

Do E-Money Transactions Affect Consumer Credit Growth, with PayLater as a Moderator?

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ABSTRACT

This study examines the effect of electronic money transactions on consumer credit growth in Indonesian banking, with paylater as a moderating variable. Using monthly secondary data from Bank Indonesia and the Financial Services Authority (OJK), this research employs Partial Least Squares Structural Equation Modeling (PLS-SEM) via SmartPLS 4 to test the proposed hypotheses. The findings reveal that electronic money transactions have a significant negative effect on consumer credit growth, indicating a substitution effect where increased digital payment adoption reduces reliance on bank credit. Conversely, paylater demonstrates a significant positive effect on consumer credit growth, suggesting that buy now pay later services function as a complement to formal banking by creating credit histories that facilitate access to larger bank loans. However, paylater does not significantly moderate the relationship between electronic money transactions and consumer credit growth, implying that the interaction between these two digital financial services is not yet strong enough to alter the direction of influence. These findings contribute to the development of digital financial intermediation theory and offer practical implications for regulators and banking institutions in formulating policies that ensure harmonious development between digital payment ecosystems and formal banking systems

Keywords: Electronic Money; Paylater; Consumer Credit

INTRODUCTION

The digital revolution has fundamentally transformed the landscape of payment systems and financial intermediation. In Indonesia, this phenomenon is reflected in the exponential growth of electronic money transactions and the proliferation of buy now, pay later (BNPL) services, more commonly known as paylater. According to data from Bank Indonesia, the value of electronic money transactions has increased significantly over the past five years, indicating a shift in consumer behavior from cash based to cashless transactions. At the same time, the Financial Services Authority (Otoritas Jasa Keuangan [OJK]) has reported rapid growth in fintech lending distribution, largely dominated by paylater products, with outstanding values reaching tens of trillions of rupiah. This development raises a fundamental question regarding how these two digital financial innovations, electronic money as a payment instrument and paylater as a credit facility, interact in influencing consumer credit behavior within the formal banking sector.

The development of financial technology (fintech) has stimulated a growing body of literature examining the impact of digital payments on consumption behavior and credit access. [Agarwal et al. \(2020\)](#) demonstrated that the adoption of digital payments significantly increases household consumption through improved transactional liquidity. In a different context, [Joseph et al. \(2026\)](#) found that the adoption of mobile money can expand credit access for previously unbanked populations by generating transaction footprints that may be used for credit assessment. Meanwhile, the literature on paylater or BNPL has expanded rapidly, primarily focusing on factors influencing usage intention ([Prasetyani et al., 2024](#)), the role of trust ([Pertiwi et al., 2025](#)), and regulatory implications for borrower behavior ([Dong et al., 2025](#)). However, most of these studies remain micro level and survey based, thereby failing to capture the aggregate dynamics between electronic money transactions, paylater usage, and consumer credit growth in the banking sector.

The research gap motivating this study lies in the limited empirical evidence examining the moderating role of paylater in the relationship between electronic money transactions and bank consumer credit. First, much of the existing literature treats electronic money and paylater as separate phenomena. [Bian et al. \(2023\)](#) began to connect the two, but primarily within the framework of competition among payment methods rather than examining moderating interactions. Second, most studies rely on perception based survey data ([Waluyo et al., 2022](#)) or micro level transaction data, thus lacking a macro level perspective on how these phenomena influence the broader financial system. Third, Indonesia, with its unique demographic characteristics, digital penetration rate, and banking structure, remains underexplored in the international literature using aggregated monthly banking data. Yet, understanding the relationship among these three variables is crucial for regulators and policymakers, especially considering that OJK recently issued Regulation No. 35/POJK.05/2024 regarding technology based joint funding services, which explicitly regulates paylater as a digital credit product.

This study offers several contributions. First, substantively, it examines paylater as a moderating variable rather than merely as an independent or dependent variable in the relationship between electronic money transactions and consumer credit growth. This moderating approach is important because paylater may either strengthen or weaken the impact of electronic money on consumer credit, depending on whether it functions as a substitute for or a complement to bank credit. [Chehrazi et al. \(2025\)](#) emphasized that understanding the interaction between BNPL and traditional credit products is critical for macroprudential policy. Second, methodologically, this study employs monthly Indonesian banking data obtained from official publications of OJK and Bank Indonesia, enabling robust time series analysis and broader generalization compared with survey

based studies. The use of monthly aggregated data also allows the study to capture short term dynamics that may be overlooked in annual data. Third, contextually, this study fills a gap in the literature on digital finance in emerging markets such as Indonesia, which exhibits unique characteristics, including high mobile penetration but uneven formal financial inclusion (Euromonitor, 2025).

The significance of this research can be viewed from several dimensions. From a theoretical perspective, this study contributes to the development of financial intermediation theory in the digital era by examining the moderating mechanism of paylater in the relationship between payment innovation and consumer credit. Berg et al. (2022) highlighted the need for a deeper understanding of how fintech lending interacts with the formal financial system, and the findings of this study are expected to enrich this discussion. From a policy perspective, the results are highly relevant for OJK and Bank Indonesia in formulating balanced policies that encourage financial inclusion through digital innovation while maintaining financial system stability. Coffie et al. (2024) demonstrated that mobile money regulation significantly affects financial behavior. By understanding the moderating role of paylater, regulators can design more targeted policies. From a practical perspective, for banking and fintech industry players, this study provides insights into how collaboration or competition with paylater services may influence their consumer credit portfolios.

This study aims to empirically examine the effect of electronic money transactions on consumer credit growth in Indonesian banking, with paylater as a moderating variable. Specifically, this research addresses the following questions: (1) Do electronic money transactions significantly affect the growth of consumer credit in the banking sector? (2) Does paylater moderate the relationship between electronic money transactions and consumer credit growth? (3) What is the direction of the moderating effect of paylater, does it reinforce or dampen the relationship?.

LITERATURE REVIEW

Digital Financial Intermediation

Digital transformation in the financial sector has fundamentally changed how individuals conduct transactions and access credit. The theoretical foundation explaining the interaction between digital money, paylater, and consumer credit is the digital financial intermediation theory developed by Berg et al. (2022). This theory explains that financial technology development creates new intermediation channels that do not fully replace banks but instead form a more complex financial ecosystem.

Within the context of this study, the relationship among the three variables can be explained through the payment–credit nexus framework proposed by Bian et al. (2023). This framework emphasizes that digital payment systems, such as electronic money, and digital credit systems, such as paylater, are interconnected and mutually influential. Electronic money creates a broad transaction base and generates digital footprints that can be utilized for credit assessment (Berg et al., 2018). Meanwhile, paylater leverages the digital payment ecosystem to offer instant credit integrated with consumption activities. The interaction between these two systems ultimately influences consumption behavior and the demand for consumer credit in the formal banking sector.

The digital financial intermediation theory posits that the emergence of fintech lending platforms fundamentally alters the traditional credit allocation process. Berg et al. (2022) argue that these platforms utilize alternative data sources, including digital payment history, e-commerce transaction patterns, and social media activity, to assess borrower creditworthiness, thereby expanding credit access to previously underserved

populations. This shift challenges the conventional role of banks as primary credit intermediaries. In the Indonesian context, [Euromonitor \(2025\)](#) notes that the rapid adoption of digital payment systems has accelerated this transformation, creating a hybrid financial ecosystem in which traditional banks and fintech platforms increasingly compete and collaborate. The integration of paylater services within major e-commerce and digital wallet platforms exemplifies this convergence, as consumers can seamlessly transition from making payments using electronic money to accessing instant credit through integrated BNPL features within a single digital interface ([Ken Research, 2025](#)).

Furthermore, regulatory frameworks play a crucial role in shaping digital financial intermediation dynamics. [Coffie et al. \(2024\)](#) demonstrate that mobile money regulation significantly influences financial behavior by affecting consumer perceptions of risk and trust. In Indonesia, the issuance of POJK No. 35/POJK.05/2024 by the Financial Services Authority, OJK, which mandates paylater providers to report transactions to the Financial Information Service System, SLIK, represents a critical intervention. This regulation transforms paylater from a peripheral fintech product into an integral component of the formal credit information system. This development aligns with [Dong et al. \(2025\)](#), who argue that credit reporting policies significantly influence borrower behavior, as consumers become more aware of their credit history. Consequently, the interaction between electronic money and paylater within Indonesia's digital financial intermediation landscape should be understood not merely as a market driven phenomenon but also as a process shaped by regulatory interventions that redefine the boundaries between digital payment systems and formal credit markets.

Consumer Credit

Consumer credit refers to loans used by individuals to finance the purchase of goods and services for consumption rather than productive activities. In banking literature, the growth of consumer credit is an important indicator, as it reflects consumer confidence in economic conditions and the accessibility of financial services ([Euromonitor, 2025](#)).

The development of digital technology has significantly transformed the consumer credit landscape. Reports from OJK indicate that consumer credit in Indonesian banking continues to grow; however, new non-bank players offering digital credit products such as paylater have emerged. This phenomenon creates a new dynamic in which consumer credit is no longer fully dominated by banks but has become a competitive arena between traditional banking institutions and fintech companies ([Parlour et al., 2022](#)).

Within this evolving competitive landscape, scholars have begun to examine the behavioral and managerial dimensions of consumer credit in the Asia Pacific region. [Zulfahmi et al. \(2026\)](#) contribute to this discourse by exploring factors influencing financial decision making within Indonesian contexts, providing insights into how local consumers navigate between traditional banking products and emerging fintech alternatives. Their findings suggest that consumer trust and perceived ease of use play significant roles in shaping preferences for digital credit products, which aligns with earlier studies on paylater adoption ([Prasetyani et al., 2024](#); [Pertiwi et al., 2025](#)).

Furthermore, the strategic responses of financial institutions to digital disruption have become a critical area of inquiry. [Putra et al. \(2026\)](#) examine how Indonesian financial service providers adapt their business models to compete with fintech entrants, highlighting the importance of institutional agility and customer centric innovation. Their research underscores that banks are not passive actors in this transformation; rather, they actively develop integrated digital offerings that combine traditional credit products with features that mirror the convenience of paylater services, thereby reshaping the consumer credit landscape from within the formal banking sector.

The cross border dimension of digital financial transformation adds another layer of complexity to understanding consumer credit dynamics. [Zhuxi and Waworuntu \(2026\)](#) provide a comparative perspective by analyzing fintech development trajectories in China and Indonesia, two of the largest and fastest growing digital economies in the Asia Pacific region. Their study reveals that while regulatory approaches differ, with China emphasizing centralized control and Indonesia adopting a more facilitative yet gradually tightening stance, both countries have experienced similar patterns of consumer credit expansion driven by the convergence of digital payment systems and instant credit features. This comparative insight suggests that the relationship between electronic money, paylater, and consumer credit observed in Indonesia reflects broader regional trends rather than isolated national phenomena.

Digital Money (E-Money)

Digital money, or electronic money, is a payment instrument that stores monetary value electronically and is used for transaction purposes. In Indonesia, the development of electronic money has accelerated rapidly alongside the implementation of the National Payment Gateway policy, which promotes cashless transactions.

Theoretically, the adoption of electronic money has significant implications for consumer financial behavior. [Agarwal et al. \(2020\)](#) demonstrate that the use of digital payments increases consumption by reducing transaction frictions. Furthermore, [Joseph et al. \(2026\)](#) find that mobile money adoption expands access to credit for previously unbanked populations by creating digital footprints that can be used for credit assessment. Therefore, digital money functions not only as a payment instrument but also as an enabler of financial inclusion that can stimulate consumer credit growth.

Paylater or Buy Now Pay Later (BNPL)

Paylater, or Buy Now Pay Later (BNPL), is a short term financing scheme that allows consumers to make purchases with deferred payments in installments. Unlike conventional credit cards, paylater services are typically integrated directly into e-commerce platforms and offer faster approval processes ([Chehrazi et al., 2025](#)).

In Indonesia, the growth of paylater services has been particularly rapid. [Ken Research \(2025\)](#) reports that the BNPL market value in Indonesia has reached billions of US dollars, with significant annual growth. This phenomenon prompted the Financial Services Authority to issue Regulation No. 35/POJK.05/2024, which formally regulates paylater as part of technology based joint funding services, including the obligation to report to the Financial Information Service System, SLIK.

The literature on paylater suggests that trust is a key factor influencing its adoption. [Prasetyani et al. \(2024\)](#) find that trust is the primary determinant of paylater usage preference among Generation Z in Indonesia and Malaysia. [Pertiwi et al. \(2025\)](#) reinforce this finding by demonstrating that platform trust significantly influences borrowing intention and actual usage of paylater services.

Hypothesis Development

The Effect of Electronic Money Transactions on Consumer Credit

The relationship between electronic money transactions and consumer credit is based on the mechanism whereby increased use of electronic money stimulates consumption, which in turn increases the demand for consumer credit ([Agarwal et al., 2020](#)). Moreover, electronic money creates digital footprints that facilitate credit assessment by financial institutions, thereby expanding access to credit for a broader range of consumers ([Joseph et al., 2026](#)). [Boar and Wehrli \(2021\)](#) also note that digital money adoption increases participation in the formal financial system, which contributes to credit growth.

H1: Electronic money transactions positively affect the growth of bank consumer credit.

The Effect of Paylater on Consumer Credit

Paylater, as a digital credit product, has a complex relationship with bank consumer credit. On one hand, paylater may act as a substitute because it offers faster processes and more flexible requirements compared to bank credit (Navaretti et al., 2018). On the other hand, paylater may function as a complement by serving as a gateway for consumers who previously lacked access to the formal financial system to subsequently access bank credit products (Berg et al., 2022).

H2: Paylater significantly affects the growth of bank consumer credit.

The Moderating Role of Paylater

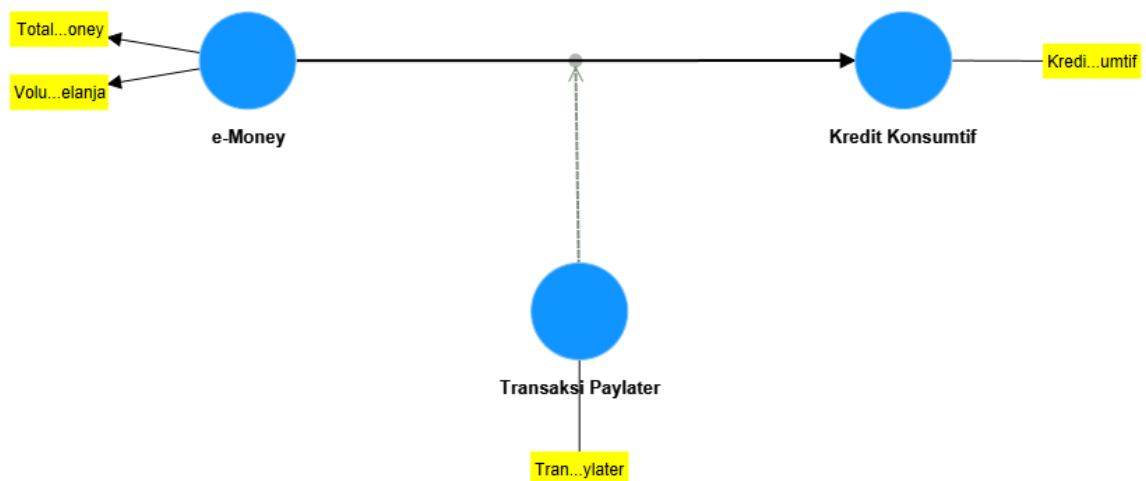
The moderating role of paylater in the relationship between electronic money transactions and consumer credit constitutes the primary focus of this study. Bian (2025) shows that the interaction between e-wallets and BNPL services is complex and may alter the direction of their relationship. Chehrazi et al. (2025) highlight that understanding the interaction between BNPL and traditional credit products is essential for macroprudential policy formulation.

H3: Paylater moderates the relationship between electronic money transactions and the growth of bank consumer credit.

Conceptual Framework

The study framework model is depicted in Figure 1

Figure 1. Research Framework



RESEARCH METHOD

This study employs a quantitative approach with a causal research design aimed at examining the cause and effect relationship between electronic money transactions, paylater, and consumer credit growth in Indonesian banking. The data used are secondary data obtained from two official institutions, namely Bank Indonesia and the Financial Services Authority, OJK. Data from Bank Indonesia include the total monthly value of electronic money transactions published in Payment System Statistics. Meanwhile, data from OJK include outstanding consumer credit from the Indonesian

Banking Statistics and outstanding paylater loans from the Fintech Lending Statistics. The observation period covers 2022 to 2025, depending on the availability of the most recent data.

The operational definitions of variables are formulated based on available data. The independent variable, electronic money transactions, is measured using the total value of electronic money transactions, in billion rupiah, and the volume of electronic money transactions. The dependent variable, consumer credit growth, is calculated as the percentage change in outstanding consumer credit in the banking sector. The moderating variable, paylater, is measured using the total value of paylater loan transactions. All variables represent aggregated data standardized by the issuing authorities, ensuring data validity and reliability.

Data analysis is conducted using SmartPLS 4, Partial Least Squares Structural Equation Modeling. The choice of PLS SEM is based on several methodological considerations, including its ability to predict relationships between variables, its minimal requirement for normal distribution assumptions, and its capability to test moderation effects robustly.

RESULTS

This study utilizes monthly secondary data obtained from Bank Indonesia and the Financial Services Authority, Otoritas Jasa Keuangan or OJK, covering the observation period from 2022 to 2025. The variables analyzed include Consumer Credit as the dependent variable, Electronic Money Transactions, e-Money, as the independent variable, and Paylater Transactions as the moderating variable.

Descriptive Statistics

Table 1. Descriptive Statistics

Variable	Mean	Median	Min	Max	Std. Dev
Consumer Credit	1.9 trillion	1.9 trillion	1.6 trillion	2.1 trillion	178,135
Total e-Money Transactions	504	499.00	219	781	170
Volume of e-Money Transactions	4,928	5,129	2,433	7,696	1,457
Paylater Transactions	846 trillion	857 trillion	573 trillion	1,107 trillion	157 trillion

Source: Processed Data (2026)

Based on the descriptive statistics, all variables exhibit sufficient variation during the observation period. Consumer Credit shows an average value of IDR 1,917,919.86 billion, with a minimum value of IDR 1,645,703 billion and a maximum value of IDR 2,197,655 billion, indicating a consistent upward trend with a standard deviation of 178,135.30. Electronic money transactions, measured through the total value of e-Money transactions, record an average value of IDR 504.5 billion, ranging from IDR 219 billion to IDR 781 billion. Meanwhile, the volume of electronic money transactions averages 4,928.14 billion transactions. Paylater transactions show an average value of IDR 846,832,002.93 million with a standard deviation of 157,925,156.55, reflecting the rapid expansion of this service during the study period. Prior to analysis, all data were standardized and processed using SmartPLS 4 to meet the assumptions of structural model estimation.

Measurement Model Evaluation (Outer Model)

Table 2. Outer Loading and Outer Weight of Indicators

Variable	Indicator	Outer Loading	Outer Weight
e-Money	Total e-Money Transactions	0.986	0.531
e-Money	Volume of e-Money Transactions	0.983	0.485
Consumer Credit	Consumer Credit	1.000	1.000
Paylater	Paylater Transactions	1.000	1.000

Source: Processed Data (2026)

According to Table 2, the measurement model evaluation aims to ensure that the indicators used are valid and reliable in measuring their respective latent constructs. As this study employs reflective indicators, the evaluation focuses on examining the outer loading and outer weight values of each indicator.

The results indicate that all indicators exhibit very high outer loading values, exceeding the recommended threshold of 0.70. The indicator Total e-Money Transactions shows an outer loading of 0.986 with a t-statistic of 112.022 and a p-value below 0.001. Meanwhile, the indicator Volume of e-Money Transactions records an outer loading of 0.983 with a t-statistic of 47.335 and a p-value below 0.001. These results confirm that both indicators are valid measures of the e-Money construct.

The outer weight values for the two indicators are 0.531 and 0.485, respectively, both of which are statistically significant. This finding indicates that each indicator contributes significantly to the formation of the e-Money construct. For the Consumer Credit and Paylater variables, single indicators are used; therefore, the outer loading value is automatically 1.000 because the constructs are measured directly.

Inner Model

Table 3. Path Coefficient and Significance Test

Relationship	Original Sample	t-statistic	p-value	Description
e-Money → Consumer Credit	-0.549	2.185	0.029	Significant, negative
Paylater → Consumer Credit	1.539	6.033	0.000	Significant, positive
Interaction → Consumer Credit	0.062	1.639	0.101	Not significant

Source: Processed Data (2026)

The results in Table 3 indicate that the structural model evaluation aims to examine the relationships between variables based on the hypotheses proposed in this study. Hypothesis testing is conducted by analyzing the path coefficients, t-statistics, and significance levels obtained through the bootstrapping procedure with 5,000 subsamples at a 95 percent confidence level, $\alpha = 0.05$.

The results show that the effect of Electronic Money Transactions on Consumer Credit has a path coefficient of -0.549, with a t-statistic of 2.185 and a p-value of 0.029. Since the p-value is below the 0.05 significance threshold, the effect is statistically significant; however, the direction of the relationship is negative. Therefore, the first hypothesis, H1, which proposes that electronic money transactions positively affect consumer credit growth, is not supported.

Furthermore, the effect of Paylater Transactions on Consumer Credit shows a path coefficient of 1.539 with a t-statistic of 6.033 and a p-value below 0.001. These results

indicate that Paylater Transactions have a positive and statistically significant effect on Consumer Credit at the 95 percent confidence level. Thus, the second hypothesis, H2, which proposes that paylater significantly affects consumer credit growth, is supported. Meanwhile, the interaction effect between Paylater and e-Money on Consumer Credit shows a path coefficient of 0.062 with a t-statistic of 1.639 and a p-value of 0.101. Because the p-value exceeds the significance threshold of 0.05, the moderating effect of paylater on the relationship between electronic money transactions and consumer credit growth is not statistically significant at the 95 percent confidence level. Consequently, the third hypothesis, H3, which proposes that paylater moderates the relationship between electronic money transactions and consumer credit growth, is not supported.

To strengthen the interpretation, the 95 percent confidence interval is also evaluated. The bootstrap confidence interval for the effect of e-Money on Consumer Credit ranges from -1.227 to -0.184, which does not include zero, thereby confirming the significance of the negative effect. Similarly, the confidence interval for the effect of Paylater ranges from 1.191 to 2.236, which also does not include zero. In contrast, the confidence interval for the interaction effect ranges from 0.008 to 0.147 under the percentile bootstrap approach, while the bias corrected interval ranges from -0.018 to 0.134, which crosses zero. This indicates that the moderation effect is statistically inconclusive and remains at the borderline of significance.

DISCUSSION

The Effect of Electronic Money Transactions on Consumer Credit Growth

The findings of this study reveal that electronic money transactions have a negative and statistically significant effect on consumer credit growth in the banking sector. This result contradicts the initial hypothesis and differs from several previous studies. [Agarwal et al. \(2020\)](#), in their study on demonetization in India, found that increased digital payment usage stimulated household consumption, which subsequently increased credit demand. Similarly, [Joseph et al. \(2026\)](#) demonstrated that mobile money adoption in Sub-Saharan Africa expanded credit access for previously unbanked populations through the creation of digital transaction footprints that facilitate credit assessment. However, the negative relationship identified in this study suggests that the Indonesian context may exhibit distinct financial dynamics.

This phenomenon can be explained through the payment and credit nexus perspective proposed by [Bian et al. \(2023\)](#). In the Indonesian context, the rapid growth of electronic money transactions appears to generate a substitution effect for traditional banking credit. Consumers who increasingly rely on electronic money for daily transactions tend to utilize instant credit features integrated within digital payment ecosystems, such as paylater services provided by e-commerce platforms or digital wallet providers. As a result, consumer credit demand that was previously fulfilled by banks may shift toward non-bank digital financial service providers. [Parlour et al. \(2022\)](#) argue that competition over payment flows between fintech platforms and traditional banks can fundamentally reshape consumer credit demand patterns.

In other words, electronic money may no longer function solely as an enabler of bank credit but rather as a catalyst that redirects consumers toward alternative digital credit services that are more convenient and seamlessly integrated with everyday consumption activities. This substitution effect can partially explain why increased electronic money usage is associated with a decline in the growth of consumer credit provided by banks.

Furthermore, the negative relationship may also reflect a crowding out effect resulting from the expansion of digital financial services. [Berg et al. \(2022\)](#) explain that fintech lending platforms often possess advantages in terms of speed, convenience, and less stringent requirements compared with traditional banking credit. These advantages encourage digitally oriented consumers to prefer credit services that are seamlessly integrated into digital payment ecosystems. In Indonesia, [Euromonitor \(2025\)](#) notes that the high penetration of electronic money among younger consumers has contributed to a stronger preference for digital credit products offered within the same platforms. Consequently, as the digital financial ecosystem matures, consumers gain access to a wider range of alternative credit options outside the banking sector, which may slow the growth of consumer credit provided by banks.

The Effect of Paylater on Consumer Credit Growth

The results of this study indicate that paylater has a positive and statistically significant effect on consumer credit growth in the banking sector. This finding supports the proposed hypothesis and aligns with several previous studies suggesting that BNPL services may function as a complement rather than a substitute for the formal financial system.

[Waluyo et al. \(2022\)](#) argue that BNPL services have the potential to enhance financial inclusion by serving as an entry point through which consumers gradually gain access to more formal financial products. Similarly, [Berg et al. \(2022\)](#) suggest that fintech lending platforms can help establish credit histories for individuals who previously lacked access to formal financial institutions. Once consumers build a positive credit record through digital lending services such as paylater, banks may use this information to assess creditworthiness and subsequently provide larger loans.

This mechanism can be explained through the stepping stone theory in financial inclusion. [Dong et al. \(2025\)](#) show that credit reporting policies requiring paylater providers to report consumer loans to credit bureaus significantly influence borrower behavior. When consumers use paylater responsibly and repay their obligations on time, these repayment records become part of the national credit information system. Banks can access this information to evaluate borrower risk more accurately. Consequently, paylater usage may facilitate the development of consumer creditworthiness, which ultimately supports the expansion of bank credit.

Empirical evidence also supports this explanation. [Prasetyani et al. \(2024\)](#) find that Generation Z consumers in Indonesia and Malaysia exhibit strong preferences for paylater services due to their convenience and flexibility. However, this preference does not necessarily imply a shift away from the banking sector. [Pertiwi et al. \(2025\)](#) show that platform trust plays a critical role in paylater adoption, and this trust may later extend to formal financial institutions when consumers require larger credit facilities. In the Indonesian context, [Ken Research \(2025\)](#) reports that the rapid growth of the BNPL market has been accompanied by increasing demand for bank credit, particularly for high value financing such as vehicles and housing. This suggests that paylater and bank credit serve different market segments, with paylater used for small to medium short term transactions and bank credit used for larger, long term financing needs.

The Moderating Role of Paylater

The results of this study indicate that paylater does not significantly moderate the relationship between electronic money transactions and consumer credit growth in the banking sector. The p-value of 0.101 exceeds the significance threshold of 0.05, indicating that the moderating effect is statistically insignificant. Consequently, the third hypothesis is not supported.

Several theoretical perspectives may explain this finding. First, the payment and credit nexus framework proposed by [Bian et al. \(2023\)](#) suggests that the relationship between digital payment systems and digital credit services is inherently complex and may not follow a linear interaction pattern. In the context of this study, electronic money and paylater services may evolve in parallel rather than interact in a moderating manner. [Guttman-Kenney et al. \(2022\)](#) note that BNPL services are often directly integrated into digital wallet ecosystems, creating a unified digital financial environment. In such ecosystems, the influence of electronic money on consumer credit may occur directly without being significantly moderated by paylater.

Second, regulatory factors may also influence the moderating role of paylater. The credit reporting policy introduced by the Financial Services Authority through Regulation No. 35/POJK.05/2024 requires paylater providers to report consumer credit data to the Financial Information Service System, SLIK. [Dong et al. \(2025\)](#) find that credit reporting requirements can significantly alter consumer borrowing behavior because individuals become more cautious about maintaining their credit records. Under such conditions, the moderating role of paylater may weaken, as consumers become more mindful of how their paylater usage affects future access to bank credit.

CONCLUSION

This study aims to examine the effect of electronic money transactions on the growth of consumer credit in the banking sector, with paylater services acting as a moderating variable, using monthly banking data from Indonesia.

First, electronic money transactions have a negative and significant effect on the growth of consumer credit in the banking sector. This finding indicates that the increasing use of electronic money is associated with a decline in the growth of consumer credit provided by banks. This phenomenon can be explained through a substitution effect, in which consumers who become increasingly accustomed to digital payment ecosystems tend to shift toward more practical and integrated digital credit alternatives, such as paylater services embedded within the same digital wallet platforms. Consequently, the first hypothesis is not supported.

Second, paylater services have a positive and significant effect on the growth of consumer credit in the banking sector. This finding suggests that BNPL services do not function as substitutes that erode the market share of traditional bank credit. Instead, they act as complementary financial services that expand overall credit access. Through a stepping stone mechanism, responsible use of paylater services can generate a digital credit history that banks can utilize to assess consumer creditworthiness. As a result, paylater usage may facilitate access to larger banking credit products, thereby encouraging the growth of bank consumer lending. Therefore, the second hypothesis is supported.

Third, paylater services are not proven to moderate the relationship between electronic money transactions and the growth of consumer credit in the banking sector. This result indicates that the moderating role of paylater is not sufficiently strong to alter either the direction or magnitude of the influence of electronic money transactions on banking credit. The non-significant moderating effect may be attributed to several factors, including the complex and non-linear relationship between digital payment ecosystems and digital credit systems, regulatory developments in credit reporting, and the limited number of observations. Therefore, the third hypothesis is not supported.

Overall, this study highlights the evolving interaction between digital payment systems and consumer credit dynamics within the Indonesian financial ecosystem. The findings suggest that while digital financial innovations reshape consumer financial behavior, their impact on traditional banking credit may vary depending on the role played by complementary financial technologies.

LIMITATION

This study has several limitations that should be acknowledged when interpreting the results and when developing future research. First, the number of observations used in this study is relatively limited. Although the data were obtained from official secondary sources, the relatively small number of observations may affect the stability of the estimations and the ability to detect moderation effects. Future studies using a longer observation period may produce more robust results.

Second, this study employs single indicators for the consumer credit and paylater variables due to limitations in the availability of aggregated monthly data. Although conceptually valid, the use of single indicators restricts the ability to conduct comprehensive assessments of reliability and discriminant validity. Future research could develop more comprehensive measurements by utilizing more granular datasets.

Third, this study only examines direct and moderating relationships without incorporating control variables that may influence the relationships among the studied variables. Macroeconomic factors such as interest rates, inflation rates, and economic growth may significantly affect consumer credit dynamics. Therefore, future research could incorporate these macroeconomic variables as controls to obtain more accurate estimations.

Fourth, this study uses aggregate level data, which limits the ability to capture heterogeneity in consumer behavior based on demographic characteristics, financial literacy levels, or risk preferences. Future studies employing individual level data or panel data may provide deeper insights into the mechanisms underlying the relationships among digital payments, paylater services, and consumer credit.

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DECLARATION OF CONFLICTING INTERESTS

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