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THE ROLE OF FINANCIAL BEHAVIOR AS A MEDIATOR OF THE INFLUENCE OF FINANCIAL LITERACY AND FINANCIAL ATTITUDES ON MSMES INVESTMENT DECISIONS IN INDONESIA

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ABSTRACT

Micro, small and medium enterprises (MSMEs) are pillars of the economy and make a large contribution to gross domestic product (GDP). However, MSMEs' access to funding is relatively limited because they are not considered bankable and have a high risk. The purpose of this study is to analyze the impact of financial literacy and financial attitudes on investment decisions in mediating financial behavior. The target audience for the study comprises small and medium enterprises in Malang City, East Java, Indonesia, with a sample size of 100 people, and structural equation modeling (SEM) was employed as an analytical tool. The conclusion argues that financial literacy and attitude have an impact on investment decisions. Financial conduct can moderate the impact of financial literacy on investment decisions, but it cannot moderate the impact of financial attitudes toward investment decisions. The findings of this study show that investment decisions involve the competence and confidence of MSME owners to employ financial knowledge or financial literacy and the ability to manage future finances. MSME owners' ability to handle resources for investment adds to financial behavior, as seen by their ability to develop budget plans. Financial behavior is unable to mitigate the impact of financial attitudes on investment decisions, implying that future financial management attitudes will make it impossible for MSMEs to estimate operational costs. This situation makes it harder for MSME owners to operate as outlined in their budget plans.

Contribution/Originality: The novelty of this research lies in its investigation of whether financial literacy and financial attitude should be mediated by financial behavior in the investment decisions of MSMEs.

1. INTRODUCTION

Due to their ability to be established anywhere for a variety of commercial operations in both urban and rural areas, micro, small and medium-sized firms (MSMEs) play a significant role in the global economy (Veskaisri, Chan, & Pollard, 2007); (Khalique, Shaari, & Hassan, 2011). For instance, MSMEs are essential in China, the world's fastest-growing economy, where they make up 99% of all firms and 70% of all jobs (Tang, Wang, & Zhang, 2007).

Ayyagari, Demirguc-Kunt, and Maksimovic (2011) stated that MSMEs contribute more to employment in low-income countries than in high-income countries. Compared to large firms, MSMEs have a greater impact on economic growth. This is because the formal market and credit are relied upon to quickly respond to economic expansion (Berry, Rodriguez, & Sandee, 2002; Bhasin & Venkataramany, 2010). The MSME sector has the ability to significantly improve social and economic systems (Sharma & Wadhawan, 2009). Additionally, the economy will benefit from the increase in MSMEs.

According to Kuratko and Hodgetts (2010), many newly created MSMEs fail within the first five years. Zimmerer, Norman, and Scarborough (2008) conducted an empirical study on the development of MSMEs. According to the bulk of Australian, American, and British surveys, 80%–90% of MSMEs fail within five to ten years (Zimmerer et al., 2008). The failure rate of MSMEs in Malaysia is 60%, which is believed to be as a result of the lack of relevant information (Noor Hazlina & Seet, 2009).

Furthermore, Garwe and Fatoki (2012) mentioned the issues faced by MSMEs in various studies and identified several aspects that affect MSMEs, notably internal factors (financial and management restrictions) and internal factors (financial and management constraints). Sannajust (2014) stated that limitations on MSMEs include a lack of firm diversification, a weak financial structure, a low level of capital, and a reliance on external financing. Other structural limitations on MSMEs include a lack of flexibility and shrinking capabilities. Limitations include difficulty in obtaining financing, the absence of suitable infrastructure, the lack of information, the lack of entrepreneurial skills, and the poor implementation of policies among MSMEs (Oduntan, 2014).

MSMEs are essential to the Indonesian economy, contributing Rp 8,500 trillion, or 61.97%, of the nation's gross domestic product (GDP) in 2020. As of 2020, MSMEs are responsible for 97% of the global capacity to hire new workers. Due to their close relationship with the number of jobs in Indonesia, MSMEs are crucial for absorbing labor. In 2018, MSMEs took on the most debt, amounting to around Rp 1 trillion (bkpm.go.id).

Despite their considerable contribution to a country's economy, MSMEs have restricted access to funding compared to major corporations. The investment climate for all MSMEs in developing nations reveals that the majority of MSMEs face challenges in achieving capital and financing from formal banks (Rosavina, Rahadi, Kitri, Nuraeni, & Mayangsari, 2019). This situation has arisen because most MSMEs are regarded as unbankable and high risk. Similarly, according to research conducted by Purwanti (2017), MSMEs in Indonesia are still unsure if funds borrowed from banks will have to be utilized to meet their duties as creditors, making it difficult for MSME owners to make investment decisions.

Ajzen (1991) made a significant contribution to the theory of planned behavior by asserting that an individual's desire to behave (behavioral intention) determines their conduct. Behavioral intention comprises three elements: attitude, subjective norms, and perceived behavioral control. Although perceived behavioral control (MSME actors) affects a person's motivation to invest, this component also includes internal determinants that are represented by financial literacy in this study. This study investigates how financial attitudes and financial conduct affect investment decisions by utilizing financial behavior as a mediator. The uniqueness of this study is the use of the role of financial behavior as a variable that mediates the effect of financial literacy and financial attitude on investment decisions which is developed in one model and explained by the theory of planned behavior.

2. LITERATURE REVIEW

2.1. Theory of Planned Behavior

Ajzen asserted that, because behavior may be thought about and planned, the theory of planned behavior anticipates behavioral considerations. An individual's behavioral intention, which is composed of three variables, is what determines their behavior and is in keeping with the theory of planned behavior (attitude, subjective norms, and perceived behavioral control) (Ajzen, 1991). Aside from investing tools, investor preferences are also relevant to estimating return and risk, and the theory of planned behavior considers that a person's conduct is a direct determinant of that behavior and risk tolerance.

The theory of planned behavior has an advantage over other behavioral theories, according to Wellington, Waxmonsky, and Melamed (2006), because it can distinguish between willed and unwilled activity by identifying a person's belief in controlling what will happen as a consequence of behavior.

2.2. Investment Decisions

When someone decides to invest, they are deferring the consumption of their current assets in the hope of being able to consume more of the funds they have invested in in the future. To gain money in the future, investors make decisions between two or more investment options. Investment decisions are a collection of planning actions that consider the degree of risk in the anticipation of obtaining future returns in the financial context (Jogiyanto, 2010). Hamza and Arif (2019) used neutral information, individual financial needs, self- and firm-image, accounting information, and advocate information as metrics to track investment decisions. Risk, return, and risk diversification were used to evaluate investment decisions by Tandelilin (2010); Atkinson and Messy (2012) and Annamaria Lusardi and Mitchell (2007).

2.3. Financial Literacy

Financial literacy is defined as a person's capability of dealing with and applying information relevant to personal finances. According to Humaira and Sagoro (2018), financial literacy is the capacity and assurance of an individual to comprehend fundamental financial concepts and manage their personal finances effectively, including both short-term and long-term financial planning in order to be prepared for life events and changing circumstances. However, the economic landscape is changing. Financial literacy, according to Chen and Volpe (1998), may be measured using four indicators: basic financial management knowledge, credit management, savings and investment management, and risk management. Van Rooij, Lusardi, and Alessie (2011) measured financial literacy using financial management, debt, savings, insurance, and investment. Financial literacy can be tested using markers of the fundamental understanding of personal finance, savings, loans, insurance, and investment Mendari and Kewal (2013).

Financial literacy influences a person's interest in investing, according to Herawati and Dewi (2020). Making the appropriate investing decisions necessitates a high level of financial literacy (Fachrudin & Fachrudin, 2016). Financial literacy has an impact on investing decisions, according to Hamza and Arif (2019). Financial literacy influences investment decisions in small firms in Southeast Sulawesi (Kalsum & Wawo, 2018). However, Jemutai, Cheboi, and Muganda (2020) reached a different conclusion, contending that financial literacy has a detrimental effect on the investment decisions made by small enterprises in Kenya. According to Arianti (2020), financial literacy has little influence on MSMEs' investment choices in the city of South Tangerang.

2.4. Financial Attitude

The use of financial fundamentals to produce and retain value through effective decision making and resource management can be termed as financial attitude (Rajna, Sharifah, & Junid, 2011). A state of thought, opinion, or judgment concerning money is referred to as financial attitude (Irine & Lady, 2016; Ososuakpor, 2022). Pankow (2003) explained financial attitude as a state of mind, opinion, and evaluation of finances.

According to the results of a previous empirical study on the impact of financial attitudes on investment decisions conducted by Astiti, Warmana, and Hidayah (2019), financial attitudes positively affect investors who are members of the Bali Hands Up Business Community. In Jakarta, employees in the prime of their careers can make better investment decisions thanks to their financial attitudes, according to Atmaningrum, Kanto, and Kisman (2021). Financial attitudes have a strong and beneficial influence on people's investment decisions in Makassar City, according to Ismail et al. (2017). However, Niazi and Malik (2019) asserted that financial attitudes have a negative impact on Pakistani public investment decisions.

2.5. Financial Behavior

Financial behavior, according to Shefrin (2010), is a study of how psychological phenomena influence financial conduct. Financial behavior indicators discovered by Parrotta and Johnson (1998) include financial planning, credit management, retirement plans, and financial management. Spending restraint, active saving, avoiding acquiring everyday expenses, budgeting, tracking money, and informed product choice are the six indicators identified for evaluating financial behavior factors by Kempson, Finney, and Poppe (2017). Akben-Selcuk (2015) identified three indicators of financial behavior – paying bills on time, creating a personal budget, and having savings that can be used in the event of an emergency in the future.

Financial attitude, according to Shokey (2002), is a mix of the notion of information and feelings about the learning process, as well as the effects of the desire to respond positively, and this combination results in financial behavior. Financial conduct is the outcome of financial knowledge, attitudes, and management, according to Zemtsov, Osipova, and Osipova (2015). Financial views influence financial management behavior, and financial attitudes influence financial management behavior in MSMEs, according to Humaira and Sagoro (2018) and Dai, Kostini, and Tresna (2021).

3. HYPOTHESES DEVELOPMENT

Financial literacy, which is defined as one's capacity to deal with and utilize personal finance information, has an impact on the success of investment decisions. Financial literacy also refers to a person's ability and conviction to use their financial knowledge to make wise financial decisions (Huston, 2010). Since it helps with the comprehension and evaluation of information required to make everyday decisions that have a financial impact on a company's day-to-day operations, financial literacy is seen as an essential tool for MSMEs' success (Fernandes, 2015). Making the right investment decisions necessitates financial knowledge (Fachrudin & Fachrudin, 2016). Financial literacy influences investment decisions, according to Herawati and Dewi (2020); Hamza and Arif (2019); and Kalsum and Wawo (2018). Based on the flow of thought and variable relationships that have been described, this study's first hypothesis is:

H_1: Financial literacy affects investment decisions.

Financial attitude, according to Rajna et al. (2011), is the use of financial concepts to create and preserve value through sound decision making and resource management. Financial attitudes influence investment decision making, according to Astiti et al. (2019); Atmaningrum et al. (2021) and Ismawati, Raprayoga, and Ismayanti (2020). Therefore, the second hypothesis is expressed as follows:

H_2: Financial attitude affects investment decisions.

Financial literacy has a favorable influence on financial behavior, according to Dwiastanti (2015); Grohmann (2018); Andarsari and Ningtyas (2019); Oliveira, Ladeira, Mette, and Ponchio (2019); and Dai et al. (2021). It is possible to make long-term financial behavior more focused by continuing to pay attention to financial literacy. Financial behavior influences investment decisions, according Upadana and Herawati (2020) and Arianti (2020). Based on the above, the third hypothesis proposed is:

H_3: Financial behavior mediates the effect of financial literacy on investment decisions.

Financial attitudes have a considerable impact on financial management behavior, in line with Yap, Komalasari, and Hadiansah (2016); Humaira and Sagoro (2018) and Dai et al. (2021). Financial behavior influences investment decisions (Arianti, 2020; Upadana & Herawati, 2020). Therefore, the fourth hypothesis is expressed as follows:

H_4: Financial behavior mediates the effect of financial attitudes on investment decisions.

4. METHODOLOGY

According to the topic and research objectives, this explanatory research study employs a quantitative strategy, which tests theories or ideas by measuring variables metrically or numerically and carries out data analysis processes using statistical tools. The pattern of influence that this study will show is the impact of financial behavior and investment decisions on financial knowledge and financial attitudes. A total of 9,870 people from MSMEs in Malang City, East Java, Indonesia, are the participants in this study. Because there were 9,870 people in the population and there was a 10% tolerance for error, the sample size for this study was 100 responses. Online surveys and in-person interviews with MSME owners were used to obtain the data for this study. The variables to be investigated were evaluated using a Likert scale, with a measurement score of 1 for strongly disagree and a measurement score of 5 for strongly agree. The general structure and indicators used are listed in Table 1.

Table 1. Operational variable.

Variable	Indicator	Source
Financial Literacy	Financial management	Chen and Volpe (1998); Van Rooij et al. (2011); Mendari and Kewal (2013)
	Credit management	
	Savings management	
	Investment management	
	Risk management	
Financial Attitude	Expenditure control	Rajna et al. (2011); Ismail et al. (2017); Shim, Barber, Card, Xiao, and Serido (2010)
	Future financial management	
	Making a monthly budget	
	Saving each month	
Financial Behavior	Financial planning	Hilgert, Hogarth, and Baverly (2003); Parrotta and Johnson (1998); Kempson et al. (2017); Akben-Selcuk (2015)
	Budget planning	
	Expenditure control	
Investment Decision	Risk	Hamza and Arif (2019); Tandelilin (2010); Atkinson and Messy (2012); Lusardi and Mitchell (2014)
	Yield (return)	
	Risk diversification	
	Personal financial needs	
	Self/company image	

Structural equation modeling (SEM) is the analysis technique used in this study. A t-test was used to determine if there was a direct effect, and the Sobel test was used to determine if there was an indirect effect.

5. RESULT AND DISCUSSION

5.1. Confirmatory Factor Analysis Results

The indicators and measurement outcomes of the variables, or variables that might be utilized to generate latent variables with the confirmatory factor analysis (CFA), are determined using the factor loading value. The results of the CFA test on the indicators that comprise the research variables are summarized in Table 2.

As shown in Table 2, indicators for financial knowledge, financial attitude, financial behavior, and investment choice all have factor loading (FL) values greater than 0.5. Based on the amount of each indicator's loading factor, it is also assumed that investment management makes the largest contribution to financial literacy. The most significant influence on the development of the investment decision components is from the financial behavior variable of budgeting.

Table 2. Factors loading (λ) measurement of the research variables.

Indicator and Variable	Factor Loading
Financial management --> Financial literacy	0.674
Credit management --> Financial literacy	0.736
Savings management --> Financial literacy	0.685
Investment management --> Financial literacy	0.777
Risk management --> Financial literacy	0.641
Expenditure control --> Financial attitude	0.674
Future financial management --> Financial attitude	0.780
Making a monthly budget --> Financial attitude	0.608
Saving each month --> Financial attitude	0.716
Financial planning --> Financial behavior	0.729
Budget planning --> Financial behavior	0.817
Expenditure control --> Financial behavior	0.749
Risk --> Investment decision	0.719
Return --> Investment decision	0.798
Risk diversification --> Investment decision	0.745
Personal financial needs --> Investment decision	0.693
Self/company image --> Investment decision	0.690

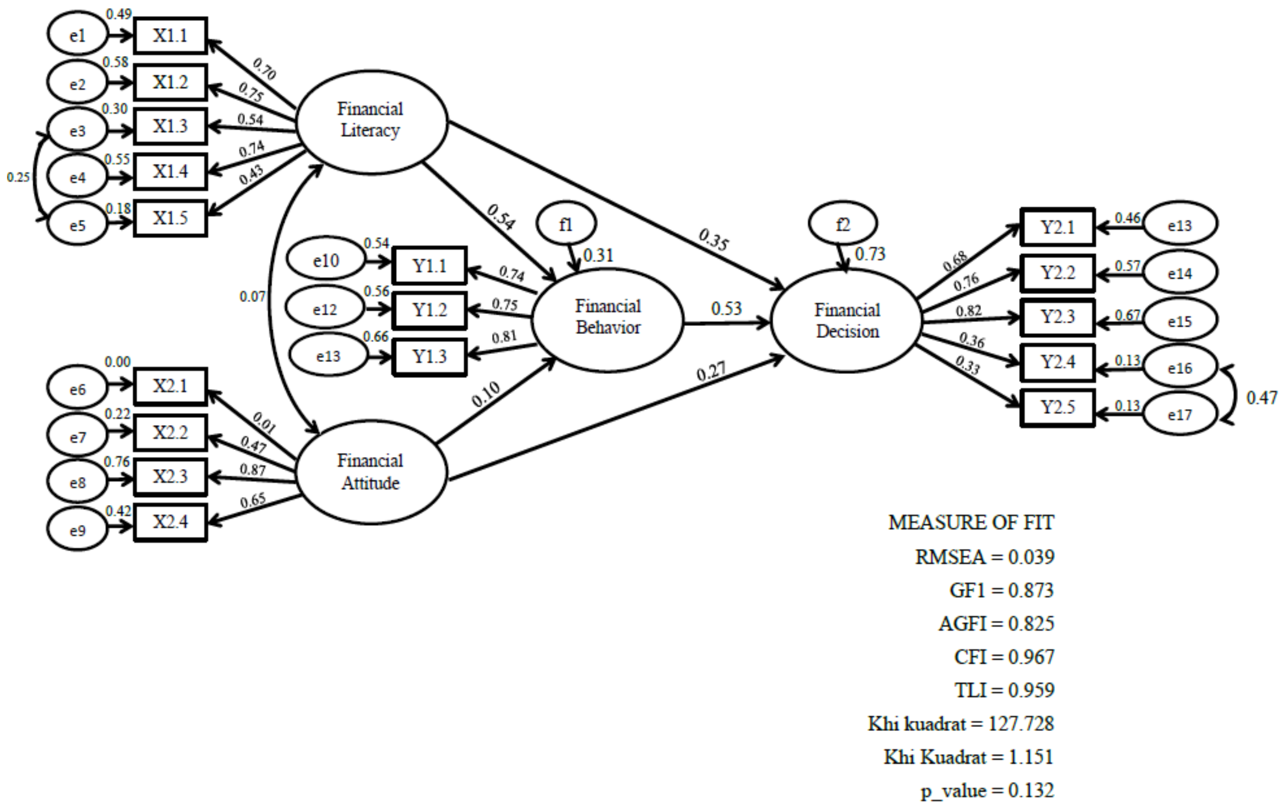

Figure 1. The results of the overall goodness of fit model test.

5.2. Goodness of Fit SEM Analysis Results

The theoretical model is said to fit if the empirical evidence concurs with the conceptual framework of the study. Figure 1 and Table 3 show the outcomes of the goodness of fit model test, which was performed in consonance with the findings of the SEM analysis to see if the hypothetical model is established by empirical data. The analysis results related to the model's feasibility index are outlined in Table 3.

The goodness of fit test results demonstrate that not all criteria automatically suggest a successful model. The adjusted goodness of fit index (AGFI) and the Tucker–Lewis index (TLI) values are close to, but just below, the cut-off value. Arbuckle and Wothke (1999) discovered that the best criterion for judging a model's quality is the minimum sample discrepancy function divided by the degree of freedom (CMIN/DF) value of less than 2 and the root mean square error of approximation (RMSEA) value of less than 0.08. The model can be classed as appropriate and practicable to apply in order to make an interpretation for future discussion. The CMIN/DF and RMSEA values in this study met the cut-off thresholds.

Table 3. Goodness of fit test results.

Criteria	Cut-off Value	Model Result	Note
Khi Kuadrat	Kecil	127.728	Good
P-value	≥ 0.05	0.132	
CMIN/DF	≤ 2.00	1.151	Good
GFI	≥ 0.90	0.873	Moderate
AGFI	≥ 0.90	0.825	Moderate
TLI	≥ 0.95	0.959	Good
CFI	≥ 0.95	0.967	Good
RMSEA	≤ 0.08	0.039	Good

5.3. Hypothesis Test Results

The SEM analysis in Amos version 20 was used to test the hypotheses. The hypotheses were tested using the critical ratio (CR) of the output weight regression. The research hypotheses are accepted and the null hypotheses are rejected if the p-value has a significance of 5%. Table 4 displays the results of the hypothesis testing.

Table 4 Results of hypothesis testing.

Category	Estimate	SE	CR	P	Hypothesis Results
FL --> FB	0.540	0.403	3.264	0.001	Accepted
FA --> FB	0.099	0.173	0.872	0.383	Rejected
FL --> ID	0.354	0.212	2.381	0.017	Accepted
FA --> ID	0.265	0.090	2.645	0.008	Accepted
FB --> ID	0.526	0.077	4.007	0.000	Accepted
FL --> FB --> ID	-	0.235	2.531	0.011	Accepted
FA --> FB --> ID	-	0.092	0.852	0.394	Rejected

Note: FL = financial literacy; FB = financial behavior; FA = financial attitude; ID = investment decisions.

Based on the data in the above table, the critical ratio (CR) and probability (p) values show the results of testing the first and second hypotheses, that financial literacy has an influence on financial behavior, while financial attitude has no effect on financial behavior. The result of the third test shows that financial literacy has an influence on investment decisions. Financial attitude was shown to have an influence on investment decisions, and it was also shown that financial behavior has an influence on investment decisions. The results of the test for financial behavior mediating the influence of financial literacy on investment decisions show that financial behavior is able to moderate the impact of financial literacy on investment decisions, but financial behavior is not able to mediate the influence of financial attitude on investment decisions in hypothesis four.

5.4. Discussion

SMEs need to be aware of decision-making techniques, particularly those that pertain to investing. Investment decisions are made regarding business expansion and keeping a business viable. To determine the investment value, rate of return, and value of return, investment decisions must be made with a complete understanding of related facts and information.

Investment decisions require MSME owners to be confident in employing knowledge of finance and to understand financial literacy. Every day, and in every aspect of life, people need certain attitudes. The attitudes people have toward money will help them define their attitudes and behaviors when it comes to managing their money, organizing their own finances, or choosing investments.

Investment decisions conducted by MSME owners are influenced by their financial attitudes, suggesting that managing their future finances will increase their incentive to make investments. According to Robb and Woodyard (2011), a person's investing judgments will be better if they have a positive attitude and a good mentality. The way a person feels about money will influence his attitude toward money matters, especially when choosing the type of investment to make. This study's results corroborate those of Astiti et al. (2019); Atmaningrum et al. (2021); and Ismawati et al. (2020), who discovered that monetary attitudes affect investment choices.

Financial activity cannot lessen the influence of financial attitudes on investment choices. The financial mindset displayed by future financial management, such as separating personal and corporate financial records, can be used to explain these findings. It is also challenging for MSME actors to calculate business operational costs because MSMEs do not segregate personal and business funds. Due to this circumstance, MSME owners find it more difficult to act financially as budget planning prescribes. This result confirms that of Sannajust (2014), who stated that structural problems, such as insufficient flexibility, downsizing ability, a lack of corporate diversification, a weak financial structure, a low level of capital, and a reliance on outside finance, are obstacles for MSMEs. According to Oduntan (2014), one of the constraints of MSMEs is their difficulty in obtaining financing and their lack of infrastructure.

Anticipated behavioral control, which is a reflection of both past experience and expected hurdles, reveals the projected ease or difficulty of performing actions. In perceived behavioral control, there is a notion of knowing. The focus of this study is financial literacy, which is the extent to which a person possesses the knowledge, skills, and convictions needed to influence their attitude and behavior toward financial management. The idea behind financial literacy is that one's skills and knowledge can improve the caliber of their financial decisions. To develop acceptable money management behaviors, one needs financial literacy. An MSME owner's financial conduct will improve as their financial literacy increases, and MSME owners will exhibit improved financial management behavior as they gain more knowledge, skills, and abilities related to finance.

6. CONCLUSION

SME owners must be confident and capable of applying financial literacy to make sound investment decisions. Financial attitudes have an impact on the investments that MSME owners make, which suggests that controlling their future finances will enhance their motivation to invest. The influence of financial behavior on investment decisions may be able to mitigate the impact of financial literacy. In particular, the capacity of MSME owners to use their financial knowledge results in financial behavior, as shown in their capacity to manage resources for investment, which is shown by their ability to create budget plans. The capacity of MSME owners to develop budgets has an impact on investment decisions. Financial activity cannot lessen the influence of financial attitudes on investment choices. The financial mindset displayed by future financial management, such as separating personal and corporate financial records, can be used to explain these findings. It is also challenging for MSME actors to calculate business operational costs because MSMEs do not segregate personal and business funds.

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