

**THE IMPLEMENTATION OF COMMUNITY BEHAVIORAL CONTROL IN REGULATING P2P LENDING PENETRATION AMONG MSMES IN JAMBI PROVINCE****<sup>1,\*</sup>Ratih Kusumastuti, <sup>2</sup>Muhammad Gowon, <sup>3</sup>Muhammad Ridwan, <sup>4</sup>Derist Touriano and <sup>5</sup>Mifthahul Nurzanah**<sup>1,2,3</sup>Department of Accounting, Faculty of Economics and Business, Universitas Jambi, Indonesia<sup>4</sup>Universitas Adiwangsa Jambi UNAJA, Jambi, Indonesia<sup>5</sup>English Academy by Ruangguru, Jambi, Indonesia**Received 24<sup>th</sup> March 2023; Accepted 27<sup>th</sup> April 2023; Published online 30<sup>th</sup> May 2023**

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**Abstract**

Human behavior exhibits a high degree of complexity and difficulty, making it one of the key factors contributing to information asymmetry, particularly when public accountants and auditors carry out unethical practices. Broadly, this study aims to analyze and develop a predictive model of customer and prospective customer behavior in adapting to the advancements in financial information technology. Additionally, it seeks to provide early warning signals to help them avoid fraudulent activities in P2P lending. The operational objective of this research is to identify the factors that create opportunities for fraud in P2P lending and explore strategies to mitigate these risks. Meanwhile, the functional aim is to ensure that the findings of this study can serve as valuable reference material for academics and scholars in their research and literature reviews. This study aims to examine the alignment of ethical behavior among P2P lending customers through the lens of the Theory of Planned Behavior (TPB), with a particular emphasis on the perceived behavioral control component as conceptualized by Raza *et al.* (2017) and Boursier, Gioia, & Griffiths (2020). Fraud detection is assessed using the Crowe's Pentagon Fraud model (Holrath, 2011) alongside the six dimensions of market penetration proposed by Rosavina *et al.* (2019). As an applied study, this research is both problem-solving and practical in nature, aiming to address real-world challenges while contributing to theoretical advancements. It employs a causal model as an explanatory framework, utilizing primary and secondary data, which are analyzed through a descriptive approach. A quantitative methodology is implemented to provide empirical evidence and precise interpretations in addressing the research problem. The findings demonstrate that all identified variables contributing to fraud or misconduct in P2P lending can be effectively mitigated, reinforcing the importance of behavioral control mechanisms in fraud prevention.

**Keywords:** P2P Lending, fraud, Theory of Planned Behavior, MSME.

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**INTRODUCTION****Background**

The Financial Services Authority (OJK) reported that as of November 2020, Indonesia's financial system remained stable despite the economic disruptions caused by the Covid-19 pandemic. In response to the crisis, OJK implemented a series of strategic policy measures and regulatory frameworks aimed at safeguarding the financial sector and mitigating broader economic risks. These interventions primarily targeted the general public, the informal sector, micro, small, and medium enterprises (MSMEs), and business entities, ensuring continued access to financial support. A key initiative involved the expansion of credit and financing restructuring programs, which were extended until March 2022 to enhance economic resilience. Additionally, OJK reported that as of November 30, 2020, the total volume of Covid-19-related credit restructuring had reached 951.2 trillion rupiah, benefiting approximately 7.53 million debtors within the banking sector. The Peer-to-Peer (P2P) lending industry also demonstrated significant growth, with outstanding financing reaching 13.24 trillion rupiah in October 2020, reflecting a year-on-year increase of 18.4%. These figures underscore the critical role of financial regulatory interventions in maintaining systemic stability and

fostering economic recovery during periods of crisis (OJK, 2020). Peer-to-peer (P2P) lending has become a global financial trend, experiencing significant growth, including in Indonesia. The Indonesian government, through the Financial Services Authority (OJK), has introduced regulatory frameworks to oversee P2P lending activities. However, OJK does not bear responsibility for issues such as platform failures or bankruptcies, as its regulatory scope is limited to financial institutions, whereas P2P fintech companies are classified as technology firms rather than financial entities. The public must remain cautious in assessing potential risks, as P2P lending platforms are not exempt from fraud or deceptive practices. Regardless of whether a platform operates legally or illegally, fraudulent activities can arise from lenders, borrowers, or even the platform operators themselves (Agustiyanti, 2018). Notably, data from the Jakarta Legal Aid Institute indicates that illegal P2P lending service providers frequently engage in legal violations and infringe upon the fundamental human rights of their borrowers (Makmur, 2020). This phenomenon serves as a key motivator for conducting a study on the behavior of both P2P lending customers and non-customers in relation to the implementation of investment regulations and supervisory systems within the credit service sector, particularly in Jambi Province. Accordingly, a comprehensive literature review is essential to bridge existing research gaps and establish a strong theoretical foundation to guide this study. Several researchers have examined societal behavior in response to the rapid expansion of P2P lending, including

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studies on customer behavior towards these platforms, the development and future prospects of P2P lending (Zhao *et al.*, 2017), as well as analyses of the equilibrium dynamics between lenders and borrowers and their impact on platform risk exposure (Liu & Xia, 2017), Biased behavior of P2P Lending customers (Ayal, Bar-Haim, & Ofir, 2018), predict the risk accuracy of each loan for P2P lending companies (Li, Ding, Chen, & Yang, 2018), seeking significant evidence that intense competition between platforms can increase customer risk behavior (Yoon, Li, & Feng, 2019) and many others.

Building upon the research gap identified through the literature review, the formulation of the research problem is structured into the following research questions to be explored in this study:

1. What are the potential risks and opportunities for fraud faced by customers as a result of P2P lending penetration?
2. What strategies can be implemented to mitigate fraud arising from the impact of P2P lending penetration?

The overarching objective of this study is to analyze and develop a predictive model of customer and prospective customer behavior in adapting to advancements in financial information technology. Additionally, it aims to provide early warning signals to safeguard individuals from fraudulent activities in the P2P lending sector. The operational objective of this study is to identify key factors that contribute to fraud opportunities within P2P lending and to formulate effective strategies for mitigating these risks. Furthermore, the functional objective of this study is to ensure that its findings serve as a valuable resource for academics, providing a theoretical foundation for literature reviews and future research. Accordingly, the proposed research title is Community Behavioral Control on P2P Lending Penetration. The current study holds significant urgency as it aims to generate scientifically grounded and highly accurate predictive signals while enriching the existing literature on the behavior of current and prospective P2P lending customers. Additionally, it plays a crucial role in mitigating the widespread occurrence of fraud within financial services, particularly in the rapidly expanding P2P lending sector. By adopting an analytical approach, this study supports the development of a mathematical prediction model, enabling the formulation of practical solutions to behavioral challenges faced by relevant stakeholders. The ultimate outcome is the publication of its findings in a nationally accredited journal, contributing to both academic discourse and regulatory advancements.

## LITERATURE REVIEW

### State of the art The Main Theory

#### *Perceived Behavioral Control*

Individual behavior is inherently complex and challenging to quantify due to its multifaceted nature and the influence of various psychological, social, and environmental factors (Ajzen, 1991). Therefore, to analyze behavior in depth, this study uses the Theory of Planned Behavior (TPB) to predict behavioral intentions through attitudes, subjective norms and perceived behavioral control. Based on (Ajzen, 1991) the intention to engage in either ethical or unethical behavior can

be effectively predicted through the interplay of attitudes, subjective norms, and perceived behavioral control, which collectively account for significant variations in human decision-making. Notably, perceived behavioral control serves as a crucial determinant, exhibiting a high degree of predictive accuracy in shaping behavioral outcomes. As explained by Ajzen (1991) the intention to engage in either ethical or unethical behavior can be effectively predicted through the interplay of attitudes, subjective norms, and perceived behavioral control, which collectively account for significant variations in human decision-making. Notably, perceived behavioral control serves as a crucial determinant, exhibiting a high degree of predictive accuracy in shaping behavioral outcomes. The conceptualization of perceived behavioral control has been systematically refined since Ajzen (1991) introducing the Theory of Planned Behavior (TPB) as a key component of the theory of planned behavior (Fishbein & Ajzen, 2009). In the contemporary framework of the Theory of Reasoned Action, perceived behavioral control is conceptualized as an individual's assessment of their capability and degree of control in executing a specific behavior (Fishbein & Ajzen, 2009). *Perceived behavioral control* is conceptually the same as self-efficacy (Yzer, 2012). According to Yzer (2012) *perceived behavioral control* is an assessment of a person's ability to organize and carry out certain activities. However, *perceived behavioral control* physiologically, it has the potential to impair neural activity associated with the preparatory motor processes that precede decision-making.

The relationship between perceived behavioral control in decision-making, as outlined by Hansen, Saridakis, and Benson (2018), is strongly associated with risk perception and trust, particularly in the selection of financial services. A lack of trust, coupled with heightened risk perception among customers and prospective customers, often leads to the reluctance or avoidance of financial transactions. Elevated risk levels pose significant challenges for service providers in establishing initial trust among users. Furthermore, public awareness of the risks associated with online transactions plays a crucial role in shaping their financial decision-making behavior. To mitigate these concerns, online financial service providers must actively enhance consumer confidence by implementing educational initiatives that promote secure transaction practices. Awareness programs aimed at informing users about the risks of disclosing personal information and reinforcing the security measures of online financial service platforms are essential in fostering trust and encouraging adoption.

#### *Signaling Theory*

Signaling theory is useful for describing behavior when two parties (individuals or organizations) have access to different information. Typically, one party, gives a signal or information, and the other party receives the information and interprets it (Spence, 1973). The signals conveyed by a company's management serve as a critical indicator for investors in assessing the firm's future managerial prospects. However, investors often face challenges in differentiating between high-quality and low-quality companies. A particularly critical juncture arises when the true financial and operational condition of a company is exposed before corrective measures are implemented. In such cases, investors become aware of the company's deteriorating state, potentially

impacting their investment decisions and market confidence. Signaling theory has been widely used by researchers, including managing service expectations in online markets (Mitra & Fay, 2010), enterprise risk management (Dionne & Ouederni, 2011), corporate mergers and acquisitions (Reuer & Ragozzino, 2012), online business reporting (Basoglu & Hess, 2014), information asymmetry (Fosu, Danso, Ahmad, & Coffie, 2016), corporate governance investigation and corporate sustainability disclosure (Bae, Masud, & Kim, 2018) and it is important for companies to build relationships with their customers and key stakeholders in the financial services industry (Boateng, 2019).

### Market Penetration

Since its emergence in 2010, P2P lending has progressively transformed the financing landscape for customers and small business owners, offering an alternative to traditional credit sources. Despite the rapid expansion of P2P lending platforms and the increasing number of lenders, their overall market share remains significantly lower than that of conventional banking institutions. However, as the industry continues to evolve, P2P lending is poised to exert a substantial influence on the global financial ecosystem, reshaping access to credit and financial intermediation in the years to come (Jagtiani & Lemieux, 2018). According to Jagtiani & Lemieux (2018) several indicators can measure the penetration of the P2P Lending market, namely:

1. *Credit Access* – the accessibility of financial services for individuals excluded from traditional banking institutions, along with the alignment of these services with the financial capabilities and needs of the community, plays a crucial role in fostering financial inclusion and economic empowerment.
2. *Price of Credit* – The reduction in loan costs for the public is a direct outcome of leveraging alternative data sources, big data analytics, machine learning algorithms, and artificial intelligence (AI) models. These advanced technologies enhance the efficiency of credit decision-making and monitoring processes, significantly lowering operational expenses for lenders while simultaneously providing substantial financial benefits to borrowers.
3. *Alternative Data Sources* – The integration of advanced technology and alternative information sources by online financial service providers enhances the efficiency of financial transactions and credit evaluations. By leveraging these innovative mechanisms, financial institutions can incorporate supplementary data, thereby minimizing errors that may adversely impact customers and improving overall decision-making accuracy.

### Fraud

Survey findings published by the Association of Certified Fraud Examiners (ACFE) Indonesia Chapter indicate that corruption constitutes the most detrimental form of fraud in Indonesia, accounting for 64.4% of cases. This is followed by the misappropriation of state and corporate assets, which represents 28.9%, while financial statement manipulation, resulting in financial losses, ranks third at 9.2%. The Internet offers an innovative new form of knowledge transfer (Cumming, Johan, & Denis, 2017). According to Cumming, Johan, & Denis (2017) this method enhances engagement across diverse community groups and streamlines the

fundraising process. However, the digital landscape also introduces novel avenues for fraudulent activities, posing significant risks to financial transactions. The intersection of fraud and information technology, particularly in the context of emerging fraudulent schemes and evolving comparative frameworks, presents a crucial area for further investigation. Additionally, exploring this subject not only contributes to the positioning of the present study within existing literature but also underscores its originality and scholarly significance.



Gambar 1. Prosentase Fraud di Indonesia (ACFE, 2019)

### Conceptual Framework

Human behavior forecasting is an attempt to anticipate (within some error) the choices that humans make (Schipper, 1991) therefore it is necessary to observe the influence of individual characteristics to produce useful information for the community. Additionally, it is important to assess the competence and independence of the community in assessing P2P Lending companies in order to reduce irresponsible actions such as fraud or cheating. (Hidajat, 2019)

The relationship between *perceived behavioral control* in decision-making, as outlined by Hansen, Saridakis, and Benson (2018), is intrinsically linked to risk perception and trust, particularly in the selection of financial services. A lack of trust and heightened risk perception among customers or prospective customers often result in reluctance or avoidance of financial transactions. Elevated risk levels pose significant challenges for service providers in establishing and maintaining initial trust with their users. Additionally, public awareness of the risks associated with online transactions plays a crucial role in shaping financial decision-making behaviors. Consequently, online financial service providers must implement proactive strategies to enhance consumer confidence by offering educational programs that promote safe transaction practices. These initiatives should focus on increasing awareness of potential risks, such as data breaches and identity theft, while simultaneously reinforcing the security measures of online financial service platforms.

Furthermore, as noted by Hidajat (2020), unethical behavior among banking professionals is a significant contributing factor to the rise in financial crimes and, in some cases, banking crises. Additionally, existing banking supervision mechanisms often fail to adequately account for risks stemming from the actions of financial service employees. Moreover, the majority of customers in the sector consist of small business owners and rural communities, making them particularly vulnerable to fraudulent practices. The persistent occurrence of fraud within financial services can lead to a severe erosion of public trust, ultimately undermining the stability and credibility of the industry.

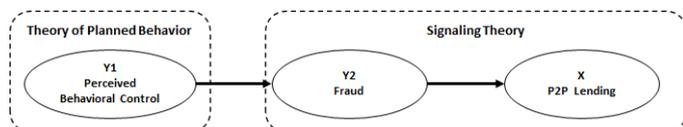


Figure 2. Research Model

### Dimensi Perceived Behavioral Control

Perceived behavioral control is a person's perception of obstacles in carrying out behavior with existing abilities or resources. The components and aspects of perceived behavioral control (Raza, Umer, Qazi, & Makhdoom, 2017; Boursier, Gioia, & Griffiths, 2020) are:

- Control beliefs*, refer to the extent to which an individual exerts control over their behavior in either obstructing or facilitating the demonstration of responsible conduct (Boursier, Gioia, & Griffiths, 2020).
- Power of control beliefs* refers to the extent to which an individual's perceived control over their beliefs influences their likelihood of exhibiting or refraining from a particular behavior. This concept highlights the degree to which perceived behavioral control shapes decision-making processes and behavioral outcomes (Raza, Umer, Qazi, & Makhdoom, 2017)

### Demension of Fraud

The Fraud Dimension in the P2P Lending concept is the existence of deviant actions that are intentionally carried out by agents and/or principals where they have better data than their customers for their own interests. In this study, in measuring fraud, 5 dimensions are used from Holrath (2011), namely: *arrogance*, *competency*, *opportunity*, *pressure* and *rationalization* or also called Crowe's Fraud Pentagon™ which is described as follows:



Gambar 3. Crowe's Fraud Pentagon (( Holrath, 2011)

- Arrogance*, it reflects a sense of superiority over entitled rights, accompanied by the perception that internal controls and corporate policies are inapplicable or do not pertain to oneself.
- Competence*, an individual's ability to circumvent internal controls, devise sophisticated concealment strategies, and assess social conditions to advance personal interests plays a critical role in fraudulent behavior. The presence of opportunity further facilitates such deviant activities, as individuals perceive a low likelihood of detection, thereby increasing the probability of misconduct within financial systems.

- Pressure*, the motivation to conceal or engage in deviant behavior is often driven by individual financial needs and socio-cultural lifestyle factors, influencing decision-making processes within a given societal framework.
- Rationalization* is a rationalization of deviant behavior as a means of justifying one's actions.

### Dimensions of Market Penetration

According to Rosavina et al. (2019), the market penetration of P2P lending platforms as an alternative financing source is assessed through six key dimensions, namely:

- Loan process*, the prequalification process undertaken by lending institutions encompasses a series of systematic steps from the initial receipt of a loan application to the final approval or rejection decision. This process includes application intake, comprehensive credit assessment, loan evaluation, and other critical due diligence measures aimed at ensuring the applicant's creditworthiness and mitigating financial risks.
- Interest Rate*, the interest rate represents the cost imposed by a lender for the utilization of a financial asset, expressed as a percentage of the loan principal.
- Process Cost*, the allocation and assessment of production costs associated with a service concerning the projected units to be produced.
- Amount of Loan*, the maximum loan amount approved by a financial institution for a borrower based on creditworthiness assessments and risk evaluation.
- Loan Flexibility*, the existence of a loan program that allows applicants to increase or decrease the amount borrowed, or change the repayment.
- Alternative Payment Scheme*, Credit payment methods can be facilitated through a variety of payment schemes, including bank transfers, cash transactions, debit cards, and electronic money (e-money), offering flexibility and accessibility to users across different financial preferences and infrastructures.

### Hypothesis Development

#### 1. Empirical Model 1: Perceived behavioral control terhadap Penetration P2P Lending Market

Public perception of barriers in executing a behavior or decision, given their existing capabilities and resources, plays a critical role in shaping their motivation and persistence in financial decision-making. The higher the level of perceived ability and resource availability among customers or prospective customers, the greater their determination to engage with and adopt financial service programs offered by P2P lending platforms. This relationship underscores the significance of perceived behavioral control in influencing market penetration within the P2P lending industry.

H1: *Perceived behavioral control* has a positive impact on *P2P Lending Market Penetration*

#### 2. Empirical Model 2: Fraud toward P2P Lending Market Penetration

Fraud within the P2P lending framework constitutes a deliberate and unethical act committed for personal gain, deviating from established regulatory and ethical norms. During the contractual agreement phase, uncertainties arise

regarding profit-sharing outcomes, as financial returns on invested capital are not fixed but instead subject to a variable distribution mechanism. In this context, increased awareness of fraudulent activities among customers and prospective customers serves as a deterrent, potentially inhibiting the market penetration and adoption of P2P lending within society.

H2: Fraud has negative impact on P2P Lending Market Penetration

### 3. Empirical Model 3: The Role of Fraud in the Relationship of Perceived Behavioral to P2P Lending Market Penetration

The level of knowledge possessed by customers or prospective customers regarding credit lending within P2P lending platforms enhances their ability to comprehend the potential consequences of alternative financial decisions. This understanding, whether directly or indirectly, influences the emergence of cognitive dissonance and conflicts in the decision-making process. Consequently, a higher degree of awareness regarding fraudulent practices strengthens the moderating effect between perceived behavioral control and P2P lending market penetration, ultimately shaping consumer engagement and adoption within the industry.

H3: Fraud mediate the relationship between Perceived Behavior Control with P2P Lending Market Penetration

## METHODS

This study is aimed at exploring the suitability of ethical behavior of P2P Lending customers based on the *Theory of Planned Behavior (TPB)*, especially the aspect of perceived behavior control put forward by Raza et. al (2017) and (Boursier, Gioia, & Griffiths (2020). Meanwhile, in measuring fraud, aspects in Crowe's Pentagon Fraud are used (Holrath, 2011) and the six dimensions of market penetration that were put forward Rosavina et al. (2019). This study constitutes applied research, designed to generate practical solutions while addressing pressing societal challenges. Employing a causality model as its explanatory framework, the study integrates both primary and secondary data, which are systematically presented in a descriptive manner. A quantitative methodological approach is adopted to ensure rigorous data analysis, facilitating precise interpretation and evidence-based problem-solving. By incorporating these methodological dimensions, the study aims to provide a comprehensive understanding of P2P lending dynamics and its associated risks. The subsequent section presents a research flowchart in the form of a Fishbone Diagram, illustrating the key determinants shaping the study's findings). The population of this study is various types of MSMEs in Jambi Province. Sampling in this study was carried out based on the *convenience sampling method* because the population of MSMEs throughout Jambi Province is not known with certainty.

The number of samples required with *maximum likelihood* estimates is between 200-400 (Ghozali, 2016). Moreover, the minimum sample size required for research utilizing structural equation modeling (SEM) should be at least three to ten times the number of observed indicators (Hair Jr, Hult, Ringle, & Sarstedt, 2013). Data collection was conducted by *offline survey* directly by means of field survey, interview and distribution of questionnaires by visiting respondents directly or indirectly by using *online survey* using *Google's* tools by sharing it through official and active email addresses of MSMEs throughout Jambi Province collected from the Jambi Province Cooperative and MSME Service. On the day the link was closed, the researcher sent a short message (SMS) and email of thanks as well as notification that the link had been deactivated. Thus, it is expected that respondents who have participated will no longer *forward* emails containing questionnaires to other prospective respondents. The present study employs advanced statistical techniques using IBM *Statistical Package for Social Sciences (SPSS)* version 25 to ensure precise data processing and comprehensive interpretation.

## RESULTS AND DISCUSSION

### 1. The Influence of Perceived Behavioral Control on Market Penetration (H1)

The analysis results indicate that perceived behavioral control has a positive and significant impact on P2P lending market penetration, with a regression coefficient of 0.45 and a p-value of 0.000. This finding suggests that individuals with higher behavioral control over their financial decisions are more likely to engage with P2P lending services. The key factors influencing perceived behavioral control include:

- **Control Beliefs:** An individual's perception of their ability to regulate and manage the use of financial services.
- **Power of Control Beliefs:** The extent to which an individual's beliefs impact financial decision-making.

This finding aligns with the Theory of Planned Behavior (TPB), which emphasizes the role of perceived behavioral control in shaping an individual's intention to take action.

### 2. The Impact of Fraud on Market Penetration (H2)

Fraud has a significant negative impact on P2P lending market penetration, as indicated by a regression coefficient of -0.38 and a p-value of 0.002. This suggests that higher levels of fraud within the P2P lending industry lead to lower adoption rates among the public. The occurrence of fraud in P2P lending can be analyzed using Crowe's Fraud Pentagon, which encompasses several key factors:

- **Arrogance:** The overconfidence of perpetrators in committing fraud.

Table 1. Summary of Hypothesis Test Results

Hypothesis	Independent Variable	Dependent Variable	Regression Coefficient	p-Value	Conclusion
H1	Perceived Behavioral Control	Market Penetration	0.45	0.000	Signifikan (Accepted)
H2	Fraud	Market Penetration	-0.38	0.002	Signifikan (Accepted)
H3	Perceived Behavioral Control	Fraud (Mediator)	Market Penetration	-0.25	0.005

- **Competence:** An individual's capacity to conceal their actions.
- **Opportunity:** Fraud Opportunities Arising from Regulatory Weaknesses.
- **Pressure:** Economic pressures that drive individuals to engage in fraudulent activities.
- **Rationalization:** Justification for deviant actions taken.

This finding reinforces that fraud is a major impediment to the growth of the P2P lending industry, significantly undermining public confidence in the platform.

### 3. The Role of Fraud as a Mediator between Perceived Behavioral Control and Market Penetration (H3)

Fraud serves as a mediating variable between perceived behavioral control and market penetration, with a regression coefficient of -0.25 and a p-value of 0.005. This indicates that even when individuals exhibit strong financial behavioral control, a high prevalence of fraud within the industry significantly hinders the expansion of P2P lending. Elevated fraud levels may deter even financially responsible individuals from engaging with P2P lending services, as the perceived risks outweigh the potential benefits.

### Conclusion

The findings of this study confirm that all identified variables contributing to fraud risks in P2P lending can be effectively mitigated through the following measures:

1. **Enhancing Financial Literacy:** Strengthening public awareness of the risks and benefits associated with P2P lending is essential to improving behavioral control and enabling more informed financial decision-making.
2. **Stricter Regulatory Oversight:** Financial authorities must reinforce regulatory frameworks and enhance supervision of P2P lending platforms to minimize fraudulent activities and protect consumers.
3. **Increased Platform Transparency:** Improving transparency in lending processes, interest rates, and platform operations can foster public trust and accelerate the penetration of the P2P lending market.

While P2P lending presents significant potential for expanding financial access to MSMEs, fraud remains a critical challenge that must be addressed through stronger regulations and comprehensive financial education.

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