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THE INFLUENCE OF FINANCIAL CONFIDENCE, FINANCIAL SOCIALIZATION, HERDING, AND MENTAL ACCOUNTING ON INVESTMENT DECISION AMONG GENERATION Z IN JAKARTA

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ABSTRACT

This research purpose is to examine the influence of financial confidence, financial socialization, herding, and mental accounting on investment decision among Generation Z in Jakarta. The samples for this research are investors who were born between 1995-2010 (Generation Z) and living in Jakarta. The cluster sampling method was used to collect 205 respondents from a survey that was shared online on social media through google forms. The data of this research is analyzed through the use of a structural equation system using the SmartPLS.3.2.9 program. The result of this research shows that the investment decision of Gen Z investors in Jakarta is significantly influenced by financial confidence, financial socialization, herding, and mental accounting. This research also found that a lower frequency of trading which happens in Gen Z investors tends to overcome the negative impact of herding.

Keywords: *financial confidence, financial socialization, herding, mental accounting, investment decision*

1. INTRODUCTION

Investment interest in the capital market is increasing among young generations. Based on data from the Indonesian Central Securities Depository (KSEI) (2022), the number of investors under 30 years old dominates with a portion of 60.18%. The 2022 Nasdaq survey found that Generation Z in the United States is much more active in trading on the stock exchange, with 34% reporting trading multiple times a week compared to 26% of millennials, 19% for gen Xers, and 7% of baby boomers (Nasdaq, 2022). Generation Z (or Gen Z) refers to the generation that was born from 1995 to 2012. Gen Z is the first generation at an early age to have portable digital technology, making them the first digital natives and adept at such things. The fierce competition amongst financial technology providers and brokerages has made investing more accessible, lower trading fees, and easy access to trade through a variety of choices. This has led Gen Zers to become more active in investing much earlier in their life than previous generations. According to surveys, the rise of social media financial influencers promotes a get-rich-quick mentality, expecting a false rapid return causing 64% of Gen Z respondents have experienced a loss due to such schemes (Nasdaq, 2022).

Finances are the major source of stress for the generation Z age group, who began entering the workforce during the pandemic. This has resulted in most generation Z members prioritizing financial stability in short-term needs over long-term savings (Deloitte, 2022). Generation Z is more attracted to short-term profit investments that tend to have a higher risk. Research shows that trading frequently correlates with worse returns on investment because it causes additional costs to adjust the portfolio and this behavior is mostly caused by overconfidence (Bonaparte

et al., 2019). Excess financial confidence can result in an inability to recognize the reality of one's financial situation (Pearson and Korankye, 2022). On the other hand, a lack of financial confidence causes poor financial practices. Therefore, a sufficient level of financial confidence is needed to improve better investment decisions.

Moreover, Gen Z tends to engage in risky behavior less than previous generations (Nasdaq, 2022). To avoid large losses, Gen Z also applies investments with devoted funds that are separated from their main account. The tendency of people to separate their money into segregated accounts based on various subjective criteria, such as the source of money and the purpose of each account is called mental accounting and it could influence someone's investment decision.

Generation Z is the generation that is the most thoughtful in investing. As many as 78% of generation Z seek financial advice from both professionals and non-professionals before deciding to invest (Insider, 2022).

Gen Z investors were five times as likely to get financial advice from social media than adults aged 41 and over, with 28% asking for friends' guidance and online influencers (Nasdaq, 2022), which indicates the needing for financial socialization among Gen Z to make an investment decision. However, the lack of experience and ability to evaluate the market made generation Z investors tend to rely on the ideals and decisions of others when collecting information and analyzing investment issues, which indicates a herding behavior. Based on these statements, there are many factors influencing investment decisions that must be analyzed because generation Z's decision on investing will make a major impact on the capital market since Gen Z will become America's largest generation by 2034, with a population of 78 million (Nasdaq, 2022). Gen Z in Indonesia will also dominate the Indonesian capital market for years to come (KSEI, 2022).

However, little work has been conducted to identify factors influencing Gen Z's financial behavior and recent research has not comprehensively considered personal values and psychological influences that might affect Gen Z's investment decisions as currently the youngest group of investors in the capital market. Personal values such as confidence and socialization, and psychological influences such as herding and mental accounting (Mittal, 2022) have been studied as factors influencing investment decisions, but the results were uncertain and differed between researchers throughout the years. Studies on behavior factors influencing investment decisions of the specific age group of Gen Z are still in their infancy. Therefore, it is sensible to examine the personal values and psychological influences of Gen Z in order to improve accuracy and accomplish the full potential of behavior factors influencing investment decisions for all groups of generations, which this study will be focused on the younger one. The results of this research serve as suggestions for educational institutions in enhancing students' financial socialization, rising confidence, and encouraging rational investment decisions, while for financial technology providers and brokerages to offer products that are more reliable to support Gen Z needs as their next customer. The objective of this research is to examine the impact of financial confidence, financial socialization, herding, and mental accounting on the investment decision of Generation Z in Jakarta, through the use of a structural equation system.

Literature Review

Financial Confidence

According to (Palameta et al., 2016), financial confidence is defined as the self-assurance needed to make financial decisions. Financial confidence also shows when someone is willing to take any amount of risk perceived they can control and they have confidence that they can make things work (Kappal and Rastogi, 2020). Financial self-confidence is the confidence necessary to make sound financial decisions (Newman, 1984). Based on these statements, financial confidence is interactions between what individuals know and feel about their abilities and what they believe and are capable of doing so. Long-term financial decision-making depends largely on individual financial confidence (Atlas et al., 2019). Previous research found that someone with higher self-confidence tends to make a healthier financial decision (Hilgert, et al., 2003) (Stolper, 2018). Individual financial confidence also is proven to help a person to participate fully in financial decision-making and strongly encourage good investment behavior (Ramalho and Forte, 2019). Financial confidence plays an important role for individuals in terms of financial planning. Individual financial confidence has a positive and significant effect on determining investment decisions (Morris and Cuthbert, 2022). Individuals who have confidence in their investment will make an appropriate decision with the effective management of their financial resources. However, based on research (Cupak et al., 2021) higher confidence or overconfidence is related to higher-risk investment decisions.

Financial Socialization

Financial socialization is a process by which individuals acquire from the environment the skills, knowledge, and attitudes necessary to maximize their consumer role in financial markets (Ward, 1974). Financial socialization is a process of acquiring and developing values, norms, knowledge, standards, attitudes, and behaviors that help individuals to acquire individual well-being in this case financial viability. Based on these statements, financial socialization is the process of gaining knowledge, skills, and behaviors necessary to improve financial well-being. The dimension of financial socialization is measured through four things, namely parental influences, peer influences, media influences, and workplace influences (Hira et al., 2013). The theory of consumer socialization (Ward, 1974) can be applied to financial socialization and its effect on investment decision, which shows that decision is caused by one's socialization agents such as parents, family, friends, and peers. Recent research also found that financial socialization derived from parental upbringing has a positive and significant effect on children's investment decisions (Lebaron et al., 2018). Therefore, financial socialization has a positive and significant effect on investment decisions (Zhao and Zhang, 2020) (Fan and Park, 2021).

Herding

Herding is the behavior of following other investors when an investor does not fully master the type of portfolio he wants to invest in (Kumar and Goyal, 2015). According to (Cao et al., 2021), herding is defined as a person's desire to do what everyone else is doing even when knowledge and information suggest something else. Herding is a behavior that tends to imitate the deeds of others, being able to make his decision change at any time because it is affected by other investors (Virigineni and Rao, 2017). Based on these statements, herding on investment decisions can be defined as the behavior of following others' investment decisions and ignoring personal opinions and abilities. In psychological studies, herding which can be categorized as imitation behavior has often been driven by the behavioral biases of human

nature. It is a common tendency for humans to refer to, learn, observe, and imitate others' behavior (Andronikidi and Kallinterakis, 2010). Research found that herding has significant effect on investment decision-making (Madaan and Singh, 2019) (Cao et al., 2021). One of the studies by (Filiz et al., 2018) revealed that herding behavior significantly influences nonoptimal portfolio choices. However, on the rational side, herding could be driven by more subtle considerations (Devenow and Welch, 1996). Reputed professionals were also found to herd and choose to follow the investment decision of the majority if the risk from potential failure is perceived as smaller compared to going it alone (Graham, 1999).

Mental Accounting

Mental accounting is defined as the cognitive behavior of a person where they are classifying between inputs and outputs based on specific posts as is the case with accounting models (Thaler and Shefrin, 1981). Mental accounting refers to the tendency of people to separate their money into segregated accounts based on various subjective criteria, such as the source of money and the purpose of each account (Kahneman and Tversky, 1981). According to (Thaler, 1985), mental accounting is a framework of cognitive operations used by individuals and households in coding, categorizing, and evaluating their financial activities. It can be concluded that mental accounting can be defined as the tendency of people to separate and evaluate their money by segregated accounts based on inputs and outputs and specific posts as accounting models. Research (Guo et al., 2019) shows that the higher the level of mental accounting of an investor, the more the investor will consider the level of risk that may arise from the investment decisions to be taken. Therefore, mental accounting is said to influence a person in considering the investment decisions they want to make by assessing trade-offs in the long term and making appropriate financial strategies (Zhang and Sussman, 2018). The results of research by (Imas, 2016) shows that investors who have mental accounting will always calculate their finances at all times. When making investment decisions, individual investors seek to accumulate losses and take into account the potential profit that can be obtained.

Investment Decision

Investment decisions refer to assets in which funds will be invested by an individual or corporate entity (Hirshleifer, 1958). Investment decisions are defined as decisions that concern the composition of investment funding chosen by the company (Capon et al., 1996). According to (Kishori and Kumar, 2016), investment decisions are funding decisions made for better returns in the future. Specific objectives must be met for each investment, such as security against liquidity, growth, and inflation and having a choice of risks and returns. Based on these statements, investment decisions can be referred to as decisions to manage assets in which the composition of funds will be invested for a better return. In making these decisions, Humans do not always make rational decisions (Raut et al., 2018). Human behavior affects their decision. Individuals' financial decisions are influenced by market sentiment and their personality (Kappal and Rastogi, 2020), their decision is biased depending on personal value, attitude, and other prejudices (Baker et al., 2019). It is come such interesting to find out why investors behave the way they do. Various studies have identified several factors that can affect investor behavior such as psychological influences, personal value, personal needs, expert advice, stock fundamentals, risk capacity, demographic behavior, and others (Mittal, 2022).

2. RESEARCH METHOD

Sample and Data Collection

In October 2022, we executed a survey for Generation Z aged 17-27 years old, living in Jakarta, Indonesia, and already invested in the Capital Market. This group has been selected because they are the most educated and the most proficient young people using Information and communications technology (ICT) in Indonesia. All data was obtained from the survey that was shared online on social media through google forms. The required criteria for the respondents are as follows: (1) Gen Z born between 1995-2010, (2) Domicile in Jakarta, and (3) Already invested in the capital market.

The cluster sampling method was used to collect 205 respondents. The majority of the sample is women (69%) with a smaller percentage of men (31%). 73% of respondents are in the age range of 17-21 years old and 27% of respondents are 22-27 years old. Figure 1 shows that as many as 70% of respondents are currently in university, 20% are employee, 4% owns a business, and the remaining 4% are still in high school.

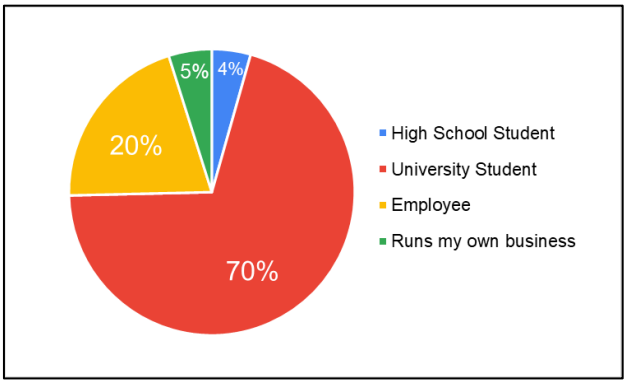

Figure 1 Percentage of Respondents Based on Occupation Status

Figure 2 shows that the majority of respondents conduct buying and selling transactions in the capital market 1-4 times in the last month (49%), following 5-8 times in the last month (29%), 9-12 times in the last month (9%), more than 12 times in the last month (5%), and have not made a transaction from last month (8%). This indicates that generation Z in Jakarta have less frequent trading intention.

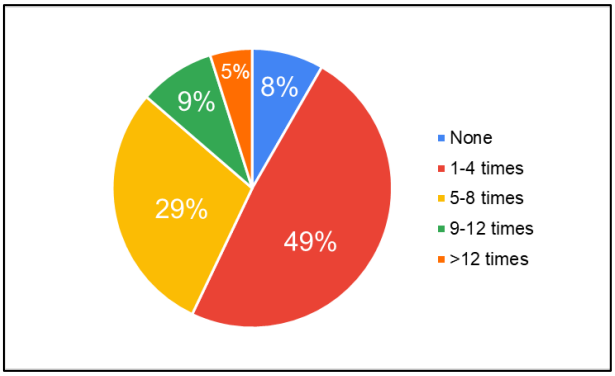

Figure 2 Percentage of Respondents Based on Capital Markets Trading Intention in Previous Month

9Moreover, Figure 3 shows that most of the respondents' source of investment funds is allowances from parents since most of them are university students.

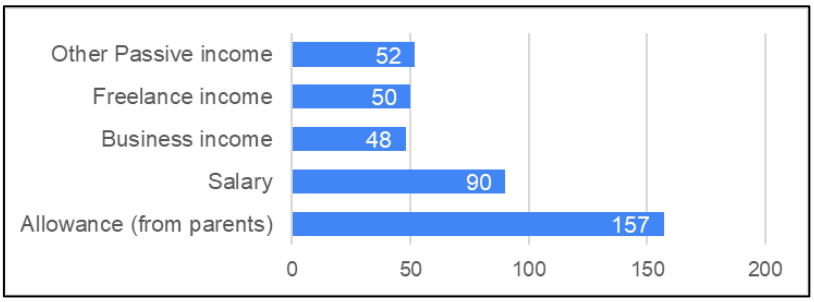

Figure 3 Respondents' Source of Investment Funds (Multiple Choice Question)

Survey Design

The survey contained 5 screening questions, 3 sociodemographic-related questions about age, gender, and education, as well as 2 investment decision questions relating to sources of investment funds and the type of chosen investment instruments. The research model consists of four independent variables such as financial confidence, financial socialization, herding, and mental accounting. The investment decision is the dependent variable.

All variables are measured by 33 indicators that can measure self-reported financial confidence, financial socialization, mental accounting, herding, and investment decision. The indicators were developed from follows: financial confidence (Bassan et al., 2014) (Ramalho and Forte, 2019), financial socialization (Isomidinova et al., 2017) (Gutter and Copur, 2011), herding (Kyriazis, 2020) (Madaan and Singh, 2019), mental accounting (Perry, 2000) (Thaler, 1999), and investment decision (Dash, 2010) (Kadariya et al., 2012). All indicators are categorized into five latent variables developed into statements with an ordinal scale. Each statement was sorted out with a five-point Likert scale response ranging from one to five, with one represented by ''Strongly Disagree'' and five by ''Strongly Agree''.

Convergent validity and discriminant validity are used in the validity test while the reliability test uses composite reliability. Derived from past research, the model is intended to highlight the direct influence of financial confidence, financial socialization, herding, and mental accounting on investment decision. In summary, the research hypotheses are:

- H1: Financial confidence positively influences investment decision
- H2: Financial socialization positively influences investment decision
- H3: Herding positively influences investment decision
- H4: Mental accounting positively influences investment decision

Hypotheses were tested by using Structural Equation Modeling (SEM) regression approach using Smart-PLS 3.2.9 software with a significance level of 5 %.

3. RESULTS

Table 1 Fornell-Larcker Criterion

Construct	Fornell-Larcker				
	Financial Confidence	Financial Socialization	Herding	Investment Decision	Mental Accounting
Financial Confidence	0.810				
Financial Socialization	0.653	0.804			
Herding	0.479	0.535	0.816		
Investment Decision	0.697	0.663	0.574	0.805	
Mental Accounting	0.610	0.595	0.590	0.656	0.806

Table 2 Cronbach's Alpha, Composite Reliability, and AVE

Construct	**Cronbach's Alpha**	**Composite Reliability**	**AVE**
Financial Confidence	0.895	0.919	0.655
Financial Socialization	0.863	0.901	0.647
Herding	0.833	0.888	0.666
Investment Decision	0.951	0.957	0.648
Mental Accounting	0.893	0.918	0.650

Based on Table 1, each variable fulfilled the criteria of convergent validity where each variable has the highest correlation with itself than any other variables, and each variable also it is concluded that the square root of the average variance (AVE) for each variable is higher than 0.5 which indicates validity (Table 2). Figure 4 shows the outer loading factors of each indicator have met the required minimum of 0.7 of convergent validity. Moreover, composite reliability which can be seen in table 2 shows that all variables have composite reliability higher than 0.7, and Cronbach's Alpha higher than 0.7 means that all latent variables are reliable. The validity and reliability test of this model indicates that the constructs used have proven to be valid and reliable. The R-square used from this model to measure the proportion of variance in the dependent variable that can be explained by the independent variable. This research shows that 62.2% (R-square: 0.622) of investment decision can be explained by financial confidence, financial socialization, herding and mental accounting.

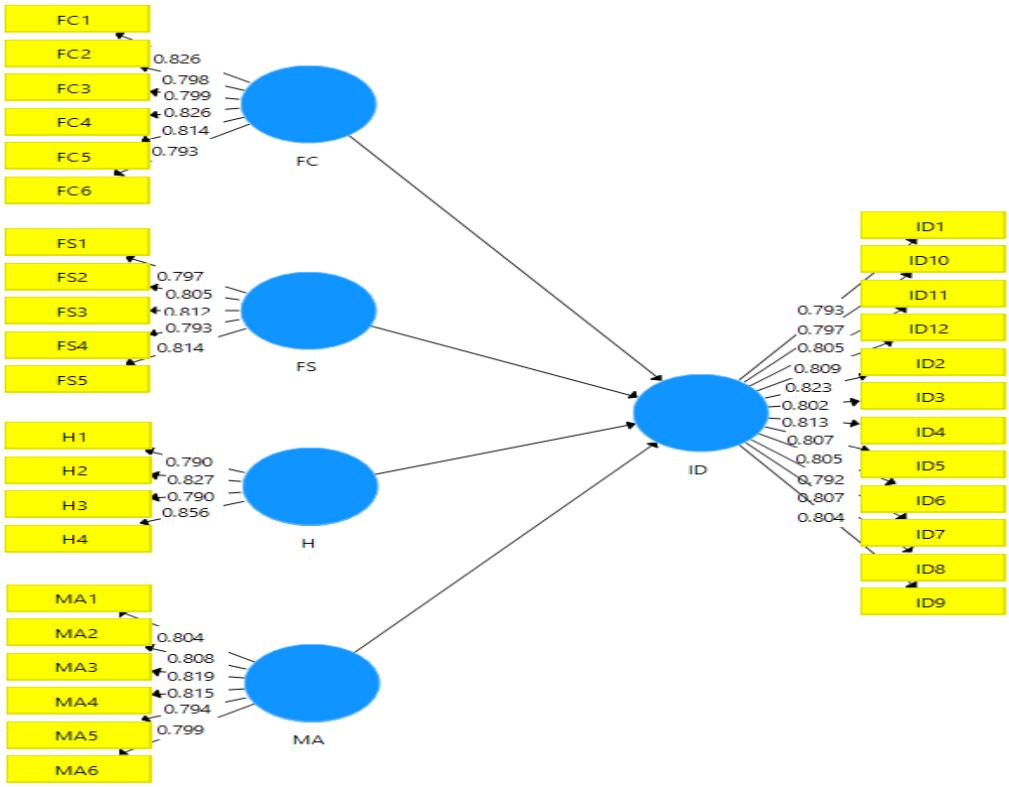

Figure 4 Outer Loading Factors

Table 3 Bootstrapping Results

Hypothesis	Path Coefficients	t- Statistics	p-Values
Ha1	0.338	3.753	0.000
Ha2	0.224	2.973	0.003
Ha3	0.161	2.419	0.016
Ha4	0.222	2.564	0.011

Based on the hypothesis test in this study, Table 3 reveals bootstrapping results to determine the direction and significance of each variable. Bootstrapping results show financial confidence (p-value: 0.000) with a t-statistics value greater than the t-table value of 1.96, the original sample value shows a positive, and the p-value less than 0.05 indicates that financial confidence significantly influences investment decision, therefore accepting the first hypothesis (Ha1). Financial socialization (p-value: 0.003) with a t-statistics value greater than the t-table value of 1.96, the original sample value shows a positive, and the p-value less than 0.05 indicates that financial socialization significantly influences investment decision, therefore accepting the second hypothesis (Ha2). Herding (p-value: 0.016) with a t-statistics value greater than the t-table value of 1.96, the original sample value shows a positive, and the p-value less than 0.05 indicates that herding significantly influences investment decision, therefore accepting the third hypothesis (Ha3). Mental accounting (p-value: 0.011) with a t-statistics value greater than the t-table value of 1.96, the original sample value shows a positive, and the p-value less than 0.05

indicates that mental accounting significantly influences investment decision, therefore accepting the first hypothesis (Ha4).

4. DISCUSSION

Despite past research has already determined that financial confidence influences investment decisions (Ramalho and Forte, 2019) (Morris et al., 2022), this research adds up to other literature that financial confidence has the highest significance and explanative reason for investment decision. Financial confidence also influences investment decisions for the younger generation. Our research reveals that generation Z's confidence in their own capability to choose the type of financial product needed and solve financial problems will affect their investment decision. Generation Z who are confident in solving financial problems if occur is likely to be bold in deciding investments in the capital market that tend to have higher risks. Generation Z who is confident to choose their financial product is likely to be straightforward in deciding on investment

Financial socialization positively influences investment decision. Supportive financial socialization will help generation Z in making an investment decision. The result of this study is in line with research by (Zhao and Zhang, 2020) (Fan and Park, 2021). Someone who is more willing to socialize and be open to seeking information and help tends to make better decisions. Respondents agreed on financial socialization from friends and family, social media, the internet, and mostly educational background helped their investment decision. Insightful financial socialization creates better investment decision as the younger generation tend to follow advice from friends, family, and teacher in considering investment decision.

Herding positively influences investment decision. The result of this study is in line with research by (Madaan and Singh, 2019) (Cao et al., 2021). This research found that generation Z investors tend to rely on the ideals and decisions of others when collecting information and analyzing investment issues. Herding is caused by the lack of ability to evaluate the market which can be seen in the younger generation of investors. However, a lower frequency of trading tends to overcome the negative impact of herding behavior (Andronikidi and Kallinterakis, 2010), hence generation Z investors in Jakarta, the majority of whom have low-frequency trading will only slightly get the negative impact of herding. The negative impact of herding includes the unrealized cost of adjusting one's investment portfolio when the trading frequency is high due to following other investors on fluctuating market trends. This research is also in line with (Puckett and Yan, 2007), that investors' herding behavior is more accordant with selling herds rather than buying herds.

Mental accounting positively influences investment decision. Respondents agreed that they categorize income by the sources and made allocation plans based on income, including an investment allocation plan. This result is in line with research by (Zhang and Abigail, 2018) (Guo et al., 2019). Mental accounting is said to influence a person in considering the investment decisions they want to make by assessing trade-offs in the long term and creating a financial evaluation. Under the standard economic theory, individuals are said to consider their financial portfolio as a whole but mental accounting behavior made some individuals tend to categorize their investments by different mental accounts. Mental accounts influence also arises for those who prefer diversification of their investment for a greater variety (Zhang and Abigail, 2018).

Therefore, we can conclude that financial confidence, financial socialization, herding, and mental accounting significantly influence investment decision among Gen Z in Jakarta. Gen Z

as the new generation of investors are in the process of learning and looking for an investment that suits them. Gen Z gains a lot of knowledge and skills from socialization through their surroundings and use of the internet. The tendency to seek socialization and to follow others' decisions is beyond doubt for Gen Z as newcomers who have no prior experience as an investor. As newcomers, Gen Z tends to engage in less risky behavior, to avoid large losses, Gen Z also applies investments with devoted funds that are separated from their main account. Gen Z is also in the stage of finding confidence that can help them make a better investment decision.

5. CONCLUSION

The purpose of this research is to reveal some of the factors that influence investment decision on generation Z in Jakarta as follows: financial confidence has a positive and significant effect on investment decision. Sufficient self-confidence can improve investment decisions well. As the first generation to be digital natives, financial socialization has a positive and significant effect on investment decision. Someone who openly discusses financial issues and actively seeks socialization tends to have more information to consider in investment decisions. However, the ease of sharing information can lead to herding behavior. This research shows that herding has a positive and significant effect on investment decision. Generation Z as the younger generation of investors tends to follow other decisions in selling and buying an investment, however, this study also found that a lower frequency of trading that happens in generation Z tends to overcome the negative impact of herding. Lastly, mental accounting has a positive and significant effect on investment decision. Most of generation Z in Jakarta agreed that they categorize income by the sources and made allocation plans based on income, including investment allocation plans and evaluations based on different mental accounts.

In conclusion, Gen Z's investment decision are influenced by personal values such as confidence and socialization, as well as psychological influences such as herding and mental accounting. This research also found that 75 respondents (37%) agreed and 63 respondents (31%) strongly agreed that they acquired financial information and skills from educational backgrounds. Therefore, educational institutions are needed to take part in enhancing students' financial socialization, rising confidence, and encouraging rational investment decisions. While financial technology providers and brokerages need to engage their new customers through socialization, provide product information, and convince their Gen Z customers of their product's safety and short-term benefits to support Gen Z's needs as their next customer. This research shows that 62.2% (R-square: 0.622) of investment decision can be explained by financial confidence, financial socialization, herding, and mental accounting. Despite this research has been made with as much precision as time allows, there still remain several limitations to this study. First, this research studies generation Z who is living in the capital city of Jakarta, and may not be generalized to other geographic regions. Second, this research studies respondent aged 17-27 years old with the majority of respondents being university students and entry-level workers which have lower incomes which might cause a low frequency of trading and limitations for respondents to invest in larger or more diverse instruments because of limited resources. Future research may consider identifying income and demographic factors influencing investment decision. Researchers also suggest future research to consider identifying more on what influences financial confidence, given the important contribution of financial confidence to an explanation of investment decision.

REFERENCES

Andronikidi, Aikaterini, and Vasileios Kallinterakis. "Thin trading and its impact upon herding: the case of Israel." Applied Economics Letters 17.18, 2010, 1805-1810. DOI: https://doi.org/10.1080/13504850903357327

Atlas, Stephen A., Jialing Lu, P. D. Micu, and Nilton Porto. "Financial Knowledge, Confidence, Credit Use, and Financial Satisfaction." *Journal of Financial Counseling and Planning* 30, 2 (2019): 175-190. DOI: 10.1891/1052-3073.30.2.175.

Baker, H. K., Kumar, S., Goyal, N. and Gaur, V. "How financial literacy and demographic variables relate to behavioral biases", 2019, Managerial Finance, Vol. 45 No. 1, pp. 124-146. DOI: https://doi.org/10.1108/MF-01-2018-0003

Bassan, Paul & Weida, Miles & Rowlette, Jeremy. Large scale infrared imaging of tissue micro arrays (TMAs) using a tunable Quantum Cascade Laser (QCL) based microscope. The Analyst. 2014 139. 10.1039/c4an00638k.

Bonaparte, Yosef, Russell Cooper, and Mengli Sha. Rationalizing Trading Frequency and Returns. No. w25838. National Bureau of Economic Research, 2019, DOI: 10.3386/ w25838

Cao, M. M, Nhu-Ty N., And Thanh. "Behavioral factors on individual investors' decision making and investment performance." The Journal of Finance, Economics and Business 8.3, 2021, 845-853.DOI: https://doi.org/10.13106/jafeb.2021.vol8.no3.0845

Capon, Noel, Gavan J. Fitzsimons, and Russ Alan Prince. "An individual level analysis of the mutual fund investment decision." Journal of financial services 10.1, 1996, 59-82.

Cupák, Andrej, Pirmin Fessler, and Alyssa Schneebaum. "Gender differences in risky asset behavior: The importance of self-confidence and financial literacy." Finance Research Letters 42, 2021, 101880. DOI: https://doi.org/10.1016/j.frl.2020.101880

Dash, Manoj Kumar. "Factors influencing investment decision of generations in India: An econometric study." Int. J. Buss. Mgt. Eco. Res 1.1, 2010, 15-26.

Deloitte Global Gen Z and Millenials Survey 2022. Deloitte. 2022. https://www2.deloitte.com/content/dam/Deloitte/global/Documents/deloitte-2022-genz-millennial-survey.pdf. (Accessed on 27th August 2022)

Devenow, Andrea, and Ivo Welch. "Rational herding in financial economics." European economic review 40.3-5, 1996, 603-615.

Fan, Lu, and Narang Park. "Factors mediating the association between financial socialization and well-being of young adults." Journal of Financial Counseling and Planning, 2021, DOI: 10.1891/JFCP-20-00056.

Gen Z investors seek short-term gain amid financial turbulence. Insider. May 10, 2022. https://www.insiderintelligence.com/content/gen-z-investors. (Accessed on 27th August 2022).

Gen Z: What to Know About the Next Generation of Investors. Nasdaq. 31 March 2022. https://www.nasdaq.com/articles/gen-z%3A-what-to-know-about-the-next-generation-of-investors. (Accessed on 27th August 2022)

Graham, John R. "Herding among investment newsletters: Theory and evidence." The Journal of Finance 54.1, 1999, 237-268.

Guo, Bin, Shen Lin, and Wei Zhang. "A Behavioral Look on Short-term Reversal." 2019.

Gutter, Michael, and Zeynep Copur. "Financial behaviors and financial well-being of college students: Evidence from a national survey." Journal of family and economic Issues 32.4, 2011, 699-714.

Hilgert, Marianne A., Jeanne M. Hogarth, and Sondra G. Beverly. "Household financial management: The connection between knowledge and behavior." Fed. Res. Bull. 89, 2003, 309.

Hira, Tahira K., Mohamad Fazli Sabri, and Cäzilia Loibl. "Financial socialization's impact on investment orientation and household net worth." International Journal of Consumer Studies 37.1, 2013: 29-35. DOI: https://doi.org/10.1111/ijcs.12003.

Hirshleifer, Jack. "On the theory of optimal investment decision." Journal of political economy 66.4, 1958, 329-352.

Ibrahim, Filiz; Nahmer, Thomas; Spiwoks, Markus; Bizer, Kilian. Financial Markets and Portfolio Management; New York Vol. 32, Iss. 2, (May 2018): 167-205. DOI: 10.1007/s11408-018-0311-x

Imas, Alex. "The realization effect: Risk-taking after realized versus paper losses." American Economic Review 106.8, 2016, 2086-2109. DOI: 10.1257/aer.20140386

Isomidinova, Gulnoza, Jugindar Singh Kartar Singh, and K. Singh. "Determinants of financial literacy: a quantitative study." Electronic Journal of Business & Management 2.1, 2017, 61-75.

Kadariya, S., Subedi, P. P., Joshi, B., & Nyaupane, R. P. Investor Awareness and Investment on Equity in Nepalese Capital Market. *Banking Journal*, *2*(1), 2012,1–15. https://doi.org/10.3126/bj.v2i1.5702

Kahneman, Daniel, and Amos Tversky. The simulation heuristic. Stanford Univ CA Dept of Psychology, 1981.

Kappal, Jyoti M., and Shailesh Rastogi. "Investment behaviour of women entrepreneurs." Qualitative Research in Financial Markets 12.4, 2020, 485-504. Vol. 12 No. 4, pp. 485-504. DOI: https://doi.org/10.1108/QRFM-04-2020-0053

Kishori, B., and P. D. Kumar. "A study on factors influencing the investors' International Journal of Management and Commerce Innovations 4.1, 2016, 39-43.

Kumar, Satish, and Nisha Goyal. "Behavioural biases in investment decision making–a systematic literature review." Qualitative Research in financial markets, 2015, Vol. 7 No. 1, pp. 88-108. DOI: https://doi.org/10.1108/QRFM-07-2014-0022

Kyriazis, Nikolaos A. "Herding behaviour in digital currency markets: An integrated survey and empirical estimation." Heliyon 6.8, 2020, e04752. DOI: https://doi.org/10.1016/j.heliyon.2020.e04752Get

LeBaron, Ashley B., et al. "Whats and hows of family financial socialization: Retrospective reports of emerging adults, parents, and grandparents." Family Relations 67.4, 2018, 497-509. DOI: https://doi.org/10.1111/fare.12335

Madaan, Geetika, and Sanjeet Singh. "An analysis of behavioral biases in investment decision-making." International Journal of Financial Research 10.4, 2019, 55-67. DOI: https://doi.org/10.5430/ijfr.v10n4p55

Mittal, S.K. "Behavior biases and investment decision: theoretical and research framework", Qualitative Research in Financial Markets, Vol. 14 No. 2, 2022, pp. 213-228. DOI: https://doi.org/10.1108/QRFM-09-2017-0085

Morris, Tania, Stephanie Maillet, and Vivi Koffi. "Financial knowledge, financial confidence and learning capacity on financial behavior: A Canadian study." Cogent Social Sciences 8.1, 2022, 1996919. DOI: https://doi.org/10.1080/23311886.2021.1996919

Newman, Richard S. "Children's numerical skill and judgments of confidence in estimation." Journal of Experimental Child Psychology 37.1, 1984, 107-123

Palameta, B., Cam Nguyen, Taylor Shek-wai Hui, and David Gyarmati. 2016. The Link between Financial Confidence and Financial Outcomes among Working-Aged Canadians for the Financial Consumer Agency of Canada. The Social Research and Demonstration Corporation (SRDC), (May), 2016, pp. 1–63.

Pearson, B. and Korankye, T. "The association between financial literacy confidence and financial satisfaction", Review of Behavioral Finance, Vol. ahead-of-print No. ahead-of-print, 2022, DOI: https://doi.org/10.1108/RBF-03-2022-0090

Perry, Vanessa Gail. Antecedents of consumer financing decisions: A mental accounting model of revolving credit usage. The University of North Carolina at Chapel Hill, 2000.

Puckett, Andy, and Xuemin Sterling Yan. "Short-term institutional herding and its impact on stock prices." 2007, DOI: http://dx.doi.org/10.2139/ssrn.972254

Ramalho, Thiago Borges, and Denis Forte. "Financial literacy in Brazil–do knowledge and self-confidence relate with behavior?" Management Journal 5.4, 2019: 77-95. DOI: https://doi.org/10.1108/RAUSP-04-2018-0008

Raut, R. Kumar, N. Das, and R. Kumar. "Extending the theory of planned behaviour: Impact of past behavioural biases on the investment decision of Indian investors." Asian Journal of Business and Accounting 11.1, 2018, 265-291. DOI: https://doi.org/10.22452/ajba.vol11no1.9

Sarah E. Morris & Bruce N. Cuthbert (2012) Research Domain Criteria: cognitive systems, neural circuits, and dimensions of behavior, Dialogues in Clinical Neuroscience, 14:1, 29-37, DOI: 10.31887/DCNS.2012.14.1/smorris

Statistik Pasar Modal Indonesia. KSEI Indonesia Central Securities Depository. March 2022. www.ksei.co.id. (Accessed on 01st October 2022)

Stolper, Oscar. "It takes two to Tango: Households' response to financial advice and the role of financial literacy." Journal of Banking & Finance 92, 2018, 295-310. DOI: https://doi.org/10.1016/j.jbankfin.2017.04.014

Thaler, Richard H. "Mental accounting matters." Journal of Behavioral decision making 12.3, 1999, 183-206.

Thaler, Richard H., and Hersh M. Shefrin. "An economic theory of self-control." Journal of political Economy 89.2, 1981, 392-406.

Virigineni, Mydhili, and M. Bhaskara Rao. "Contemporary developments in behavioural finance." International Journal of Economics and Financial Issues 7.1, 2017, 448-459.

Ward, Scott. Consumer Socialization, *Journal of Consumer Research*, Volume 1, Issue 2, September 1974, Pages 1–14, DOI: https://doi.org/10.1086/208584

Zhang, C. Yiwei and Sussman, Abigail B., Perspectives on Mental Accounting: An Exploration of Budgeting and Investing September 19, 2018, Financial Planning Review, Vol. 1, Issue 1-2, March-June 2018, DOI: https://doi.org/10.1002/cfp2.1011

Zhao, Haidong, and Lini Zhang. "Talking money at home: the value of family financial socialization." International Journal of Bank Marketing, 2020, Vol. 38 No. 7, pp. 1617-1634. DOI: https://doi.org/10.1108/IJBM-04-2020-0174