SD = 0.85$), *moderate*.

Table 3. Degree of Risk Tolerance when grouped according to Generation

Indicators	Mean	Interpretation	SD	Indicators
Gen Z	60	3.43	Moderate	0.77
Millennials	60	3.70	High	0.83
Gen X	60	3.33	Moderate	0.77
Baby Boomers	60	3.28	Moderate	0.85
As a whole	240	3.44	Moderate	0.82

This analysis suggests that Millennials exhibit the highest level of risk tolerance compared to other generations, likely due to their experiences with rapid technological advancements and a more dynamic job market. Boomers demonstrate the lowest inclination towards risk, likely shaped by their more traditional upbringing and economic circumstances.

Hoffower (2019) suggests that Millennials are more inclined to embrace uncertainty in financial decisions, motivated by their desire for greater autonomy and the opportunities of emerging technologies like online businesses and digital platforms. Additionally, the volatility of the 2008 financial crisis and the recovery that followed have influenced their attitude toward risk, fostering a more entrepreneurial mindset and a greater willingness to take financial risks. According to Godbout (2024), the Baby Boomer generation, raised during periods of economic stability, tends to exhibit more cautious financial behavior, prioritizing security, retirement savings, and avoiding significant financial risks. Baby Boomers' risk aversion is primarily driven by a desire to safeguard their wealth and ensure financial stability for retirement, which results in more conservative financial strategies.

Table 4 shows the results of the degree of risk tolerance when grouped according to gross monthly income. The data summarizes investors' gross monthly income range corresponding to risk tolerance. The table shows a

moderate score ($M = 3.44$, $SD = 0.82$). The highest mean score is the gross monthly income of ₱18,201.00-₱36,400.00 ($M = 3.58$, $SD = 0.57$), interpreted as *high*. The lowest mean score was ₱36,401.00-₱63,700.00 ($M = 3.27$, $SD = 0.82$), which was interpreted as *moderate*.

Table 4. Degree of Risk Tolerance when grouped according to Gross Monthly Income

Indicators	Mean	Interpretation	SD	Indicators
₱9,100.00-₱18,200.00	37	3.43	Moderate	0.80
₱18,201.00-₱36,400.00	88	3.58	High	0.77
₱36,401.00-₱63,700.00	85	3.27	Moderate	0.82
₱63,701.00-₱109,200.00 or more	30	3.50	High	0.90
As a whole	240	3.44	Moderate	0.82

The analysis indicates that the overall risk tolerance score is moderate, indicating a general trend toward balanced risk-taking within the sample. The highest mean score is observed in individuals with a gross monthly income between ₱18,201.00 and ₱36,400.00. This suggests that this income group may have a higher comfort level with risk, possibly due to greater financial flexibility or fewer financial pressures. Conversely, individuals with a monthly income between ₱36,401.00 and ₱63,700.00 exhibit the lowest mean score. This may reflect a more cautious approach, potentially driven by the increased financial responsibilities and stability concerns associated with higher income brackets.

The findings are supported by Hendrawaty et al. (2020), which shows the risk tolerance of middle-income earners. Their research suggests that individuals earning between ₱18,201.00 and ₱36,400 (the highest risk tolerance group in this study) tend to adopt a balanced approach to risk-taking. This group seems to have sufficient financial stability to take on moderate risks while not possessing excessive wealth that would allow them to take overly risky or reckless investment decisions. They emphasized that wealthier individuals, particularly those in higher income brackets, have better access to diversified investment portfolios and are able to take on more risk. For example, individuals earning a gross monthly income of over ₱63,701 (the second-highest income group in this study) are more likely to invest in riskier assets, such as stocks, due to their enhanced financial stability and security. Research by Lusardi & Mitchell (2011) suggests that individuals in lower-income brackets tend to be more risk-averse when making financial decisions, as their primary focus is often on meeting basic needs and securing financial stability for themselves and their families.

The results are also supported by Oehler et al. (2024) on income and investment behavior, who found that individuals in the middle-income bracket are generally less inclined to invest in speculative or high-risk assets. Although they have more disposable income than lower-income earners, they remain cautious about risking large portions of their savings. Instead, this group favors lower-risk investments, such as bonds or low-cost mutual funds, where the potential for loss is more controlled.

Table 5 presents the degree of risk tolerance when grouped according to educational attainment and interpreted as *moderate* ($M = 3.44$, $SD = 0.82$). The mean postgraduate score is ($M = 3.63$, $SD = 0.96$) interpreted as *high*, which is higher than that of a college graduate ($M = 3.42$, $SD = 0.81$), which is *moderate*.

Table 5. Degree of Risk Tolerance when grouped according to Educational Attainment

Indicators	Mean	Interpretation	SD	Indicators
College Graduate	224	3.42	Moderate	0.81
Post-Graduate	16	3.63	High	0.96
As a whole	240	3.44	Moderate	0.82

The overall risk tolerance score is moderate, reflecting a general inclination toward balanced risk-taking within the sample. Individuals with postgraduate education exhibit the highest mean score, implying that higher educational attainment may correlate with greater openness to risk, potentially driven by increased confidence in their expertise and decision-making skills. In contrast, college graduates display a moderate level of risk tolerance, as their strong investment knowledge makes them more aware of the risks associated with investments.

Koekemoer (2019) supported the findings that individuals with postgraduate education tend to have higher risk tolerance than those with only a college degree. This may be due to the nature of postgraduate education, which

frequently involves tackling complex and ambiguous problems and making decisions in uncertain situations. Such experiences can help individuals become more comfortable with risk. Additionally, postgraduate education often leads to better career prospects and greater financial security, which can safeguard against the potential adverse outcomes of taking risks.

3.3 Extension of Factors Influencing Investment Decisions

Table 6 illustrates Investment Decisions regarding behavioral biases, financial literacy, perceptual factors, and conceptual factors. The highest mean score was *conceptual factors* ($M = 3.96$, $SD = 0.61$), which was interpreted as *high*; the lowest mean score was *behavioral biases* ($M = 3.65$, $SD = 0.58$), which was also interpreted as *high*.

Table 6. Factors Influencing Investment Decisions

Indicators	Mean	Interpretation	SD
Behavioral Biases	3.65	High	0.58
Financial Literacy	3.83	High	0.63
Perceptual Factors	3.89	High	0.59
Conceptual Factors	3.96	High	0.61

This analysis reveals the differing importance of factors affecting investment decisions. Conceptual components attain the highest mean score, indicating that investors value their understanding of investment principles. In contrast, while behavioral biases received high scores, they were regarded as slightly less influential, suggesting that investors may acknowledge these biases but are less affected by them. The disparity in average scores emphasizes conceptual knowledge's central relevance while highlighting the significance of cognitive comprehension and behavioral inclinations in influencing investment choices.

The high mean score given to conceptual factors emphasizes their critical role in shaping the framework that guides investors' decision-making. Investors with strong financial knowledge and understanding of concepts typically achieve better portfolio diversification and risk management outcomes. Perceptual factors include risk perceptions, opportunities, and the broader economic environment. Favorable market trends drive investors to engage in more aggressive ventures, while unfavorable perceptions foster risk aversion (Wijaya & Utami, 2022). Investors with robust financial literacy are more likely to implement long-term investing plans, diversify their portfolios, and base their decisions on rational analysis rather than emotional responses (Hamza & Arif, 2019). Research by Suresh (2024) suggests that although behavioral biases persist, their impact on investing decisions is diminished relative to financial literacy and conceptual comprehension criteria. This indicates that numerous investors may either recognize their biases or possess the capacity to mitigate them, whether deliberately or unintentionally.

3.4 Difference in the Level of Investment Knowledge When Grouped According to Participants' Profiles

Table 7 shows significant differences in investment knowledge across generations, as evidenced by a chi-square statistic ($\chi^2 = 24.438$) and a *p-value* of 0.000 below the 0.01 significance threshold. This suggests that at least one generation differs substantially from the others in terms of their level of investment knowledge. The mean ranks for each generation are *Gen Z* (91.46), *Millennials* (145.40), *Gen X* (106.96), and *Baby Boomers* (138.18).

Table 7. Difference in the Level of Investment Knowledge when grouped according to Generation

Generation	Kruskal Wallis Test				
	N	Mean Rank	df	χ^2	p
Gen Z	60	91.46			
Millennials	60	145.40			
Gen X	60	106.96			
Baby Boomers	60	138.18			
Total	240		3	24.43**	<.001

*Significant at $p \leq .01$

The findings indicate that Millennials, succeeded by Baby Boomers, have better mean rankings and presumably superior investment knowledge relative to Gen Z and Gen X. The notable *p-value* (0.000) signifies considerable disparities in investment knowledge among various generational cohorts. Hastings et al. (2013) observed that Millennials and Baby Boomers often exhibit greater financial literacy, including investment acumen, than Generation X and Generation Z. Their research indicates that older generations possess a better experience in financial markets, resulting in a superior comprehension of financial concepts. Younger generations, especially

Gen Z and Gen X, typically have reduced familiarity with these concepts due to various socio-economic issues. This corresponds with your analysis, demonstrating that Millennials and Baby Boomers exhibit superior investment understanding, as indicated by substantial generational disparities and a p-value of 0.000, signifying considerable variation in financial literacy.

Table 8 illustrates whether there are significant differences in income levels among different groups, based on their income categories. The gross monthly income of ₱9,100.00 - ₱18,200.00 (N=37) and mean rank (104.49), ₱18,201.00 - ₱36,400.00 (N=88) and mean rank (110.20), ₱36,401.00 - ₱63,700.00 (N=85) and mean rank (128.57) and ₱63,701.00 - ₱109,200.00 (N=30) and mean rank (147.60). The p-value is 0.022, and the result is statistically significant.

Table 8. *Difference in the Level of Investment Knowledge when Grouped According to Gross Monthly Income*

Gross Monthly Income	Kruskal-Wallis U Test				
	N	Mean Rank	df	χ^2	p
P9,100.00-P18,200.00	37	104.49			
P18,201.00-P36,400.00	88	110.20			
P36,401.00-P63,700.00	85	128.57			
P63,701-P109,200 or more	30	147.60			
Total	240		3	9.644*	.022

*Significant at $p \leq .05$

The study illustrates that persons in higher income levels generally possess a higher mean rank, implying a more advantageous distribution of investment knowledge or activity among affluent investors. The findings suggest that higher income may correlate with enhanced access to resources, education, or opportunities that foster a more profound comprehension or advanced methodology in investing relative to persons in lower income brackets.

A study by Bucher-Koenen & Lusardi (2011) examined the correlation between income and financial literacy, indicating that those in elevated income tiers typically possess greater investing knowledge and financial proficiency. The study highlighted that affluent persons are typically more equipped to obtain financial resources, educational materials, and professional advice, enabling them to implement more sophisticated investment plans. Conversely, individuals in lower income brackets frequently encounter obstacles in accessing these tools, resulting in diminished financial awareness and investment knowledge.

3.5 Difference in the Degree of Risk Tolerance When Grouped According to Generation

Table 9 presents the results of a Kruskal-Wallis U test used to assess whether there are statistically significant differences in risk tolerance across different generational groups (Gen Z, Millennials, Gen X, and Baby Boomers).

Table 9. *Difference in the Degree of Risk Tolerance when grouped according to Generation*

Generation	Kruskal Wallis U Test				
	N	Mean Rank	df	χ^2	p
Gen Z	60	119.75			
Millennials	60	141.22			
Gen X	60	111.91			
Baby Boomers	60	109.13			
Total	240		3	9.05*	.029

*Significant at $p \leq .05$

This analysis suggests that Millennials have the highest mean rank (141.22), indicating they tend to have a higher risk tolerance than the other generations. Gen Z has a moderate rank (119.75), slightly higher than Gen X and Baby Boomers. Gen X (111.91) and Baby Boomers (109.13) have the lowest mean ranks, suggesting that these generations report lower risk tolerance. The Kruskal-Wallis test statistic ($\chi^2 = 9.053$) has a p-value of 0.029, less than 0.05, indicating a statistically significant difference in risk tolerance across the generations. Millennials show the highest risk tolerance, while Baby Boomers exhibit the lowest.

Antwi and Naanwaab (2022) examine the differences in risk tolerance across various age groups, including Millennials, Gen Z, Gen X, and Baby Boomers, concluding that Millennials are generally more willing to take financial risks. The study further suggests that Millennials, typically more comfortable with digital technology, are likelier to engage in online investment platforms with higher risks. In contrast, Baby Boomers and Gen X,

who have witnessed more economic stability throughout their lives, often exhibit more conservative approaches to investing. Baby Boomers tend to prioritize preserving wealth for retirement, leading them to favor less volatile, lower-risk financial options. Although Gen Z is still in the early stages of achieving financial independence, they are starting to exhibit similar patterns to Millennials regarding a greater willingness to take financial risks.

3.6 Difference in Factors Influencing Investment Decisions when grouped according to Participants' Profiles

Table 10 compares the investment decisions made by males and females, highlighting any significant differences in the extent of their involvement. It shows whether sex shapes the scope and nature of financial decisions and provides valuable insights. The mean rank and sum of ranks are Males: (N=63, Mean Rank=105.11, Sum of Ranks=6,622) and Females: (N=177, Mean Rank=125.98, Sum of Ranks=22,298). Higher ranks suggest higher values; females are higher compared to males. The U value of 4606.000 for males and the rank sums indicate a distribution of investment decisions between males and females. Z-value of -2.050: This suggests that the difference between the ranks of males and females is slight, with the result being about 1.5 standard deviations below the mean of the null hypothesis. The p-value of 0.040: The p-value is lower than 0.05, which means there is a significant difference in the extent of investment decisions between males and females at the 5% significance level.

Table 10. *Difference in the Extent of Factors Influencing Investment Decisions when grouped according to Sex*

Dimension	Grouping Variable	Mann-Whitney U Test						
		N	Mean Rank	Sum of Ranks	U-ratio	W	Z	p
Investment Decision	Male	63	105.11	6,622.00	4606.00	6622.00	-2.05	.040
	Female	177	125.98	22,298.00				

Significant at $p \leq .05$

The analysis reveals a significant difference between male and female participants, indicating that the two groups approach financial decision-making differently. Specifically, females may demonstrate distinct preferences or behaviors when making investment choices, which sets them apart from their male counterparts regarding risk tolerance, investment strategies, and decision-making processes. A study by Fisher and Yao (2017) found that men generally exhibited a higher tolerance for risk in investment decisions. In contrast, women tended to be more risk-averse, mainly when their choices affected long-term financial security. This aligns with the findings, where females had a higher mean rank than males. They provided empirical evidence on the impact of sex on investment behavior, particularly in terms of risk preferences and decision-making strategies. Their study indicates that females tend to adopt more conservative investment approaches than males, which aligns with the results presented in Table 33, where females have higher ranks, suggesting greater involvement in more cautious financial decisions. This finding underscores the significant differences between male and female investment behaviors, with females generally demonstrating more risk aversion and distinct preferences in their investment choices.

Table 11 presents the results of a Kruskal-Wallis test to compare the distributions of investment decision extent across different generational groups. Each generation has 60 participants, and these are the mean ranks: Gen Z (110.51), Millennials (139.56), Gen X (69.63), and Baby Boomers (162.30). The p -value for the test is 0.000, less than the typical alpha level of 0.01 ($p \leq 0.01$).

Table 11. *Difference in the Extent of Factors Influencing Investment Decisions when grouped according to Generation*

Generation	Kruskal Wallis Test				
	N	Mean Rank	df	χ^2	p
Gen Z	60	110.51	3	59.80**	<.001
Millennials	60	139.56			
Gen X	60	69.63			
Baby Boomers	60	162.30			
Total	240				

**Significant at $p \leq .01$

This analysis shows that Baby Boomers have the highest average rank of 162.30, demonstrating the most significant involvement in investment decisions compared to other generations. Millennials have an average

rank of 139.56, higher than Gen Z and Gen X but lower than Baby Boomers. Gen Z indicates a moderate tendency toward higher investment decisions. Gen X has the lowest average rank, suggesting they are the least involved in investment decisions. The p-value is 0.000; this indicates a statistically significant difference in the level of investment decisions across the four generational groups.

Thomas et al (2024) examine the differences in investment decision-making across generational cohorts, focusing on age, financial experience, and risk tolerance. Their research shows that Baby Boomers are typically the most involved in investment decisions, which aligns with the results presented in Table 34, where Baby Boomers have the highest mean rank, indicating greater engagement in financial decision-making. While still actively engaged, Millennials have a slightly lower average rank, suggesting a moderate level of involvement compared to the older generation. In contrast, Gen Z shows a more cautious approach with a moderate rank, reflecting their growing but less pronounced participation in investment decisions. Gen X, on the other hand, has the lowest mean rank, demonstrating the least involvement in investment decisions. These findings underscore the significant impact of generational differences on financial behaviors, highlighting that older generations, such as Baby Boomers, tend to have higher levels of financial engagement and decision-making involvement compared to younger cohorts like Gen X and Gen Z. This study reinforces the importance of considering generational context when analyzing financial decision-making patterns.

Researchers such as Martaningrat and Kurniawan (2024) highlight that Gen Z's desire for financial independence, combined with the impact of financial influencers on social media, plays a significant role in shaping their interest in investments. In contrast, a study by Antwi and Naanwaab (2022) found that Gen X is typically considered more conservative in its investment approach and has shown lower engagement in newer, more volatile markets like stocks. This aligns with the findings, which show Gen X as the least involved in investment decisions. They note that Gen X generally favors traditional, safer investment options, reflecting a preference for stability over high-risk, high-reward opportunities. The study's p-value of 0.000 offers strong statistical evidence that the generational differences in investment decision involvement are not attributable to chance, confirming a significant disparity in investment behaviors across the four generations.

Table 12 illustrates the difference in the Extent of Investment Decisions when grouped according to gross monthly income using the Kruskal-Wallis U Test. The group with the income range of P9,100.00-P18,200.00 has the lowest mean rank of 101.00, P18,201.00-P36,400.00 mean rank of 119.37, P36,401.00-P63,700.00 of 117.52, and P63,701.00-P109,200.00 or more mean rank of 156.30, which is the highest mean rank. The p-value = 0.011, which is lower than 0.05. This means there is a statistically significant difference in the extent of investment decisions between the income groups.

Table 12. *Difference in the Extent of Factors Influencing Investment Decisions when grouped according to Gross Monthly Income*

Income	Kruskal-Wallis U Test				
	N	Mean Rank	df	χ^2	p
P9,100.00-P18,200.00	37	101.00			
P18,201.00-P36,400.00	88	119.37			
P36,401.00-P63,700.00	85	117.52			
P63,701.00-P109,200.00 or more	30	156.30			
Total	240		3	11.091	.011

Significant at $p \leq .05$

This analysis indicates that participants in higher-income groups tend to have a higher ranking for investment decisions. The highest mean rank was under P63,701.00-P109,200.00 or more; in contrast, the lowest mean rank is under this income group, P9,100.00-P18,200.00. The p-value of 0.011, which is lower than the commonly accepted threshold of 0.05, indicates a statistically significant difference in the extent of investment decisions across the various income groups. This suggests that income influences investment decision-making. Specifically, individuals in the highest income group (P63,701.00-P109,200.00 or more) show a significantly higher mean rank, implying that their investment decisions may be shaped differently than those in lower-income brackets.

The study by Yulianto (2023) provides empirical evidence highlighting the significant role of income in shaping investment decisions. Their research shows that individuals with higher incomes are more likely to be influenced by various factors such as risk tolerance, market knowledge, and financial goals when making

investment choices. This finding is consistent with the results in Table 36, where higher-income groups, particularly those earning P63,701.00-P109,200.00 or more, demonstrate a higher level of involvement in investment decision-making, as indicated by their higher mean ranks.

3.7 Relationship between Investment Knowledge and Factors Influencing Investment Decisions

Table 13 displays the Spearman's rho correlation coefficient between the Level of Investment Knowledge and the Extent of Factors Influencing Investment Decisions. The correlation coefficient (r) between these two variables is 0.466, and the p -value associated with this correlation is 0.000, below the 0.01 significance threshold. This indicates a statistically significant relationship between the level of investment knowledge and the extent of investment decisions.

Table 13. *Relationship between Investment Knowledge and Factors Influencing Investment Decisions*

Correlation	r	p
Investment Knowledge and Investment Decisions	1 .466**	 <.001

** Significant at $p \leq .01$

The findings indicate a moderate positive correlation between investment knowledge and the factors influencing investment decisions ($r = 0.466$), with the relationship being statistically significant ($p = 0.000$). This suggests that individuals' investment knowledge increases, they are more likely to consider a greater range of factors when making investment decisions. The results align with Parsai and Chandok (2025), who discovered that persons with greater financial knowledge are inclined to make careful investment choices. Their study emphasizes that these individuals are more proficient at critically assessing risks before making investment commitments.

4.0 Conclusion

Based on the findings, participants exhibit a high level of investment knowledge, particularly in understanding the purpose, returns, and risks associated with investment products. Risk tolerance varies across demographic groups. Males show a higher risk tolerance than females. Millennials display the highest risk tolerance among generational cohorts, likely influenced by their exposure to rapid technological change and a dynamic labor market. Conversely, Baby Boomers tend to be more risk-averse, shaped by traditional values and economic conservatism. In terms of income, individuals earning P18,201.00 to P36,400.00 monthly show the highest risk tolerance, possibly due to a balance of financial flexibility and manageable responsibilities. Meanwhile, those in the P36,401.00 to P63,700.00 range show more caution, possibly driven by heightened financial obligations. Educational attainment also influences risk tolerance, with postgraduate individuals showing greater openness to risk, potentially due to increased confidence and decision-making capabilities. College graduates show moderate risk tolerance, possibly influenced by their more profound understanding of investment-related risks.

Regarding factors influencing investment decisions, conceptual knowledge stands out as the most influential, underscoring the importance of investors' understanding of investment principles. While behavioral biases are acknowledged, they exert relatively less influence, suggesting that investors may recognize these tendencies without being significantly swayed by them. Statistical analysis reveals significant differences in investment knowledge across generations and income levels. Similarly, risk tolerance significantly varies across generations. The extent to which investment decision factors affect individuals differs significantly when grouped by sex, generation, and income. Lastly, a significant relationship exists between the level of investment knowledge and the extent of factors influencing investment decisions. This suggests that higher investment knowledge is associated with a greater consideration of both conceptual understanding and behavioral aspects when making investment choices. The insights highlight the importance of tailored financial education and investment strategies, considering demographic differences, particularly in designing programs that address varying knowledge levels, risk tolerances, and decision-making influences.

5.0 Contributions of Authors

Author 1: conceptualization, data gathering, data analysis
Author 2: data analysis, data gathering, reviewed manuscript

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7.0 Conflict of Interests

The authors declare that they have no conflict of interest.

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