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Implementation of MIS (Management InformationSystem) to Improve Efficiency and Security of Interbank transactions Using BCA Mobile (Case Study at Bank BCA Tbk)

Abstract

The rapid advancement of digital technology has revolutionized the financial services industry, compelling banks to adopt more efficient and secure digital platforms. This study explores the implementation of a Management Information System (MIS) to enhance the efficiency and security of interbank transactions through the BCA Mobile application, a leading digital banking solution provided by PT Bank Central Asia (BCA). The research employs a case study approach and gathers primary data from 30 respondents who are active users of BCA Mobile. Using SPSS for validity testing, the results indicate that the efficiency variable (X1) has a strong and significant positive correlation with improved transaction performance, while the security variable (X2) also contributes positively, albeit to a lesser degree. The findings suggest that an integrated MIS—featuring rapid data access, process automation, and biometric authentication—can substantially enhance operational reliability and customer trust. Moreover, the prototype development model used in this study supports user-centered design iterations to optimize usability and system functionality. The research contributes to digital banking literature by demonstrating how a tailored MIS can support financial inclusion, customer satisfaction, and strategic agility in Indonesia's competitive banking sector. It also offers practical implications for banks seeking to minimize operational risks and improve service quality through system innovation. This study underscores the significance of continual MIS enhancements to sustain customer confidence and address evolving cybersecurity threats in the digital era.

Keywords: *Work Management Information System, Digital Transactions, BCA Mobile, Banking services*

Received on May 2025; Revised on May 2025; Accepted on May 2025; Published on August 2025.

I. INTRODUCTION

In today's digital era, the needs of the community and business world for fast, easy, and safe banking services are increasing. PT Bank Central Asia (BCA) as one of the largest banks in Indonesia has provided digital services through the BCA Mobile application which has more than 30 million active users in the third quarter of 2023, with a digital transaction volume reaching tens of billions each year. However, with the increasing number of users and transactions, several obstacles have emerged such as the transaction process which is sometimes slow and concerns about the security of customer data. The current system has not been fully able to overcome security risks and has not been optimal in managing efficiently. This is a big challenge for BCA to continue to improve the quality of its digital services so that it can continue to meet customer needs quickly, safely, and comfortably. (Rigawan & Afriyeni, 2019). The rapid development of technology, especially in this era of globalization, has influenced the development of both economic and social activities of the community, including financial activities and transactions both directly and indirectly. All of this is accompanied by the busyness of society and increasingly complex needs and preferring facilities or needs that are easier to fulfill. (Permatasari, 2022)

To overcome this problem, it is necessary to develop a better Management Information System at BCA Mobile. This new system will be designed so that the interbank transaction process becomes faster and safer. The latest technologies such as data encryption and layered security

systems, including biometric authentication, will be used to protect customer information from the threat of cybercrime. In addition, this system is also made to be easy to use and integrated with other banking services, including the myBCA application which has additional features and has been used by millions of customers. With this development, BCA can provide more reliable and secure digital solutions for the community and business actors, while supporting the growth of digital transactions that continue to increase. (Yanti, Harianja, Wirakususma, & Saleh, 2024)

Despite the widespread adoption of digital banking applications in Indonesia, including BCA Mobile, current studies have largely focused on user satisfaction, adoption factors, or general technology acceptance. However, limited research has specifically examined the technical and managerial integration of Management Information Systems (MIS) in enhancing the dual dimensions of transaction efficiency and cybersecurity within the context of interbank digital services. Existing systems still face challenges in balancing seamless user experience with robust security mechanisms, especially under increasing transaction volumes and diverse user demands. This highlights a critical research gap in evaluating how MIS frameworks can be systematically optimized to support secure and rapid transaction processing in mobile banking applications.

Therefore, this study aims to analyze the implementation of MIS in the BCA Mobile application with a focus on its impact on interbank transaction efficiency and security. By employing a case study method and quantitative data analysis, the research seeks to determine the extent to which efficiency and security contribute to overall system performance. The findings are expected to contribute to the literature by offering empirical insights into MIS integration in mobile banking systems. Practically, the study provides recommendations for banking institutions to improve their MIS-based services, thus strengthening operational reliability, customer trust, and digital service competitiveness in the banking industry.

II. LITERATURE REVIEW

A. Conceptual Description

1. Definition of Management System (MIS)

A Management Information System (MIS) is a system that processes and organizes data and information that is useful for supporting the implementation of tasks in an organization. A management information system or MIS is a planning system that is part of a business's internal control, which includes the use of people, documents, technology, and procedures by management accounting to solve business problems such as product costs, services, or a business strategy.

A management information system is distinguished from a regular information system because MIS is used to analyze other information systems that are applied to the organization's operational activities. Academically, this term is generally used to refer to a group of information management methods related to automation or support for human decision-making, such as decision support systems, expert systems, and executive information systems.

The system was then formed into a computer-based information system (CBI). Until now, the information system has been running in an integrated manner and automatically. MIS itself has physical elements that are needed for the smooth running of the system used, namely computer

hardware, software, namely general system software, general application software, and application programs. Furthermore, Furthermore, in the SIM there is a database and procedures for implementing the company's management system and of course, officers who operate all of these systems (Hariyanto, 2018).

2. *Management Information Systems in the Banking World*

Information Systems are a crucial backbone in optimizing the efficiency and effectiveness of BCA Bank management. Various ways in which information systems contribute to a strong foundation for the success of this bank. First, data management is one of the key aspects. Information systems help banks manage and integrate customer, transaction, and operational data. With well-organized data, management can make more timely and accurate decisions. This helps in responding to market changes more quickly. Furthermore, information systems enable real-time monitoring of business performance. This includes monitoring transactions, customer service, and product performance. Real-time information helps management identify problems quickly and pursue opportunities before competitors.

Information security is a priority in the banking world, and information systems help banks secure customer and transaction data. It also helps banks comply with strict regulations, such as anti-money laundering regulations, and manage security risks. Furthermore, process automation is an important contribution of information systems. It reduces manual workload and improves operational efficiency. Data analysis is another strength, enabling the bank to identify market trends, customer behavior, and new business opportunities. Data generated by information systems supports strategic decision-making, such as resource allocation, branch expansion, and product development. The development of digital services such as internet banking and mobile banking enhances customer convenience. Finally, information systems help banks comply with applicable banking regulations, ensuring compliance with information security regulations. With good integration, efficient data management, and in-depth analysis, information systems enable Bank BCA to remain competitive in the competitive banking industry while providing better service to customers.

Management Information Systems (MIS) play a central role in information management and decision-making at Bank Central Asia (BCA). MIS collects data from various sources, including daily operational data, customer data, and financial data, and processes it into relevant and useful information through a structured process of analysis, processing, and storage. The resulting information is stored securely in a database that allows easy and fast access.

MIS also functions to distribute the right information to the right people in the organization, either through reports, dashboards, or other communication tools. It provides key support in decision making, helping managers and organizational leaders make better decisions with accurate and timely information (Wijoyo, Sari, & Pratama, 2023).

3. *Bank Central Asia (BCA)*

Bank BCA is one of the private banks with partially influential service features that implements digital services for customer interest in banking. One of them is a mobile banking product known as BCA Mobile and was launched in 2011. By launching banking services via customer smartphones, Bank BCA hopes that its customers can enjoy BCA Mobile as a fast and easy banking service. In 2019, the number of BCA mobile banking transactions increased from 2018 by 99.2% (www.bca.co.id) and the number of BCA Mobile banking users increased by 28.57% (Kontan.co.id). This shows that the BCA mobile banking application is accepted and in demand by most BCA bank customers (Asmike & Setiono, 2020).

4. *Mobile Banking as a Digital Innovation*

Mobile banking is one of the innovative services offered by banks that allows customers to make banking transactions via mobile phones (HP). Through mobile phones (HP) and mobile banking services, banking transactions that are usually done manually, meaning that activities are carried out by customers by visiting the bank directly, can now be done without having to visit the bank, just by using a mobile phone (HP). Mobile banking aims to ensure that customers are not left behind in using modern electronic media (Mu'asiroh & Darwanto, 2021)

BCA Bank, which is developing a user-friendly mobile banking application and providing various innovative features such as QR payments and chat banking, which convenience can help customers in making transactions. Digital transformation is not only about adopting new technology, but also about changing the way we think and operate to be more responsive to dynamic market needs. Through continuous innovation, banks can ensure that they remain relevant and competitive in the increasingly advanced financial industry.

One strategy that can be implemented is to develop a mobile banking application that makes it easier for customers to access banking services anytime and anywhere. This technology provides convenience in real-time transactions, checking balances, transferring funds, and paying bills quickly and safely. In addition, innovation in cybersecurity is important to protect customer data and ensure that transactions run smoothly without threats from irresponsible parties (Safitri et al., 2024).

5. *Transaction Efficiency Through BCA Mobile*

The development of BCA Mobile aims to increase the efficiency of interbank transactions. A study by (Turban, Pollard, & Wood, 2018) shows that mobile banking applications can speed up the transaction process and reduce customer waiting time. With features such as interbank transfers, bill payments, and purchases, BCA Mobile facilitates faster and easier transactions.

6. *Digital Transaction Security*

Security is a crucial aspect in the banking information system. According to (Anderson, 2010), cybersecurity threats increase along with the digitalization of banking services. BCA implements various security measures, such as two-factor authentication and data encryption, to protect customer information and transactions.

7. Digital Solutions for the Community

BCA Mobile not only increases efficiency and security, but also provides better access to the community. According to research by (Abdulquadri, Mogaji, Kieu, & Nguyen, 2021), the adoption of mobile banking provides convenience for people who previously had difficulty accessing banking services. BCA Mobile allows users to make transactions anytime and anywhere, thus supporting financial inclusion.

III. RESEARCH METHOD

A. Research Design

This study employs a case study approach as the research design, which allows for an in-depth examination of a real-world phenomenon within its contextual boundaries (Yin, 2014). The selected case involves the implementation of a Management Information System (MIS) within the BCA Mobile platform to analyze its impact on interbank transaction efficiency and security. This design is appropriate given the need to investigate complex interactions between system components, user perceptions, and transactional performance in a specific banking environment. The case study also facilitates triangulation of multiple data sources, including primary user feedback and system performance indicators, to enhance the validity of findings.

B. Population and Sampling

The population in this study consists of users of BCA Mobile among active students at Universitas Bina Sarana Informatika (UBSI), who represent a relevant user segment in terms of mobile banking adoption and digital transaction behavior. A non-probability purposive sampling technique was used to select participants who actively use the BCA Mobile application for interbank transactions. A total of 30 respondents were involved in the study, deemed sufficient for exploratory quantitative analysis in line with case study methodology, particularly when supported by instrument validation procedures (Creswell & Creswell, 2018).

C. Operational Definition of Variables

This study was conducted at PT. MPIW, a company based in Jakarta with a total workforce of approximately 300 employees. For the purpose of this research, the target population was narrowed down to employees working in three specific divisions: logistics, production, and purchasing. These divisions were selected due to their direct involvement in operational and managerial activities relevant to the research objectives. As a result, the total population considered in this study consisted of 50 employees across the aforementioned divisions. The operationalization of variable shown in Table 1.

Table 1. Operationalization of Variables

Variable	Indicator	Item Code	Measurement Scale
Efficiency (X1)	Speed of access to information	X1P1	Likert 1–5
	Time savings in transaction process	X1P2	Likert 1–5
	Reduction of operational costs	X1P3	Likert 1–5
	Ease of use for daily banking	X1P4	Likert 1–5
Security (X2)	Data protection from unauthorized access	X2P1	Likert 1–5
	User trust in system	X2P2	Likert 1–5

Variable	Indicator	Item Code	Measurement Scale
	Security features (OTP, biometrics, encryption)	X2P3	Likert 1–5
MIS Performance (Y)	Transaction speed	Y1P1	Likert 1–5
	Error/disruption frequency	Y1P2	Likert 1–5
	System protection and user support	Y1P3	Likert 1–5

To ensure clarity and measurability, the following operational definitions were adopted:

- Independent Variables:
  - Efficiency (X1): Defined as the capability of the MIS to streamline transaction processes by reducing time, cost, and energy. Indicators include:
    - Speed of access to system features
    - Time savings in conducting transactions
    - Reduction in operational overhead
  - Security (X2): Defined as the system's ability to protect data from unauthorized access and ensure transaction integrity. Indicators include:
    - Protection of customer data
    - Level of user trust in the application
    - Presence of security features (e.g., encryption, biometric login)
- Dependent Variable:
  - MIS Performance (Y): Refers to the effectiveness of the implemented MIS in supporting decision-making and secure transaction processes through BCA Mobile. Indicators include:
    - Transaction speed
    - Error/failure rates
    - System reliability and user protection

D. Data Collection Technique

The study employed structured questionnaires as the primary data collection instrument, designed based on the operational indicators mentioned above. The instrument underwent a validity test to ensure its capacity to accurately measure each construct. Ethical considerations, including informed consent and data confidentiality, were observed during distribution.

E. Data Analysis Techniques

Data were analyzed using descriptive statistics and Pearson's correlation analysis via the SPSS software package to assess the relationships between the independent variables (Efficiency and Security) and the dependent variable (MIS performance). A validity test was also conducted to confirm that each item in the questionnaire significantly correlates with its respective construct. Significance was evaluated at the 0.05 level (two-tailed), and results showed that all measurement items met the validity criteria, thereby supporting the reliability of the instrument.

IV. RESULT AND DISCUSSION

A. Result

1. The Implementation of MIS on Efficiency & Effectiveness of BCA Management

Information Systems are a crucial backbone in optimizing the efficiency and effectiveness of BCA Bank management. The various ways in which information systems contribute to a strong

foundation for the bank's success. First, data management is one of the key aspects. Information systems help banks manage and integrate customer, transaction, and operational data. With well-organized data, management can make more timely and accurate decisions. This helps in responding to market changes more quickly.

Furthermore, information systems enable real-time monitoring of business performance. This includes monitoring transactions, customer service, and product performance. Real-time information helps management identify problems quickly and pursue opportunities before competitors. Information security is a priority in the banking world, and information systems help banks secure customer and transaction data. It also helps banks comply with strict regulations, such as anti-money laundering regulations, and manage security risks.

However, process automation is an important contribution of information systems. It reduces manual workload and improves operational efficiency. Data analytics is another strength, enabling the bank to identify market trends, customer behavior, and new business opportunities. Data generated by information systems supports strategic decision-making, such as resource allocation, branch expansion, and product development. The development of digital services such as internet banking and mobile banking increases customer convenience. Finally, information systems help banks comply with applicable banking regulations, ensuring compliance with information security regulations. With good integration, efficient data management, and in-depth analysis, information systems enable Bank BCA to remain competitive in the competitive banking industry while providing better service to customers

2. *Validity Test*

A validity test was conducted to ensure that each indicator used in the questionnaire accurately represents the latent variables being measured. The validity assessment employed Pearson's product-moment correlation to evaluate the relationship between each item and the total score of its corresponding construct. The analysis was carried out using SPSS with a sample size of 30 respondents.

Tabel 1. Result of Validity Test

		X1P1	X1P2	X1P3	X1P4
X1P1	Pearson Correlation	1	,745**	,644**	,774**
	Sig. (2-tailed)		,000	,000	,000
	N	30	30	30	30
X1P2	Pearson Correlation	,745**	1	,711**	,585**
	Sig. (2-tailed)	,000		,000	,001
	N	30	30	30	30
X1P3	Pearson Correlation	,644**	,711**	1	,607**
	Sig. (2-tailed)	,000	,000		,000
	N	30	30	30	30
X1P4	Pearson Correlation	,774**	,585**	,607**	1
	Sig. (2-tailed)	,000	,001	,000	
	N	30	30	30	30
X1 Variable Efficient	Pearson Correlation	,911**	,874**	,841**	,855**
	Sig. (2-tailed)	,000	,000	,000	,000
	N	30	30	30	30

As shown in Table 1, all items under the variable Efficiency (X1)—namely X1P1, X1P2, X1P3, and X1P4—demonstrated high correlation coefficients with the total score of X1, ranging from

0.585 to 0.911, all with significance levels below 0.05. These results indicate that each item is strongly and significantly correlated with the underlying construct, affirming their validity.

Similarly, for the variable Security (X2), the indicators X2P1 to X2P4 exhibited correlation coefficients between 0.371 and 0.776, with most p-values also falling below the 0.05 threshold. Although X2P3 and X2P4 show relatively lower correlations compared to X2P1 and X2P2, they still meet the minimum statistical requirements for item validity. Furthermore, the aggregate correlation between all X2 indicators and the composite Security variable reached 0.768, indicating a robust level of internal consistency. This findings confirm that all questionnaire items are statistically valid and appropriately reflect the constructs of Efficiency (X1), Security (X2), and Management Information System (Y). This supports the reliability of the instrument used for further analysis in this study.

3. *System Development Method*

The system development approach adopted in this study is the Prototyping Model, a method widely used in the development of information systems to iteratively refine system requirements through early user interaction (Purnomo, 2017). Prototyping involves creating an initial version of the system—known as a prototype—which simulates core functionalities and serves as a visual and functional representation for both developers and users.

The overall stages of the prototyping process implemented in this study are illustrated in **Figure 1** below, showing the iterative loop between feedback and system refinement stages.

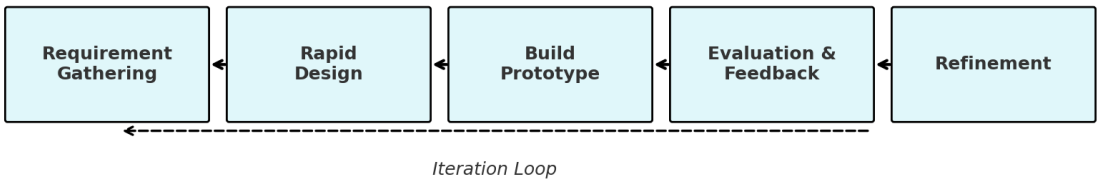

Figure 1. Prototyping Process Model for BCA Mobile System Development

The primary objective of using the prototyping method is to enhance communication between system developers and end users. By enabling direct feedback on the prototype, developers can better understand user expectations and refine the system iteratively before final deployment. The process helps to reduce misunderstandings, aligns development with user needs, and accelerates system maturity.

The prototyping stages in this research include:

- Requirement Gathering: Initial meetings with users to define system goals, features, and operational scope.
- Rapid Design: Quick formulation of a conceptual interface and flow.
- Prototype Building: Development of a functional early version of the system.
- Evaluation and Refinement: Collecting user feedback for continuous improvement and system enhancement.

This iterative cycle continues until the prototype is sufficiently aligned with user requirements and technical specifications, enabling the transition into full-scale development.

4. *System Needs Analysi*

According to Purnomo (2017), effective system development requires a comprehensive needs analysis in the early phase to ensure that both functional and technical requirements are accurately identified. This involves evaluating existing processes, identifying system limitations, and gathering expectations from end users to build a system that is both efficient and user-oriented.

The analysis focuses on key system components, including hardware infrastructure, software tools, network architecture, and user interaction points. Each component must be examined to determine its relevance, performance requirements, and potential constraints in the context of system integration.

The system requirements in this study are categorized as follows:

- System Inputs: Types of data to be entered by users, such as transaction details, bank codes, and authentication credentials.
- System Outputs: Expected outputs like transaction confirmations, account balance updates, and error messages.
- System Processes: The internal logic and workflows for processing transactions, verifying user data, and executing interbank transfers.
- Database Requirements: The structure, storage, and security of transactional and user data to support system performance and compliance.

This analysis serves as the foundation for designing a reliable and responsive mobile banking system, tailored to the operational standards of BCA and the expectations of its users.

5. *Prototype Design*

The prototype designed in this study aims to visualize the key stages of interbank transaction processes using the BCA Mobile application. This interactive mock-up simulates user interactions and serves as a reference for evaluating system usability, efficiency, and security features. Each step in the process is illustrated with interface screenshots to guide users through the digital transaction flow. The sequential interface design also demonstrates how Management Information Systems (MIS) principles—such as transaction validation, authentication, and feedback—are implemented.

Figure 2. Main menu m-BCA

The process begins with the main BCA Mobile service interface, where users must first access the m-BCA menu. As shown in Figure 2, this screen acts as the central gateway to all mobile banking functions.

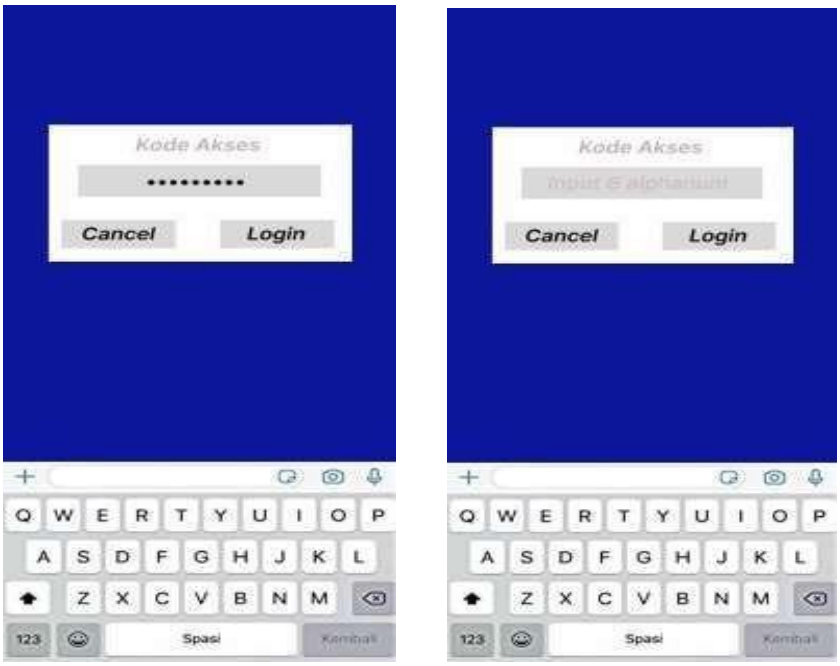

Figure 3. Access code entry

To proceed, users are prompted to input a six-digit access code as a security measure. This authentication step is depicted in Figure 3, which consists of two panels: the access code entry screen and the transition to the main dashboard after successful login.

Figure 4. Screenshoot Successfully login

Once logged in, users are presented with the main transaction menu. As seen in Figure 4, the next step involves selecting the m-Transfer feature, which leads to multiple transfer options.

Figure 5. Selecting the m-Transfer feature

For interbank transfers, users must choose the "Inter Bank" option, allowing them to send funds to accounts at other financial institutions such as BRI, BNI, or Mandiri. The navigation flow and screen details for this step are illustrated in Figure 5, which includes two screenshots showing the interbank transfer menu and account entry fields.

Figure 6. Critical data input stage

Subsequently, users are required to enter transaction details, including the destination bank, account number, transfer amount, and the source account. This critical data input stage is shown in Figure 6.

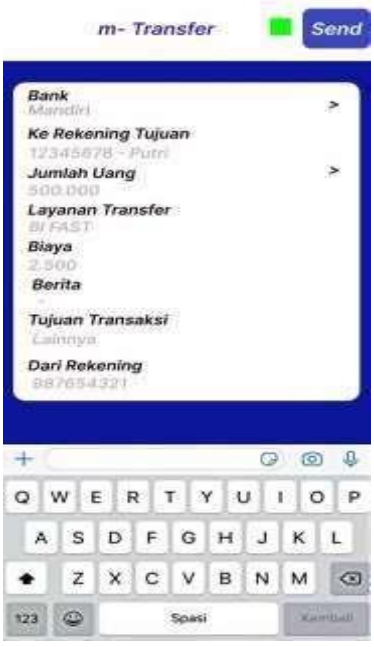

Figure 7. Completed transaction status

Upon completing the input, the system displays a confirmation screen summarizing all transaction parameters such as destination account name, amount, admin fee (IDR 2,500), transaction purpose, and source account. Finally, users must input their m-BCA PIN to authenticate and finalize the transaction. If successful, a confirmation message appears. This final stage is depicted in Figure 7 and 8, illustrating the completed transaction status.

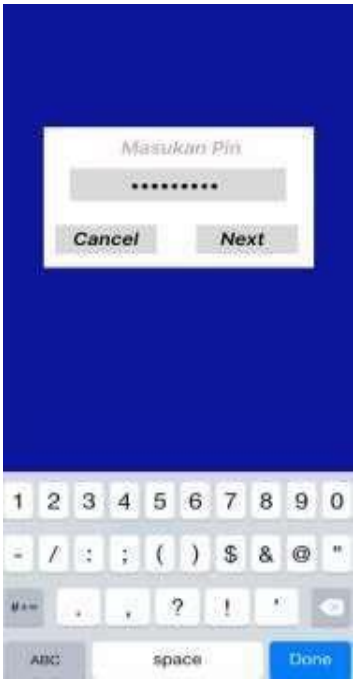

Figure 8. Last password input for ransaction

Each visual element of the prototype aligns with MIS principles, ensuring that the system is user-centered, efficient, and secure. These interface mock-ups also serve as communication tools for refining the design before full implementation.

B. Discussion

The findings of this study indicate that the implementation of a Management Information System (MIS) in BCA Mobile significantly contributes to improving the efficiency and security of interbank transactions. This aligns with the previous assertion by Wijoyo, Sari, and Pratama (2023), who emphasized that a well-integrated MIS enables banks to manage customer and operational data more effectively, supporting faster decision-making and enhancing service reliability.

First, the analysis revealed that the efficiency variable (X1) has the strongest and most significant correlation with MIS performance. This finding confirms the role of digital platforms in streamlining banking operations, particularly by reducing processing time and improving transaction flow. As supported by Turban, Pollard, and Wood (2018), mobile banking applications like BCA Mobile inherently accelerate the transaction process, minimizing manual intervention and customer waiting time. The high correlation coefficients from the validity test suggest that system responsiveness and ease of access are primary drivers of perceived efficiency among users.

Second, the security variable (X2) also showed a significant correlation with system performance, although slightly weaker than efficiency. This result highlights that while speed and accessibility are critical, user trust in the protection of their personal and financial data remains a major concern. According to Anderson (2010), as financial services become more digitalized, the risks of cyber threats also rise—necessitating robust encryption, authentication, and intrusion detection systems. BCA's efforts to integrate security features such as two-factor authentication and

biometric verification are consistent with this expectation and contribute to maintaining user confidence.

Moreover, the design and prototyping stages of the MIS emphasize a user-centered development approach, ensuring that the system aligns with the actual needs and behavior of users. This is consistent with Purnomo (2017), who argues that prototyping enables iterative refinement through continuous feedback from users, resulting in better alignment between system functionality and user expectations.

The adoption of BCA Mobile as a digital solution also reflects broader trends in financial inclusion and digital transformation. As noted by Abdulquadri et al. (2021), mobile banking increases accessibility to financial services for populations that may otherwise face barriers in traditional banking environments. This is particularly relevant in the Indonesian context, where mobile penetration is high, but branch-based banking access is often limited.

Lastly, the implications of this study contribute not only to the academic understanding of MIS in banking but also offer practical insights for banking institutions. By enhancing system efficiency and reinforcing cybersecurity, BCA can improve service quality and sustain competitiveness in an increasingly digital financial landscape (Safitri et al., 2024).

V. CONCLUSION AND RECOMMENDATION

This study investigated the role of a Management Information System (MIS) in enhancing the efficiency and security of interbank transactions through the BCA Mobile application, which serves as a digital banking solution for the public. Based on the results of statistical analysis and prototype evaluation, several key conclusions can be drawn. First, the Efficiency variable (X1) demonstrated the strongest and most significant influence on the performance of interbank transactions (Y). This indicates that improving system efficiency—particularly in terms of access speed, transaction processing, and operational simplicity—has a direct and measurable impact on user experience and transaction quality.

Second, while the Security variable (X2) also showed a significant positive correlation with the dependent variable, its influence was slightly lower compared to efficiency. Nevertheless, this underscores the critical role of data protection, user trust, and system safeguards in sustaining secure digital banking operations. Third, the overall MIS construct (Y) itself was found to have a significant and reinforcing correlation with both efficiency and security components. This confirms that a well-designed, stable, and user-friendly information system plays a pivotal role in facilitating successful digital banking services, particularly for high-frequency activities such as interbank transfers.

Recommendation

Based on the findings, the following recommendations are proposed:

- Enhance Transaction Efficiency: PT Bank Central Asia (BCA) should prioritize the continuous optimization of BCA Mobile features that accelerate transaction processes, reduce user friction, and improve real-time responsiveness. Enhancements in system navigation and load times will further improve user satisfaction.
- Strengthen Digital Security: Despite being slightly less dominant than efficiency, security remains a foundational aspect of user trust. It is recommended that BCA regularly update

its security protocols, including multi-factor authentication (e.g., OTP, biometrics), data encryption, and anomaly detection systems to combat evolving cyber threats.

- Ensure System Stability and Reliability: To maintain consistent performance, especially during peak usage hours, BCA should invest in infrastructure upgrades such as server scaling, cloud-based load balancing, and automated maintenance scheduling. Routine stress testing and system audits are also advised to minimize service disruptions.

These strategies are not only essential for maintaining the integrity of interbank transactions but also vital for positioning BCA as a leader in secure and efficient digital banking solutions in Indonesia's rapidly evolving financial ecosystem.

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