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Research Article

Absolute and Relative Investing Income of Cryptocurrency Investors: An Assessment on Risk Management Knowledge and Practices

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ABSTRACT

Cryptocurrency has emerged as a disruptive force in the financial landscape, presenting both alternative investment opportunities and emergent risks to investors seeking financial stability. This study investigates the relationship between cryptocurrency investors' income and their risk management knowledge and practices, addressing a gap in understanding on whether traditional risk management principles apply to highly volatile digital assets. Employing a descriptive-correlational design, the research gathered data through an online survey of 400 Filipino cryptocurrency users of a certain cryptocurrency platform. Findings indicate a significant positive relationship between risk management knowledge and practices and relative cryptocurrency income (p=.001, coefficient = +.173), suggesting that cryptocurrency portfolios are susceptible to effective risk management and do not simply result from mere fluctuations in market value. However, no significant relationship was found between risk management and absolute income. Nevertheless, absolute income was significantly different across respondents when grouped by age, employment status, income bracket, and investment exposure. This implies that older, gainfully employed investors from higher income brackets and greater investment exposure tended to achieve higher absolute gains, likely due to access to greater initial capital.

Keywords: Cryptocurrency, Investment, Investors, Risk Management, Income, Financial Stability, Socioeconomic Factors

1. INTRODUCTION

The rise of cryptocurrency has revolutionized the financial landscape, offering new alternatives to conventional investments while also posing significant risks. The accounting and finance sector has faced challenges in the face of such rapid developments, not least because of the multi-faceted nature of crypto assets, which function simultaneously alike with currencies, financial instruments and intangible assets.

As these digital assets continue to gain popularity in the increasingly online world of the global pandemic, investors face challenges in managing risks associated with market volatility, regulatory uncertainties, and security concerns. While traditional wisdom posits that understanding risk management strategies in cryptocurrency investment is essential for informed decision-making leading to profitable positions, whether this is applicable to the highly volatile crypto asset environment remains to be seen. To this end, this study examines the relationship between the income of cryptocurrency investors, and their risk management knowledge and practices.

This study is significant as it provides valuable insights into cryptocurrency investment and risk management. Individual investors both prospective and current, especially those seeking financial stability in contemporary financial environments may glean from the research offers a deeper understanding of the impact of risk management strategies on income. This study is also significant for non-individual participants in the cryptocurrency markets. Financial institutions can utilize the study's insights to better understand cryptocurrency investment behavior, which may influence their service offerings and risk assessment strategies. Moreover, regulatory bodies, such as the Bureau of Internal Revenue and other government agencies, can leverage the study's

findings to develop appropriate tax policies and regulatory frameworks for cryptocurrencies. Finally, this research contributes to the academic discourse on cryptocurrency, investment strategies, and risk management, serving as a valuable resource for future researchers and scholars exploring this evolving financial landscape.

2. MATERIALS AND METHODS

This study employs a descriptive-correlational design to analyze factors influencing cryptocurrency income and risk management strategies. Adapted from various previous studies, it examines investment factors such as demographic profiles, investment profiles, investment exposure, risk tolerance, and risk management knowledge and practices. The research uses a quantitative approach to examine the relationship between the key variables, applying appropriate statistical methods to identify relationships and trends within the data.

For purposes of this study, demographic profiles include age, gender, educational attainment, employment status, and annual income. Investment profile includes amount of capital, source of capital and income from cryptocurrency. Respondents were classified as having exceptional exposure, high exposure, moderate exposure, or low exposure based on their previous investment history. Respondents were also classified as risk aggressive, risk balanced, or risk moderate based on their risk tolerance. Significant differences in cryptocurrency income were examined across these different groupings.

Cryptocurrency income under this study is understood in two senses: (1) absolute income, which refers to gains from cryptocurrency measured in Philippine peso (PHP); and (2) relative income, which refers to gains measured as a percentage of the respondent's initial capital. Risk management knowledge and practice is quantitatively expressed as an absolute score and a relative score as percentage of maximum possible score based on responses, to facilitate analysis against income.

A combination of convenience and snowball sampling was used due to COVID-19 limitations. The study targeted Filipino users of a certain Philippine cryptocurrency trading platform, estimating a sample size of 400 respondents using Slovin's formula with a ±5% margin of error, in the years of study 2021-2022.

Data collection was conducted via online survey questionnaires for cost-effectiveness and accessibility despite physical limitations during the global pandemic. Respondents were invited through direct links, and referrals were used to expand participation. The survey questionnaire underwent validation by academic experts and pilot test respondents, scoring a "Very Valid" rating based on relevance, clarity, and ease of administration. Reliability testing was also conducted which yielded a Cronbach's alpha of 0.936.

Descriptive statistical methods such as arithmetic mean, frequency distribution, and percentage were applied to assess the profiles of the respondents. Prior to applying correlation tests, data was subjected to Kolmogorov-Smirnov test the assumption of normality. As the tested data did not follow the normal distribution, Spearman Rho Correlation was used to evaluate relationships between cryptocurrency income and risk management scores. Prior to testing significant differences across groups, data was also pre-tested using Levene's Test. Where the grouped data was found to be homogenous, one-way ANOVA alone was used to determine significant differences in cryptocurrency income across groups. Where the grouped data was found to be heterogeneous, one-way ANOVA was used in conjunction with robust tests of equality of means. Specifically, Brown-Forsythe test was used to confirm when significant differences were detected by ANOVA to account for skewness of data. Games-Howell test was used post-hoc to determine where significant differences occurred in the groups.

The study adhered to ethical standards, ensuring respondent confidentiality and compliance with data privacy laws. Participation was voluntary, and informed consent was obtained before data collection. The researchers ensured maintaining integrity, objectivity, and independence throughout the study.

3. RESULTS AND DISCUSSIONS

The demographic profile of respondents provides critical insight into the characteristics of cryptocurrency investors. Most respondents were young adults, indicating that cryptocurrency investment is more prevalent among younger generations. In terms of gender distribution, there was a near-equal representation of male and female investors, suggesting that interest in cryptocurrency investment is not significantly gender-biased. Educational attainment was predominantly at the tertiary level, reflecting a well-educated investor base. Employment status varied, with a significant portion of respondents engaged in full-time work, followed by self-employed individuals and students, highlighting the diverse economic backgrounds of investors. Income levels showed a wide range, with a notable concentration in middle-income brackets. Investment experience also varied, with most respondents having moderate exposure to cryptocurrency markets. Overall, the demographic findings suggest that cryptocurrency investors tend to be young, well-educated, and employed, with varying degrees of investment exposure and risk tolerance.

Savings was predominantly used to finance cryptocurrency investments, followed by salaries and allowances. However, there were no respondents who used debt to finance cryptocurrency investments (margin traders). Most respondents had only 1-year previous investment experience in cryptocurrency markets but had 5-year previous investment experience in other financial markets. Furthermore, most respondents had moderate exposure had moderate risk tolerance.

Across respondents, the average initial investment in cryptocurrency was 164,552 PHP. The maximum absolute income reported by respondents was 10,500,000 PHP while the minimum was a loss of approximately 45,000 PHP. The maximum relative income reported by respondents was approximately +7000% while the minimum was a loss of approximately 93%. On average, the absolute income of respondents was 146,128 PHP and the average relative income of respondents was 109% of initial capital.

In terms of risk management knowledge and practices, respondents scores showed a strong sense of risk management (mean = 3.121316, standard deviation = 0.8677632) with special emphasis on considering platform transaction fees, executing stop loss orders, and holding long positions for speculation.

Pretesting through Kolmogorov-Smirnov test revealed that absolute income ($p < 0.001$) and relative income ($p < 0.001$) data is not normally distributed. Pretesting through Levene's test based on mean also showed that age ($p < 0.001$), gender ($p < 0.001$), educational attainment ($p < 0.001$), employment ($p < 0.001$), income bracket ($p < 0.001$), investment exposure ($p < 0.001$) and absolute risk tolerance ($p < 0.001$) data had heterogeneous variances, while capital source ($p = 0.147$) and relative risk tolerance ($p = 0.158$) data had homogeneous variances.

Significant findings are summarized as follows:

Variable Analyzed	Test Used	Significant Finding	p-value
Relative Income v. Risk Management Score	Correlation Test	Significant Positive Relationship	p = .001 coefficient = +.173
Absolute Income v. Age	One Way ANOVA; Brown-Forsythe	Significant Difference	ANOVA: p < .0001 B.-F.: p < .0001
Absolute Income v. Employment	One Way ANOVA; Brown-Forsythe	Significant Difference	ANOVA: p < .0001 B.-F.: p < .0001
Absolute Income v. Income Bracket	One Way ANOVA; Brown-Forsythe	Significant Difference	ANOVA: p = .004 B.-F.: p = 0.31
Absolute Income v. Investment Exposure	One Way ANOVA; Brown-Forsythe	Significant Difference	ANOVA: p < .0001 B.-F.: p < .0001
Absolute Income v. Absolute Risk Tolerance	One Way ANOVA; Brown-Forsythe	Significant Difference	ANOVA: p < .0001 B.-F.: p < .0001

Correlation test via Spearman Rho showed that there is no significant relationship between risk management score and absolute income ($p = .248$), but there is a significant positive relationship between risk management score and relative income ($p = .001$, coefficient = +.173).

No significant differences were detected in absolute income when respondents are grouped by gender, education, capital source, and relative risk tolerance. Meanwhile, no significant differences were detected in terms of relative income whether respondents were grouped by age, gender, education, employment, income bracket, capital source, investment exposure, absolute risk tolerance and relative risk tolerance.

Post hoc-tests via Games-Howell reveal that the differences in absolute income existed in age groupings between the younger and older groups (18-26 vs. 36-44 age brackets; 18-26 vs. 54-62 age brackets; 27-35 vs. 54-62 age brackets; and 36-44 vs.

54-62 age brackets). Post-hoc tests also showed differences in absolute income also existed in employment groupings between employed and unemployed groups (self-employed vs. students; self-employed vs. unemployed; and private employees vs. students), and across lower to middle income brackets (0-250,000 PHP vs. 250,000-400,000 PHP; and 0-250,000 PHP vs. 400,000-800,000 PHP). Absolute income was also shown to be significantly different across all groupings by investment exposure (low, moderate, high and exceptional), but only in some groups of absolute risk tolerance (risk aggressive vs. risk moderate; risk aggressive vs. risk balanced).

4. CONCLUSION

The findings of this study establish that risk management knowledge and practices have no significant relationship with absolute income from cryptocurrency. Furthermore, respondents show significant differences in absolute income in terms of age, employment, income bracket, investment exposure and relative risk tolerance. Taking these findings together, it is evident that the absolute income of an investor is a mere result of the pre-existing conditions of the investor. Those who are older, gainfully employed, belonging to a higher income tax bracket, and possess more previous investment exposure and measured risk tolerance naturally have the upper hand in generating more income from cryptocurrency investments simply because they have access to more initial capital.

On the other hand, a positive and significant relationship of risk management knowledge and practices with relative income suggests that cryptocurrency gains are not the mere result of market volatility, blind speculation and fluctuations in value. In other words, as risk management knowledge and practice increase, cryptocurrency income measured as a percentage of initial capital also increases. The findings imply that cryptocurrency portfolios are susceptible to risk management techniques. Despite the inherent volatility of the market, the act of managing a cryptocurrency portfolio is not outside the realm of possibility.

Overall, this study underscores the importance of risk management in cryptocurrency investments and provides a foundation for future research exploring additional factors influencing investment success in digital asset markets. Future researchers may consider analyzing the role of other key variables found in this study, particularly age, employment, income bracket, investment exposure and risk tolerance. Longitudinal studies, comparative studies in different locales, as well as replication studies outside of the environment of the COVID-19 pandemic may also be considered to verify the findings of the study also apply in different contexts.

Financial institutions may also consider studying cryptocurrency in a perspective similar to other investments. Together with regulators and policymakers, financial institutions may begin looking into the possibility of integrating cryptocurrencies into the mainstream financial system. In relation to this, the Bangko Sentral ng Pilipinas, the Securities and Exchange Commission and Bureau of Internal Revenue, should jointly look into the regulation so that cryptocurrency gains may be properly reported and disclosed, and the whole of Philippine society may benefit from the value generated by cryptocurrency transactions, not only a select few..

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