Analysis of The Impact of Cryptocurrency Loss Risks and Returns on Gen Z Investment Decisions

Anastasia Audrie Paretta[1], Regina Ameylia[2], and Setiani Putri Hendratno[3]

{anastasia.paretta@binus.ac.id[1], regina.ameylia@binus.ac.id[2], shendratno@binus.edu[3]}

Bina Nusantara University, Jakarta, Indonesia[1,2,3]

Abstract. Cryptocurrency is a digital currency that has developed rapidly in recent years, especially among Generation Z. Despite the high risks, Generation Z investors remain interested in cryptocurrencies because fluctuations can make people earn higher profits than other investment instruments. This study aims to determine whether the impact of the risk of loss and the rate of return of this cryptocurrency affects (or not) the investment decisions of Generation Z. This research uses qualitative methods; data are obtained from interviews by applying the purposive sampling technique to Generation Z, which invests in cryptocurrency. The results show that one of the main reasons respondents choose to invest in cryptos is that they have a high return. The results also show that risk and return affect cryptocurrency investment decisions. This finding calls for Generation Z to apply financial behavior well by balancing behavioral biases and financial literacy to produce optimal investment decisions.

Keywords: cryptocurrency, risks, returns, generation Z, financial behavior, financial literacy.

1 Introduction

The cryptocurrency market has experienced exponential growth in the 10 years since cryptocurrency was officially introduced to the public in 2008. Cryptocurrency has attracted much attention from investors since its success with Bitcoin. Over time, cryptocurrencies have attracted increasing attention because of the large price fluctuations, and more than 420 million people in various parts of the world have adopted cryptocurrencies (TripleA, 2023). Cryptocurrency investment is mostly in demand by young people, including Generation Z (18-25 years old), where most of them invested in crypto, with a percentage breakdown of 55% (Miamiherald.com).

Generation Z is the first generation that has grown side by side with the digital era from an early age, so they tend to be more interested in the use of technology. With gadgets and Internet access, Generation Z can easily obtain comprehensive information about current financial products[33]. In addition, the presence of technology has also encouraged Generation Z to engage in cryptocurrency investment. Despite its popularity, cryptocurrency is decentralized, which makes it easier for investors to make payments quickly without any conditions to meet the needs of the conventional banking system[16]. However, most

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investors tend to make cryptocurrencies a speculative asset rather than a means of payment to identify opportunities to benefit from price differences[7]. So, it can be seen that Generation Z shows interest in cryptocurrency investment because of the high-risk nature of digital assets but can provide high returns, easy accessibility, and some aim to prepare retirement plans.

Many Generation Z tend to be interested in creating instant wealth; not infrequently, they believe that crypto assets could be an opportunity for them to become billionaires, because of their high volatility. However, they would have thought that this could encourage Generation Z to develop speculative investment behavior that causes users to show a natural response to high impulses and low self-control[29]. Moreover, the cryptocurrency market is currently facing bearish and bullish trends, where the prices of cryptocurrency assets experience price stagnation until they experience a decline. This uncertainty gives rise to various positive and negative responses from the social environment, which ultimately influences the decisions of Generation Z investors [36]. Thus, Generation Z investors need to realize that entering the cryptocurrency world is not just about relying on a high level of trust and tolerance for taking all forms of risk due to extreme volatility. It is also important to increase insight and awareness when making more effective decisions to achieve profitable investment results.

This study aims to identify how the loss risks and returns of cryptocurrency investment affect Generation Z's decision-making. Considering that the cryptocurrency market is still growing, a slightly vulnerable investment price will change investors' perceptions owing to its unstable value[6]. This study adopts financial behavior theory to understand investor perceptions in dealing with the impact of risks and returns while investing in cryptocurrencies. Financial literacy refers to beliefs that influence attitudes and behavior to improve the quality of financial management decision-making to achieve prosperity. Finally, apart from analyzing how investors behave when facing the impact of risks and returns, researchers will also further explore whether Generation Z investors rely on financial literacy or base their decisions on the actions of other investors in similar circumstances, which is usually known as herding behavior. Therefore, the results of this research are expected to provide insights to global investors about the strategies that Generation Z has implemented in dealing with the risks and returns of cryptocurrency investment

2 Literature Review

2.1 Cryptocurrency

Cryptocurrency refers to digital assets designed as digital currencies using the concept of cryptography[16, 27]. Cryptocurrency is a digital asset that uses cryptographic technology to secure and validate transactions. Blockchain technology acts as a decentralized database that records all cryptocurrency transactions. Blockchain can be said to be a ledger that records all transaction activity in a decentralized, valid, and error-free system based on a peer-to-peer computer network[15,33]. The existence of peer-to-peer networks, algorithms, cryptography, distributed data storage, and decentralized consensus mechanisms allows people to agree on certain conditions and record these agreements in a secure and verifiable manner[32].

Cryptocurrency investment has a different system from other investment instruments: cryptocurrencies are volatile and have a high level of risk due to extreme price volatility[31].

Another factor that can influence cryptocurrency price changes is public information, which can cause price movements based on positive or negative information connotations[18]. Thus, cryptocurrency investment is an illogical investment because the value of each cryptocurrency fluctuates wildly (a trait known as volatility)[6], which can make the cryptocurrency market inefficient and trigger gaps where investors' psychological factors contribute to making investment decisions.

Investing in the cryptocurrency market is risky and unpredictable, even in the medium or long term[11]. There are still many investors who do not realize how big the risk of cryptocurrency is, but they are more challenged to try this new investment product because cryptocurrency is synonymous with high returns[34]. Previous research studies also support that more people are passionate about cryptocurrencies and end up buying tokens, which will affect the increase in price and return in the future[26]. That is, if investors' enthusiasm for transacting in cryptocurrencies influences future metrics, then investors can, in principle, look to the engagement coefficient to predict future value.

2.2 Generation Z

Generation Z is a generation born in 1995 – 2012. They are known as the digital generation who are used to technology because Generation Z was born in a situation of technological development and grew up in the digital world. Generation Z is labeled as a generation without boundaries[3], where apart from being a technology-oriented young group, they are also classified as independent in making decisions, very open-minded, ambitious, imaginative and creative, and multitasking. Generation Z tends to prefer to work as little as possible but still expects maximum results[30]. This is increasingly being demonstrated by Generation Z in utilizing the role of technology to earn more income.

Previous research explained that the presence of technology will help them to further explore how good financial management can lead them to a better future[33]. However, there are arguments that young people have a high level of trust with low literacy[30], which triggers investors to make momentary decisions and underestimates the level of risk involved. On the other hand, Generation Z is very easily influenced by trends and tends to follow suit, or it can be said to have minimal investment knowledge, so Generation Z needs to continue to explore financial literacy, which, of course, has a positive impact on their finances.

2.3 Financial Behaviour

The study of financial behavior investigates how people are responsible for treating, managing, and using their finances[32]. Financial Behavior highlights the occurrence of market inefficiencies due to investors' reactions to information, which results in market trends and extreme cases (such as market bubbles and crashes). This is because investors often apply irrational behavior when facing uncertain situations, which can be divided into three parts: (1) cognitive limitations on financial competence, (2) social factors based on the investment decisions of other parties in the market (herding factor), and (3) behavioral economics, which explains psychological biases and mental shortcuts that lead to suboptimal behavior[18, 8]. These conditions can trigger decisions that are irrational, and inefficient, and affect investment results in the future because most investors rely more on behavioral biases without a foundation in literacy.

The theory of financial behavior itself is built to produce strategies by finding answers to various questions about financial investment from a human perspective, which simultaneously predicts systematic implications in financial markets from a psychological perspective[18]. Many studies state that cognitive abilities and intelligence toward financial science with a behavioral bias have a crucial role in making decisions and the financial behavior of investors[9]. The combination of these factors will lead investors to make more rational investment decisions that are in line with their financial goals. Previous studies also say that if investors process information in a bad way, where they do not collect data or test hypotheses and only follow other people's choices, then their investment decisions will lead to irrational decisions[8].

One aspect of financial behavior is the influence of psychological bias that affects the decision-making process and the results to be achieved, by involving emotions, traits, preferences, and everything that exists in humans. The existence of financial behavior is believed to be able to help investors make financial decisions based on rational or objective data with a psychological approach to show which decisions will succeed or fail [5]. However, it is not uncommon for someone to experience financial problems because the money spent does not match the income they receive, this can happen because of financial behavior[32]. So, it should be important for all investors to apply the concept of financial behavior as well as possible in making decisions. investment, by not only relying on behavioral biases but also prioritizing insights and facts that have been implicated.

2.4 Financial Literacy

Financial literacy can be interpreted as understanding and knowledge to understand financial problems in its application in the business world and personal life[35]. Investors who adopt financial literacy tend to distance themselves from market participation and avoid buying expensive products or loans[8]. This is because financial literacy opens investors' minds in planning their financial future, be it retirement benefits or other urgent needs.

When making investment decisions, investors must consider market conditions, profits, and losses that will impact the future[33]. Previous research explains that decisions based on financial literacy always take into account various kinds of information by evaluating the returns and risks arising from investment, being careful in choosing investment products, and looking for relevant information, either by utilizing Internet access or viewing the latest news[8]. The assumption is that those who have a significantly low level of financial literacy will find it difficult to make financial investments, one of which is cryptocurrency, where most applications use sophisticated technological instruments[1]. Financial literacy is a basic need for investors because, without this ability, they will find it difficult to make a profit from investing.

Many young adults lack financial literacy. A low level of financial literacy results in incorrect financial plans and bias in achieving welfare at a non-productive age[13]. Previous studies state that to carry out financial planning, investors must be able to conduct research, such as social science and money[5]. Improving financial studies can be achieved through school education, training in the world of work, and available resources such as books, articles, and journals. This is because all investors must know that understanding financial literacy can be a long-term investment that can direct them in managing and maintaining stable finances.

3 Methods

This study used a qualitative method. Qualitative methods are defined as studies that are concerned with understanding some aspects of social life and methods that generally produce words, not numbers, as data for analysis[25]. The researchers used primary and secondary data for this study. Primary data were obtained from interviews by applying the purposive sampling technique to Gen Z, who invests in cryptocurrencies. Purposive sampling is a non-random sampling technique in which the researchers determine the research sample with certain considerations to make the data obtained later more representative.

The researchers conducted interviews with Gen Z respondents regarding whether the impact of the risk of loss and the rate of return of this cryptocurrency influenced (or not) Gen Z's investment decisions. Interviews were conducted in person as well as online through the Zoom or Discord application which allowed researchers and respondents to communicate directly. The researcher has also asked permission from the respondent to use the interview results without stating the respondent's name (anonymous). Respondent criteria included; (1) Gen Z who was born in the range of 1995 - 2012. (2) Gen Z who plays cryptocurrency investment (3)At least 17 years old. Researchers will analyze information based on the results of interviews given by respondents, draw important data, and make a summary in the form of a graph as a result of this research. As for secondary data, researchers use data from the literature, such as international journal publications, with the theme of cryptocurrency.

4 Results and Discussions

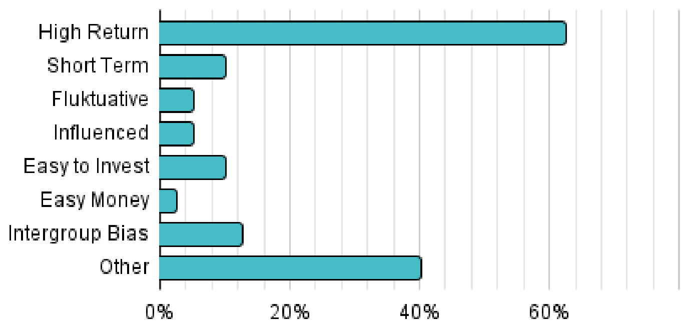

Fig. 1. why generation z is investing in crypto

Researchers interviewed 40 Generation Z respondents with an age range of 17 to 26 years, where respondents were randomly drawn who met the criteria of respondents needed in this study. The results indicate that most respondents are male, with 33 males and 7 females, and that most respondents have been involved in the cryptocurrency industry for over two years. Approximately 60% of respondents did not come from related fields such as accounting, finance, or management but rather from other majors such as information systems, IT, computer science, engineering, architecture, communications, and even high school.

Researchers found that the main factor that influences their investment decisions is the return of cryptocurrencies.

4.1 Factors Impact Generation Z Investment Decisions

The researchers found that the main factor considered for Generation Z investment decisions is cryptocurrency returns. 65% of respondents stated that a significant return rate was one reason for their interest in getting into the crypto world. Furthermore, an intergroup bias occupies the second position of 13%, where the surrounding environment has an essential role in shaping investment decisions. They are often influenced by their friends and try to invest in cryptocurrencies without a clear understanding of what they are doing. Approximately 5% of respondents were affected by influencers. In addition, cryptocurrencies can generate high returns quickly compared to other instruments. Several respondents believe that investing in crypto will produce high returns in a short period. Unlike the other respondents, one respondent is investing in cryptocurrency for the sake of easy money. He is confident that he will be able to profit from cryptocurrency easily. 40% of the responses are influenced by other factors, 25% of which are respondents who are interested in learning more about crypto. Several other respondents also mentioned that 24-hour volatility, unique technology, good opportunities and prospects in crypto, asset diversification, and currency futures attracted them.

Respondent K stated that Cryptocurrency is the currency of the future, where cryptosystems will replace fiat. Respondents AP and GB support this statement; they believe crypto will be a future asset, and therefore they are interested in investing in it. Additionally, cryptocurrencies are also associated with a high risk of loss. Cryptocurrencies have extreme volatility and fluctuating prices. A high level of volatility and fluctuating cryptocurrency prices attracted Generation Z investors to cryptocurrency investing. The responses of respondents VN, M, GB, and Y indicate that they are interested in investing in cryptocurrency due to its high volatility and fluctuating prices.

4.2 Cryptocurrency Investment Risks Impact Generation Z Investment Decisions

Cryptocurrencies have a high loss risk due to fluctuating prices and extreme volatility. Some of them have lost significant amounts of money as a result of playing cryptocurrency. Based on the results of the study, Respondent C experienced the greatest loss of more than 100 million rupiahs. There were losses for all respondents, not only respondent C, ranging from 5 million to 30 million rupiahs, or 10% to 70% of the invested capital, and losses below one million rupiahs.

Despite the losses experienced, respondents still seek a return on investment and have several reasons to keep investing in cryptocurrencies. Many reasons for these factors are attributed to the belief that asset values will recover due to high volatility in markets, cryptocurrencies being seen as future currency assets, a strong interest in cryptocurrencies and the technology used, a desire for high returns, and a desire to return to the game after losing money in the past.

The study results show that cryptocurrency investment risks impact Generation Z's investment decisions. For these reasons, respondents continue to invest in cryptocurrency despite their losses. Even though respondents are aware of the risks involved with cryptocurrency investments, they still see value and potential in investing in them. However, respondents also acknowledged the importance of caution and discontinued investing if they continued to experience significant losses.

4.3 Cryptocurrency investment returns impact Generation Z investment decisions

For Generation Z investors, a high rate of return is one of the most important factors. It is important to note that a high rate of return on cryptocurrency may be significantly more influential than the risk of cryptocurrency losses on Generation Z's interest in cryptocurrencies. In addition to other factors, all respondents stated that cryptocurrency returns were one of the factors and their interest in investing in cryptocurrency.

According to the interview results, the returns obtained by the respondents ranged from 100 thousand to 50 million, or 10% to 700% of the initial investment. Respondent E obtained the highest profit of 350,000% from the initial capital invested compared to the other respondents. Several other respondents achieved 3.5 million in 5 minutes, $ 1,000 in 24 hours, and even 8-9 million with only 150 thousand dollars. Based on the statement of the respondent, cryptocurrency has high volatility and fluctuating risk, but it can also bring high profits to the respondent. The lack of a profit percentage limit in cryptocurrency also encourages respondents to play cryptocurrency. When they experience profits, Generation Z tends to choose to hold coins or sell some of the profits earned to buy other tokens with more promising prospects. However, there are some Generation Z who are involved in cryptocurrencies for long-term investments, where they implement the HODL (Held on for Dear Life) system or don't sell crypto assets. The use of the HODL strategy is also expected to provide long-term benefits for investors. On the other hand, there is Generation Z, when they get the profit according to the target they want to achieve, they prefer to sell all of these tokens to be put into a bank account or to diversify into other investment instruments.

4.4 Generation Z's Strategy of Investing in Cryptocurrency

According to the interviews, the respondents use various investment strategies when investing in cryptocurrencies. The strategy covered several aspects, including conducting fundamental and technical analysis, following news and market sentiment, conducting research before purchasing crypto coins, managing risks, and expanding their understanding of cryptocurrencies. These are some of the strategies respondents used in investing in cryptocurrencies:

4.4.1 Fundamental Analysis and Technical Analysis

Before investing, several respondents conducted fundamental and technical analyses. As part of the fundamental analysis, several respondents conducted macroeconomic analysis, followed the news, and monitored the supply chain. As part of technical analysis, respondents analyze charts and candlestick patterns, which help them make decisions based on market and data information.

4.4.2 Following the News and Analyzing Market Sentiment

Before investing, respondents should do their due diligence by reading news and following market sentiment related to cryptocurrencies. The Fed policy news was mentioned by one of the respondents. Respondents will be able to obtain up-to-date information regarding cryptocurrencies and the economy as well as predict cryptocurrency price fluctuations. In addition, respondents also actively seek out other sources of information by following investment experts' social media accounts such as Elon Musk. It allows them to make better investment decisions and understand market influences.

4.4.3 Research

Several respondents emphasized the importance of conducting research before purchasing cryptocurrency. It is important to provide information regarding the advantages and disadvantages of a coin, as well as information regarding its prospects. Joining a cryptocurrency community is also a great way to learn more, as it allows them to have discussions and communicate with people who have more knowledge and gain a lot of additional information.

4.4.4 Risk Management

Table 1. Risk Management

Portfolio Diversification	Managing Money	Choose Low-Risk Coins	Not All In into One Coin
12,5%	12,5%	27,5%	7,5%

Risk management was disclosed by respondents as one of their strategies. Diversifying the portfolio, managing money, choosing low-risk coins, and not investing exclusively in one coin can all contribute to this goal.

“ You have to understand what crypto is and what the technology is like, play on safe coins like ETH or BTC, and do asset diversification.” – Respondent FM.

To avoid the risk of loss, respondents FM, diversify their portfolios and play on safe coins. Respondents MR, N, PD, E, AR, and MA made the same statement as Respondent FM.

4.4.5 Mental and Emotional Control

"Don't use emotions when trading” – Respondent FRS.

Respondent FRS emphasizes the importance of not trading with emotions. Other respondents also expressed the importance of controlling emotions and maintaining mentality as one of their strategies for making investments. They avoid letting their emotions influence their investment decisions to avoid risking their momentary emotions.

This study found that not a few of Generation Z are influenced by the people around them, especially the community in their environment that plays a lot of cryptocurrencies. Consequently, it supports the emergence of feelings of Fear of Missing Out (FOMO), which is known as someone's feeling of anxiety because they are afraid of missing out on the latest trends, information, or news. In this study, the fear of missing out is triggered by the fact that the environment around us invests in cryptocurrency.

"I feel FOMO because my friends play crypto, and I see that many people on social media especially on TikTok, talk about crypto because it's easy as if they see the experiences of people who have made a lot of profits and have made a return on investment, so I feel FOMO and finally try to join in cryptocurrency" – Respondent PD.

Many respondents felt the same sense of FOMO and they eventually attempted to invest in crypto. Furthermore, there are 55% of respondents experienced FOMO and finally decided to play crypto without sufficient knowledge.

A strong understanding of financial literacy has become essential to making sound financial decisions[13]. In this study, financial literacy is emphasized as a means of providing financial education to the general public, particularly Generation Z, to help them understand their financial situation, manage their finances intelligently, and avoid fraudulent investment products that offer short-term profits without considering the existing investment risks[13].

Researchers found that almost all respondents had sufficient knowledge and understanding before investing. Through time, respondents acquired more knowledge about cryptocurrency and applied it to their next investment decision. A total of 38 out of 40 respondents analyzed and conducted research related to the coin they were considering purchasing. A variety of methods of analysis are used, including technical analysis, fundamental analysis, candle analysis, or chart analysis. Besides doing analysis, they also follow the news, read white papers, and assess the market sentiment to add information before investing. As a result of their interviews, they explained that research and analysis are required before investing to ensure that they can gain profits and avoid losses.

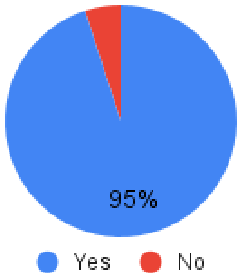

Fig.2. Does cryptocurrency less risk and returns impact to generation z decision

Generally, high-risk cryptocurrencies generate high returns. Most people play crypto because of the high returns. The results of 40 Generation Z respondents indicated that 95% of them were influenced by the risk of loss and the rate of return of cryptocurrency in making their investment decisions. Cryptocurrency investing has gained popularity since the pandemic of COVID 19. According to previous studies, four cryptocurrencies (BTC, XRP, LTC, and XMR) had a negative return during the period associated with the start of the COVID-19 pandemic [2]. Cryptocurrencies generally displayed low volatility and low returns during this period. In this phase, many respondents experienced losses on their investments. In facing this risk, the majority of Generation Z choose to continue to return on investment, and some Generation Z believes that it is only a floating loss. The term' floating loss can be interpreted as a condition in which investors experience temporary losses due to declining market prices. Apart from that, there are some Generation Z who feel that it is not a problem if there is a loss because they have already accepted the consequences of cryptocurrency, namely, high-risk high return. But, on the other hand, there are still Generation Z investors who also respond to risk with an ordinary response. This occurs because they invest in idle money. Idle money is known as money outside the allocation of daily expenses or in terms of not being needed shortly. Thus, they tend to be too indifferent in the event of loss. However, after the pandemic passed, the cryptocurrency market began to rise again and move positively, offering positive prospects.

Currently, most Generation Z investors believe that cryptocurrencies remain relevant. Cryptocurrencies have been used in several countries, and cryptocurrency investment may continue to rise in the future due to technological advancements. Cryptocurrencies are expected to continue growing over time, and they believe that cryptocurrencies are viable long-term investments and have the potential to increase in price in the future. Equations and formulas should be punctuated in the same way as ordinary text but with a space before the punctuation mark.

5 Conclusions

The results of this study show that the risks and returns of cryptocurrencies significantly influence Generation Z's investment decisions. This study focuses on data collected from 40 respondents, with the criteria of Generation Z being at least 17 years old and still actively using cryptocurrency as an investment instrument. From this research, it is clear how Generation Z responds to the impact of risks and returns that occur in cryptocurrency investment. Besides high returns, investing in cryptocurrencies is also closely associated with high risks. Volatility is one of the most common risk factors. Because cryptocurrencies have very rapid price fluctuations that can change in the blink of an eye, it is not known when coin prices will soar or even fall.

The implication of this research is to provide concrete evidence of how Generation Z responds to the impact of risks and rewards that occur when investing in cryptocurrencies. This finding shows that there are still some Generation Z who tend to have a high investment interest, but this is not matched by good financial literacy. This of course will have an impact on investment decisions and impact on investment results that end up not being optimal or not by the desired target. Thus, Generation Z needs to be able to balance financial literacy and behavioral biases to produce the desired investment decisions. However, it is too early to generalize these findings.

The limitation of this research is that it is difficult to find respondents who are still actively investing in cryptocurrency because many Generation Z are diversifying their investments because crypto prices have stagnated or even decreased. Therefore, future research should collect a larger sample and compare generations in future research to see how different generations perceive differences in the decisions to be taken when facing the impact of cryptocurrency risks and returns. Quantitative methods were used and questionnaires were distributed to obtain relevant data to support further research.

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