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# Challenges and Problems in Banking Industry Services in Digitalization Innovation Transformation

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**Abstract**

Dynamic technological advancements have led to significant transformations within the banking industry. Digital transformation is regulated under POJK Number 12/POJK.03/2021, which encompasses not only the transition from conventional to digital banking but also digital innovations that generate substantial operational cost efficiencies, system optimizations, and enhanced convenience for customers to transact independently. While digitalization in the banking sector benefits both banks and customers, it simultaneously poses challenges, legal protection issues, and legal consequences regarding the loss of customer funds in digital banks. This study employs a doctrinal research method with a statutory approaches. The findings indicate that challenges faced by the banking industry in the digitalization era include building public trust, technological and cybersecurity risks, operational risks, regulatory and supervisory challenges, as well as public financial literacy. To address the issues concerning customer funds in the banking sector, banks must ensure reliable security systems, transparency of product information and risks, strict Standard Operating Procedures (SOPs), secure and robust IT systems, and the preservation of system and data security. Under Articles 4 and 7 of Law No. 8 of 1999 on Consumer Protection, the principle of presumption of liability serves as the foundation for fund losses resulting from phishing or system failures; Hence, banks are obligated to prove the implementation of cybersecurity in compliance with POJK No. 6/POJK.07/2022 and Article 245 of Law No. 4 of 2023 on the Development and Strengthening of the Financial Sector (UU P2SK). The legal consequence for the loss of customer funds in a digital bank includes compensation for unlawful acts if the bank is proven negligent in maintaining its system security.

***Keywords:*** *Banking, Challenges, Digitalization, Problematics.*

## INTRODUCTION

Technological developments continue to advance over time, both in the fields of communications and finance. One such area is banking. Banks are monetary intermediary organizations generally empowered to accept deposits, make cash loans, and act as intermediaries in the payment process.[1]Banks play a crucial role in driving the economy, ensuring that no society survives without the need for financial institutions. The digital era has brought significant changes, enabling banks to expand their service reach and enhance technological innovation. Technological innovations in banking encompass the digitization of service processes, from mobile banking to the establishment of purely



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digital banking entities that can operate without branch offices, as stipulated in Article 9 of the Financial Services Authority Regulation (POJK). No. 12/ POJK.03/2021 Concerning Bank General. In today's digital age, digitalization is welcomed as a way to meet societal needs because it can be implemented more effectively and efficiently. Nowadays, many people are already utilizing and enjoying technology, such as the internet.[2]According to a report from the Indonesian Internet Service Providers Association (APJII), the number of internet users in Indonesia reached 235.26 million in 2026, with a penetration rate of 81.72% of the total population. This demonstrates the significant increase in internet users in Indonesia, prompting people to explore new internet-related products.[3]

The latest products in banking technology, coupled with the shift in digital innovation, have been warmly welcomed by customers. This shift in innovation in the banking world is not merely a transition, but a breakthrough in the way banks interact to satisfy customers. One of the policies implemented by the government in response to this shift in innovation is the development of banking products from conventional to digital. The shift from conventional to digital banking does not change the function of banks, which is to collect funds and then distribute these assets back to the community in general within a predetermined time period. Recently, the phenomenon of customer funds being lost in digital bank accounts has emerged, but banks have not responded positively, only blocking accounts and resetting passwords without providing guarantees for the balances in the accounts. This violates Article 365 of the Civil Code and Article 19 of Law Number 8 of 1999 concerning consumer protection because the bank has committed an unlawful act and has harmed consumers. Based on Article 245 of Law Number 8 of 1999 concerning Consumer Protection, the bank has committed an unlawful act and has harmed consumers. 4 Year 2023 concerning the development and strengthening of the financial sector, which regulates consumer protection for financial services, personal data protection, and financial literacy.

Article 1 8 POJK Number 6/POJK.07/2022 Arrange obligation Banks are required to provide consumer protection in the financial services sector. The POJK specifically regulating digital banking is regulated in Article 9 POJK Number 12/POJK.03/2021. Furthermore, because it relates to the digitalization system in banking, customer data must also be protected, as stipulated in Articles 36, 47, and 49. Article 47 of Law Number 27 of 2022 About Protection Personal Data. From this phenomenon, the issues to be discussed in this research are the challenges facing the banking industry in the development of the digital technology industry, the problems of digitalization, and the legal consequences of lost customer funds in the digital banking sector.

## METHOD

On This research uses research methods Doctrinal research is also known as library research or document study, due to its focus on written regulations and other legal materials. This research is conducted using research approach Statute approach. This research was conducted using several types of legal materials, namely primary legal materials and secondary legal materials.[4]The legal materials used include primary legal materials which contain all information, facts and realities related to or relevant to the research.[5]Among other things, the law book law civil, Law Number 4 2023 about protection consumers, Law Number 4 2023 About Development And



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Strengthening the Financial Sector. POJK Number 6/POJK.07/2022 About protection consumers and society in the sector financial services that regulate banks' obligations to protect customers, POJK No. 12/POJK.03/2021 concerning Digital Banks, Law Number 27 of 2022 About Protection Data Personal. Secondary legal materials consist of existing data related to books and journals related to digitalization in the banking sector.

## RESULTS AND DISCUSSION

### 1. Challenges of the Banking Industry in the Development of the Digitalization Technology Industry

Dynamic and significant developments in the banking sector are transforming following the Industrial Revolution 5.0. This digital transformation is due to changes in mindset, strategy, and services within the banking sector, resulting in adaptive and innovative systems. Innovations such as ATMs, mobile banking, internet banking, and branchless banking represent a form of banking adaptation to improve fast, efficient, and easily accessible services anywhere, thus providing convenience for customers. The development of digital banking, based on Article 12/POJK.03/2021, not only increases operational efficiency by reducing physical branch costs and automating services but also accelerates end-to-end transactions for customers. Digitalization has made banking easier and more convenient for customers. Customers no longer have to wait in long lines at the bank or worry about bank operating hours.[6]

Innovations in online banking and mobile applications have made it easier for customers to conduct transactions without the constraints of time and space. However, in the context of legal liability for lost customer funds, these innovations pose a higher risk of cyberattacks due to the reliance on electronic channels. To protect customers, banks must:maintain fund security or assets consumer Which be in charge answer perpetrator service business finances and are required to implement the provisions of Article 25 Regulation OJK Number 01/POJK.07/2013 Year 2013 and Regulations OJK Number 13/POJK.03/2021. Technically, this regulation presents new challenges in line with the development of digitalization, which banking institutions must anticipate, both internally and externally. The challenges facing banks in this digital era include:

a. On protection consumer

Article 229 Law Number 4 of 2023 concerning P2SK, Consumer Protection in the sector finance has a purpose create protection ecosystem consumers who realize certainty law, growing awareness PUSK regarding responsible business behavior Responsible, increasing consumer awareness to prevent harm to both banks and customers, as increasingly massive digital developments result in innovations that keep pace with the times. Based on Article 2 UUPK Protection consumer based on benefit, justice, balance, security, safety consumers and consumer legal certainty. These five principles must be fulfilled in efforts to implement consumer protection, justice between the interests of consumers and business actors. effort and certainty law to obtain justice.



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In order to differentiate between preventive protection in data encryption and customer education and repressive complaint mechanisms via LAPS SJK as regulated in Law No. 8 Year 1999 in conjunction with POJK No. 12/POJK.03/2018 which requires banks to apply the principle of prudence.[6]Customer security and protection are major challenges for banks, including digital banks that require a 24-hour complaint mechanism and customer problem handling. The incompleteness of lex specialis can create gaps in legal accountability, so the OJK needs to strengthen POJK No. 22 of 2023 for restitution of lost funds without proof of negligence.

b. Technology and cybersecurity risks
Cybercrime is not a threat that can be ignored, so it is important for banks to improve their understanding of cybersecurity. Banks are required to pay attention to security aspects through optimizing digital technology systems including: (1) external threats with linear increases in digital services in increasing the vulnerability of cyber attacks, hacking, phishing, malware to social engineering crimes such as SIM, Swap and Skimming. In consumer protection, cases of loss of funds due to skimming crimes show the need for strong consumer protection for digital bank customers, (2) internal threats although the risk of internal fraud carried out by bank officials remains a serious concern in the security aspect.[7]
c. Operational risk. The challenges lie in (a) the aspect of third-party dependency in running digital services. This dependency transfers some operational risk to third parties, so banks need to manage this risk; (b) the reliability of a non-stop system requires banks to maintain a reliable, non-stop system that requires investment in robust infrastructure and an effective business continuity plan; (c) the management and protection of customer data, which is a crucial challenge, so banks must ensure that the management and protection of customer data are in accordance with the Personal Data Protection Law.
d. Regulatory and Supervisory Challenges. Regulatory changes are one of the biggest challenges facing financial institutions. The massive development of technological innovation necessitates regulatory adaptation. The legal vacuum for the emergence of purely digital banks operating without physical offices has led to the Financial Services Authority Regulation (POJK). No. 11 Year 2022 about Protection Consumers. Oversight of complex and evolving digital products and services while ensuring proper implementation of regulatory and consumer protection aspects.
e. Community literacy level
Improvements in digital services must be balanced with improvements in digital and financial literacy. Diverse customer literacy levels leave some vulnerable to fraud. A lack of customer understanding of cybersecurity mechanisms and how digital fraud works necessitates an inclusive approach.

The dynamic technological developments in digital banking pose challenges, such as public inclusion and financial literacy. Lack of widespread knowledge about digital banking often leads people to assume digital banking is the same as conventional banking, but when examined more closely, digital banking is actually more vulnerable to legal loopholes. This situation can be seen



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as a challenge in leveraging technological developments by educating the public about digital literacy through campaigns conducted by banks and the government. In addition to these challenges, banks are also implementing strategies to improve digital services in the 4.0 era.

Digital transformation has a positive impact by accelerating services without time and place limitations, but also has a negative impact by increasing banks' exposure to cyber, operational, and compliance risks, thus requiring strict regulations on consumer protection that integrate IT security obligations, third-party audits, encryption, business continuity plans, and alternative dispute resolution mechanisms in the financial services sector. This is to ensure that customers do not bear the technological risks of the bank's digital business model, especially in the event of a loss of funds without proof of customer negligence. The provisions of the Financial Services Authority Regulation (POJK) on commercial banks and the Consumer Protection Law provide the basis for supervision and risk management obligations, but the legal vacuum (rechtvacum) regarding operational aspects of digital banks such as cloud service outsourcing, minimum security standards, and liability for third-party failures requires the establishment of a lex specialis to clarify the parameters of digital bank negligence.

In the Circular Letter OJK Number 29/SEOJK.03/2022 only regulates multi-factor authentication, real-time detection, and the burden of proof. Strengthening consumer protection regulations in the financial services sector, as well as IT risk management, is necessary. The challenges of the digital era for banking institutions include an integrated risk chain. While technological innovation, intended to provide speed and convenience, can actually increase cyber risks, operations, and regulations that ultimately impact protection and security. Strengthening consumer protection regulations in the financial services sector and emphasizing information technology risk management are necessary as prerequisites for digital banking operations. Overall, the challenges of the digital era are an integrated risk chain, where technological innovation, intended to provide speed and convenience, actually increases cyber risks, operations, and regulations regarding protection and security. Banking plays a crucial role in a country's economy, especially with technological advancements. Therefore, maintaining customer trust is crucial. Trust can be maintained if the banking sector is managed and operated carefully, thereby maintaining its health and benefiting all parties.[8]Customers play a very important role because the survival of banking depends on the trust given by the public or customers.[9]

## 2. The Problems of Digitalization and the Legal Consequences of Lost Customer Funds in the Digital Banking Sector

Rapid advances in information technology have transformed conventional banking services into digital ones, creating challenges related to customer fund security. This issue is especially pressing due to the increasing number of cases of lost funds from accounts caused by system failures and cyberattacks.[10]These issues arise from an unreliable IT security system, a lack of transparency in product



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and risk information, a lack of strict SOPs, and the frequent occurrence of skimming and data leaks. This phenomenon of lost customer funds has caused concern and disputes, necessitating a form of legal certainty to resolve the issue as a form of legal protection for customers. Legal protection for customer savings must be carried out in a comprehensive and comprehensive manner. Hadjon stated that there are two types of legal protection: preventive legal protection aimed at preventing disputes from occurring, and repressive legal protection used to resolve disputes that have already occurred.[11] Legal protection for customers as consumers of digital banks provides the right to file complaints and obtain dispute resolution based on simple, affordable, and expeditious principles. Consumer protection in banking arises from economic activities that have the potential to cause economic losses that harm consumers. The law provides protection to customers because banks lack proper management and the supervision and management systems they employ are insufficiently effective, disrupting bank operations.

This legal protection can be achieved by preventing and addressing unforeseen circumstances, both of which can be achieved through legislation. In banking, customers are considered users of financial services whose rights must be protected. Legal protection for customers encompasses all legal actions that ensure their rights. customers as service consumers Financial needs are met. Legal protection plays a role in preventing and suppressing legal liability cases related to the loss of consumer funds in digital banks. This requires a comprehensive and multi-step protection system. Preventive protection prevents losses as early as possible through banks' obligations to implement transparent information technology security standards, including data encryption and customer education, product and risk information transparency, and strict operational standards. Meanwhile, repressive protection provides a post-loss recovery mechanism through internal complaints. Dispute Resolution (IDR) and Alternative Institutions Settlement service sector disputes Financial protection to ensure restorative justice. Repressive protection, in addition to the dispute resolution process, and the bank's responsibility to provide compensation, serves as a mechanism for determining legal certainty and justice for the injured party. Prudential standards that must be met by banks must also be applied before and after the loss, so that if a customer's funds are lost, it constitutes a violation of negligence in maintaining system and data security or failure to provide a complaint mechanism, compensation, or dispute resolution. Losses in consumer protection will occur if someone commits an act that violates the law. law as regulated in Article 1365 Civil Code. An action can be considered an act that violates law if it meets several conditions, namely it is contrary to the legal obligations that must be carried out by the perpetrator, harms the rights of others, and is contrary to the sense of custom, politeness, accuracy and caution.[12]

Effective legal protection must include efforts to prevent disputes as well as redress when disputes cannot be avoided.Legal relationship between customers with the bank is a relationship civil law that arises due to the existence of The agreement or contract included in the credit agreement. Most banking agreements use a standard agreement format. The bank, as the stronger party, sets



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unilateral terms and conditions that place customers in a weaker position, thus prioritizing consumer protection and the Financial Services Authority (POJK) to fight for consumer rights. Furthermore, it ensures customers receive transparent, accountable, fair, and reliable financial services. The urgency of layered legal protection for digital bank customers is increasingly pressing given the increasing number of cases of lost funds due to cyberattacks, phishing, or system authentication weaknesses. Most customers are trapped in burdensome proof against financial institutions that control transaction data. The inability of a single regulation such as the Consumer Protection Act (UUPK) to handle the complexity of digital technology demands the integration of specific sectoral norms. Therefore, the Financial Services Authority (OJK) plays a crucial role in ensuring bank accountability through transaction trail audits and absolute compensation mechanisms in the event of proven internal negligence.

This approach not only encourages responsible banking innovation by shifting the presumption of liability to the bank, but also includes several fundamental rights: (a) rights on security and safety Banks are required to guarantee the confidentiality of customers' personal data (know your customer principle) and the security of customer funds and transactions from cybercrime practices or other misuse, (b) rights for information correct, clear and honest, banks are required to provide information transparent and easy-to-understand information regarding the products offered, including risks, hidden costs, and dispute resolution mechanisms before customers sign the contract, (c) The right to hear customer complaints and obtain fair and fast dispute resolution, either through internal bank complaint handling or mediation facilitated by the OJK. This layered protection is not only a moral obligation of digital banks but also a legal imperative in Articles 4 and 7 Law No. 8 of 2008 1999 on protection consumers who explicitly require businessmen provide information correct clear and honest about condition guarantee and provide goods/services according to the agreement The agreed upon guarantee of safety against cyber threats is the basis for the bank's presumption of liability for loss of funds due to phishing or system failure, with the bank required to demonstrate the implementation of cyber security in accordance with the POJK. No. 6/POJK.07/2022.[13]

The implementation of this imperative strengthens the argument for digital banks' legal accountability to consumers for non-compliance with consumer rights, which can be classified as an unlawful act. Taken together, these regulations this states that the disappearance owned funds customers in the account bank becomes responsible the bank, which is realized with the gift compensation.[14]Where in this obligation, part of the repressive legal protection mandates the bank to pay attention to the principle of customer protection, thus creating a clear legal umbrella for customers to demand the return of funds.[15]In Article 10 POJK No. 22 of 2023 requires compensation for losses suffered by customers caused by external hackers in digital banks. However, POJK does not explicitly formulate responsibilities, indicating a crucial legal gap in the scope of bank liability, which is then examined through the doctrine of legal responsibility, civil consequences, bank defenses related to force majeure and customer negligence. In determining the legal consequences of customer funds in



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digital banks, identifying the principle of bank responsibility or liability is fundamental. Positive law in Indonesia, including the Banking Law, P2SK, UUPK, and POJK, which lays the foundation for banks having responsibility for the security of entrusted funds, so that the principle is based on a relationship of trust for customer funds to be managed safely by the bank.

## CONCLUSION

1. Dynamic developments in the banking sector provide many benefits but also challenges that must be faced, including consumer protection, this is because innovation also brings risks to banks and customers so it is very important to provide protection to customers to build the principle of trust in the banking world, risks to technology and cyber security which are major threats that directly have an impact on stability and operations in the banking sector, operational risks that depend on external parties and data management, regulatory and supervisory challenges there are indications of legal vacuum as well as adaptation of OJK regulations and supervision of complex and continuously developing digital services, the level of understanding of public literacy towards digital banking.
2. The recent surge in digitalization in the banking sector has brought many conveniences to customers, but there are also concerns that are detrimental to debtors. Problems with digitalization in the banking sector include negligence on the part of digital banks and the presence of external hackers. The legal consequences for lost customer funds are outlined in Article 10 of POJK Number 22 of 2023. Negligence on the part of digital banks, including embezzlement of customer funds, require banks to compensate customers for losses incurred if the losses are caused by external hackers. This POJK regulation is not explicitly regulated, thus revealing a crucial gap in norms in determining the scope of bank responsibility. Preventive efforts are implemented through comprehensive mechanisms, including strengthening information technology risk management regulations and transparent system audits to prevent data leaks or electronic system failures.

**Suggestion**

1. Challenges of the Banking Industry In facing the dynamic development of the Digitalization Technology Industry by providing legal protection to customers in digital banking services, providing education to customers, data encryption, creating new, more specific and complex regulations on information technology risk management in the banking sector
2. The government needs to formulate more specific regulations regarding the automatic compensation mechanism in cyber cases to overcome the burden of proof that has been burdening customers. On the other hand, customers are required to maintain the confidentiality of personal data and immediately report any transaction anomalies so that the risk of loss for customers is minimized.

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