



DIGITAL BANKING CONSUMER PROTECTION: DEVELOPMENTS & CHALLENGES

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Abstract

Technology and digitalization are growing and affecting various economic and industrial fields, one of which is banking industry. The presence of technology and the phenomenon of digitalization has directed this industry to a digital transformation process through digital banking. Digital banking was developed to serve customers faster, easier, and in accordance with customer experience, it can be done completely independently by customers while still paying attention to security aspects through optimizing digital technology systems. The presence of lifestyle integration, automation in banking services is an important aspect that needs attention. Security and customer trust are important for banks, so customers trust banks as a one-stop service for their financial needs. However, the problem faced in the digital banking era is how far digital banking can be done by improving the quality of service to customers while paying attention and without compromising transaction security. In addition, there are cyber security issues related to consumer data protection, which until now do not have special regulations to provide legal certainty. The urgency of consumer protection for digital banking services will be assessed using legal research methods with a doctrinal approach contained in primary and secondary legal materials. The purpose of this study is to examine and analyze the developments and legal challenges of digital banking consumer protection in Indonesia.

Kata kunci:

Perlindungan Hukum,
Konsumen, Digital
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Abstrak

Teknologi dan digitalisasi semakin berkembang dan mempengaruhi berbagai macam bidang ekonomi dan industri, salah satunya adalah industri perbankan. Kehadiran teknologi dan fenomena digitalisasi tersebut mengarahkan industri ini pada proses transformasi digital melalui digital banking. Digital banking dikembangkan untuk melayani nasabah dengan lebih cepat, mudah, dan sesuai dengan pengalaman nasabah, serta dapat dilakukan sepenuhnya secara mandiri oleh nasabah dengan tetap memperhatikan aspek keamanan melalui pengoptimalan sistem teknologi digital. Kehadiran integrasi gaya hidup, otomatisasi dalam banking services merupakan aspek penting yang perlu mendapat perhatian. Keamanan dan kepercayaan nasabah merupakan hal yang penting bagi bank, sehingga nasabah mempercayai bank sebagai one-stop service untuk kebutuhan finansialnya. Namun permasalahan yang dihadapi di era digital banking yakni sejauh mana digital banking dapat dilakukan dengan meningkatkan kualitas layanan kepada nasabah dengan tetap memperhatikan dan tanpa mengorbankan keamanan transaksi. Selain itu, terdapat isu keamanan siber terkait perlindungan data konsumen yang hingga saat ini belum memiliki regulasi khusus untuk memberikan kepastian hukum. Urgensi perlindungan konsumen terhadap layanan perbankan digital akan dikaji dengan menggunakan metode penelitian hukum dengan pendekatan doktrinal yang terdapat pada bahan hukum primer dan sekunder. Tujuan dari penelitian ini adalah untuk mengkaji dan menganalisis perkembangan dan tantangan hukum perlindungan konsumen digital banking di Indonesia.

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Background of Study

The presence of digital banking technology, both digital banking services and the existence of digital banks, is an opportunity as well as a challenge in the digital economy ecosystem. Moreover, with the momentum of the current pandemic situation, which reacts to changes in customer habits in transactions, and experience a shift in transaction patterns from conventional to digital basis. Due to

this condition, Indonesia's digital economy is projected to continue to grow (Prastyaningtyas, 2019). It happens because of the potential factors of Indonesia in developing a digital-based financial industry (Kholis, 2018). One of the factors is demographic factor, which is known that Indonesia has a large population. Based on data published by *Administrasi Kependudukan* (Indonesian Population Administration) as of June 2021, the total population of Indonesia are 272,229,372 people (Dukcapil Kemendagri, 2021), and most of the population or the majority of the Indonesian people are internet users. Internet users in Indonesia reached 212.35 million as of March 2021 (Dukcapil Kemendagri, 2021). It is also known that Indonesian people's gadget ownerships are quite high. This can be seen through the following data.

Table 1. Percentage of Device Ownership in Indonesia

No.	Type of Device	Ownership Percentage
1.	Mobile Phone (All types)	98,3%
2.	Smartphone	98,2%
3.	Mobile Phone (Non-Smartphon)	16,0%
4.	Laptop or Computer	74,7%
5.	Tablet	18,5%

Source: Indonesian Financial Fervices Authority (2021)

Based on these opportunities, digital transformation in the banking sector becomes a 'wetland'. This can be seen from the proliferation of banking transactions carried out through mobile applications and other digital banking services known as "delivery channels" as stated in Article 3 and the Elucidation of Article 3 of Indonesian Financial Services Authority Regulation Number 12/POJK.03/2018 Regarding Implementation of Digital Banking Services by Commercial Banks (In Indonesia: *POJK No.12/POJK.03/2018*). Some of them mentioned in the explanation are "Automated Teller Machine (ATM), Cash Deposit Machine (CDM), phone banking, Short Message Services (SMS) banking, Electronic Data Capture (EDC), Point of Sales (POS), internet banking, and mobile banking". The presence of these various forms of delivery channels as the existence of digital banking has an impact on the behavior of people who are now rarely go to bank offices.

POJK No.12/POJK.03/2018 defines digital banking services as: "electronic banking services developed by optimizing the use of customer data in order to serve customers quickly, easily, and according to customer experience, and can be done online. fully independent by the customer, taking into account the security aspect". Based on the definition above, it reveals that the main thing considered here is the service to customers or consumers. The banking industry keeps making innovation

and adapts to continue providing the best service for community. One of the efforts made is to carry out digital transformation to improve service quality (Amrillah, 2020). The existence of digital transformation has also made many banks to establish themselves as digital banks. Article 1 number (24) of *POJK No.12/POJK.03/2021* states: "Digital Bank is an Indonesian Legal Entity Bank that provides and carries out business activities mainly through electronic channels without a physical office other than the Head Office or using limited physical office."

Through digital transformation, it is expected that banks can reach more customers. Digital transformation in the banking sector is driven by the increasing level of digital opportunity and digital habits. Indonesia is a country that is considered to have great potential, due to the high growth of e-commerce. Basically, this digital habit indicator is also quite high, of course this has an influence in the banking world, due to technological developments. One of them is the relationship between the bank and its customers which will be truly individualized customer centered banking, through the process of adopting this technology. As a result, connectivity makes it easier for customers to access banking services through their gadgets, which no longer focuses on financial products but on contextual financial services that adapt to the lifestyle and needs of today's customers. Massive system automation makes customers trust the bank. With the existence of digital banking services, a digital bank was born where the bank has a super-app, which allows banking services and other financial services to be integrated into one platform.

The presence of lifestyle integration, automation in banking services are important aspects that need attention. Security and consumer trust are important for banks, so customers trust the bank as a one-stop service for their needs. However, the problem faced in this digital banking era is the issue of how far digital banking can be implemented by improving services to customers but without compromising the security of customer transactions. In addition, there is the issue of cyber security related to the protection of consumer data, which until now does not have specific regulations to provide legal certainty. The publication of the results of previous research has been available in 2019. The research was carried out by Herdian Ayu Andreana Beru Tarigan and Darminto Hartono Paulus, which aims to provide an overview of the implementation of digital banking services and customer protection against the risks of digital banking services (Tarigan & Paulus, 2019). The publication of other research results was in 2021 by Muh Akbar Fhad Syahril, which has the aim of knowing and analyzing how the legal responsibilities and protections for customers in ATM transactions and legal remedies that can be taken by customers using ATM cards in obtaining their rights in the event of disadvantages of using an ATM (Syahril, 2021). Based on the description of the problem and the description of several previous research objectives, the focus of this research is to examine the development of digital banking and its challenges in consumer protection which are analyzed based on the theory of legal protection.

Research Method

Contemporary legal problems are growing day by day. Contemporary legal problems arise as a form of reaction or as a result of the development of information technology (IT) (Benuf & Azhar, 2020). Therefore, scientific activity is needed as a process in solving existing problems. What is meant by the scientific activity here is research as part of the activity of developing science for the sake of educating mankind. Existing knowledge is essentially built, studied and developed to benefit mankind in order to create a dynamic and harmonious life order. It works the same with legal science, which must also be studied and utilized through a research process in order to contribute to science and human values (Arliman, 2018). Legal research is a process or activity to identify and research about the law, regulations, and court decisions—which apply to the issue under study (Thomsonreuter, n.d). In general, the goal of legal research is to find support for a particular legal issue or decision. In conducting this research, there is an important aspect that is used, namely the method. The legal research method is a technique in which a person obtains legally relevant information, analyzes, interprets and applies it to solve the problem and present the findings. The legal research method used in this research is normative juridical research, with a doctrinal approach (Benuf & Azhar, 2020). This doctrinal research uses secondary data obtained indirectly, which is divided into primary and secondary legal materials. Primary legal materials are legal materials that are authoritative, meaning that they have the authority, which consists of regulations, official records and judges' decisions. While secondary materials is all forms of publications. These publications include books, researches, theses, legal dictionaries, and opinions on court decisions and the writings of relevant or related scholars in this research.

Results and Discussion

1. The Development of Digital Banking in Indonesia

Banking is generally a business activity which includes buying and selling currency, securities, and other tradable instruments. Meanwhile, the juridical definition of banking is contained in Article 1 of Indonesian Law Number 10 of 1998 concerning Amendments to Law Number 7 of 1992 concerning Banking (Indonesian Banking Law), which states “Banking is everything related to banks, including institutions, business activities, as well as methods and processes in carrying out their business activities”. Meanwhile, the law that regulates banking is referred to banking law, it is positive legal provisions that apply to today, and regulate banking as an institution, and aspects of its activities, the behavior of its officials, rights,

obligations, duties and responsibilities of the parties involved in the banking business. Not only those, the provisions also regulate what banks are allowed and not allowed to do, the existence of banking, and other matters related to the banking world.

Banks are institutions trusted by the public that are used to store cash and authorize banks to monitor their funds. Banks are operationally separated into 2 (two), namely conventional banks and Islamic banks. A bank carries out its activities conventionally and based on established procedures or provisions. As is well known, banking is one of the sectors that can help to improve Indonesian economy. The growth of banking in Indonesia increases along with the source of income obtained by the bank itself. Sources of bank income can be in the form of margin from bank interest, fee based income, and others (Susilawaty & Nicola, 2020).

The highly developed consumer needs encourage many business actors, such as banking institutions, to participate in developing technology and adapting to meet market needs. The development of this technology has a very positive impact on these business actors, one of which is reducing operational costs, increasing market exposure, increasing customer loyalty and expanding marketing reach. Current technological developments are able to bring innovation to the banking world and have a significant effect on the efficiency and effectiveness of banking performance. Banks can easily raise public funds by providing services in the form of raising funds or channeling them back to the community, this is in line with the definition of banks in general, banks are defined as business entities engaged in services, especially those related to finance (Disemadi & Prananingtyas, 2019).

Rapid technological developments have directed the banking industry to further improve services through digital banking (Gaib, 2020). This is intended so that banks can maximize their services to customers and improve the quality of their operations. Thus, it is expected that banks can develop digital banking well through the existence of digital banks. This digital bank concept is designed so that customers can carry out transactions independently and take actions related to banking, such as opening accounts online, obtaining online/digital information, making transactions (money transfers), closing accounts and all kinds of other needs from customers (Vebiana, 2018).

Entering this digital era, the banking industry is increasingly developing digital banking technology. One of the reasons for this development is to attract new potential customers, especially digital savvy (Mutiasari, 2020). Digital savvy includes people and/or generations who understand and can adapt in the digital field, which in this case can be millennials, generation z and everyone who is able to adapt to digitalization. More than 70% (seventy percent) of Indonesian population are in the productive age range (15 to 64 years), meaning that the demographics are dominated by digital savvy, which are none other than Generation Z, Millennial Generation, and Generation X which are the most prospective consumer segments.

Thus, this group becomes a new target audience and market share for the banking industry.

The digitalization demands on the banking industry are reinforced by various factors such as digital opportunities, digital behavior and digital transactions. This situation arises because Indonesia's economy has great potential to absorb the flow of digitalization. The development of technology in the banking sector can be seen from the production of various forms of services or delivery channels. The following are digital banking services produced and used by several banks in Indonesia.

Table 2. Several Banks and the Digital Banking Service Products in Indonesia

No.	Name of Bank	Digital Banking Service Products
1.	<i>BNI</i>	ATM
		Message Banking
		Mobile Banking
		Internet Banking
		Agen46
		TapCash
		<i>BNI</i> Online Debit
		Text Notification
		IPay
		Smartpay
		EDC
2.	<i>BRI</i>	<i>BRI</i> Internet Banking
		ATM
		Mini ATM
		BRIZZI
		<i>BRI</i> Message Banking
		E-Buzz <i>BRI</i>
		Mocash <i>BRI</i>
		<i>BRI</i> Mobile
		Kisok <i>BRI</i>
3.	<i>CIMB Niaga</i>	ATM Gallery
		CIMB Clicks
		Digital Lounge
		Octo Mobile
		Phone Banking
		Preferred Service Assistant
		Mobile Account

Source: Personal Data Processing (2022)

There are many digital banking service products that are managed and introduced by banks according to the data above. This shows the existence of digitalization in Indonesia. In addition, it is important to note that the development of digital banking is growing in terms of the number of users. User growth can be seen from the composition of digital banking service users for several delivery channels at one of Indonesian banks, namely *Bank Negara Indonesia (BNI)*. The following is a table that describes this growth.

Table 3. Composition of Digital Banking Service Users at BNI 2018-2020

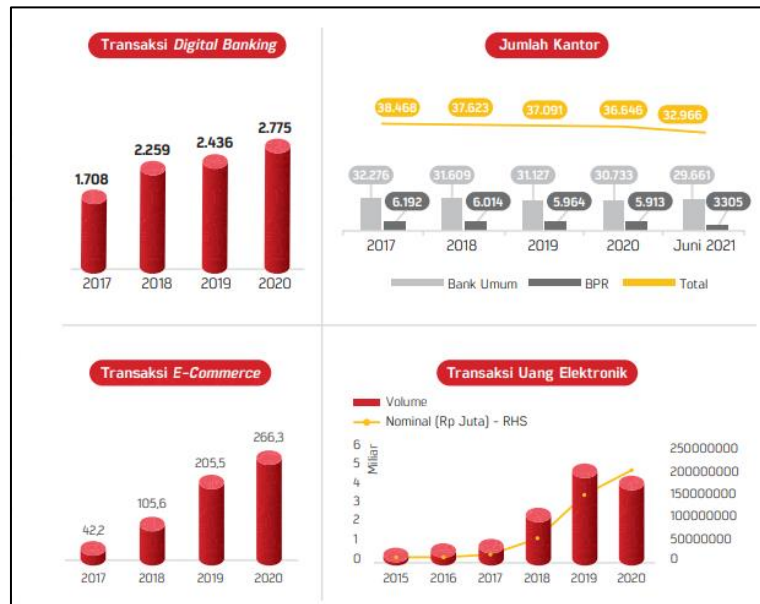
<i>Delivery Channel</i>	2020	2019	2018
<i>Internet Banking</i>	2.060.221	1.996.653	1.893.721
<i>Mobile Banking</i>	7.786.849	4.877.738	2.892.518
<i>SMS Banking</i>	11.837.176	10.865.581	9.819.514

Source: BNI Annual Report (2020)

The data presented in Table 3 shows the increase number of Digital Banking services users at *BNI* from year to year. This shows that there is progressivity on the user side in the digital banking service ecosystem. In addition to this data, based on McKinsey's new Personal Financial Services 2021 survey, around 78% (seventy eight percent) of Indonesian customers are now actively using digital banking (at least once a month via online or cellular channels)—up from 57% (fifty seven percent)) in 2017. Indonesians are ready to reduce cash outlays as they increasingly rely on digital payment instruments. In 2021, 55% (fifty five percent) of the survey respondents said that they used cash less than 30% (thirty percent) of their weekly expenses, and 80% (eighty percent) of Indonesian survey respondents reported that they expect to maintain or increase the use of mobile banking and online banking outside of pandemic conditions (McKinsey & Company, 2021). Additionally, mobile banking users in Indonesia increased by 37% (thirty seven percent) during the pandemic from 57.9 million users in January 2020 to 79.4 million users in January 2021 (Telkomsel Interprise, 2021).

The following graph was published by Indonesian Financial Services Authority (In Indonesia: *OJK*) in "Digital Bank Transformation Print in Indonesia 2021".

Picture 1. The Development of Digital Transactions in Indonesia,



Source: OJK
Through graph, it is apparent that banking









(2021) this digital

transactions, e-commerce transactions and electronic money transactions have increased significantly and this is in line with the decrease in the number of bank office buildings in Indonesia which can be caused by people using digital transactions more than coming physically to the bank.

In addition to the data from these surveys and graphs, the development of digital banking can also be proven from different perspective, that is the value of digital banking transactions. Perry Warjiyo as Governor of *Bank Indonesia (BI)*, stated that the transaction value of digital banking increased 46.72% yoy (forty-six point seventy two percent year over year) to Rp 28,685.48 trillion until September 2021. This achievement is projected to grow 43.04% yoy (forty-three point zero four percent year over year) reaching IDR 39,130 trillion for the whole of 2021 (Walfajri, 2021).

As well as the development of digital banking services, in the same industry and in the digital ecosystem, the concept of digital banking has also emerged. Basically, digital banking services still take a position here, however it has basic difference in the concept of digital banking that is not only as a service but as a digital bank which only has a head office and all services are digital-based (full digital services). Digital Banks here are like banks in general, but this type of bank provides and runs its business through digital channels/delivery channels without a physical office other than the head office, or using a physical office but with a limited number. Digital banks themselves can run their business in two ways, through new establishments and by transforming from existing banks into digital banks. There are several digital banks that have operated in Indonesia, they are:

Table 4. Digital Banks in Indonesia

No.	Name of Digital Bank	Digital Bank App	
1.	<i>Bank BTPN</i>	Jenius	
2.	<i>Bank Jago</i>	Jago	
3.	<i>Bank Seabank Indonesia</i>	SeaBank	
4.	<i>Bank UOB</i>	TMRW	
5.	<i>Bank BCA</i>	Blu	
6.	<i>Bank Neo Commerce</i>	Neobank	
7.	<i>Bank DBS Indonesia</i>	Digibank	
8.	<i>Bank Bukopin</i>	Wokee+	

Source: (Rizki, 2021)

In addition to the presence of the digital bank, the development of digital banks can be seen in the following table.

Table 5. Survey in 30 Countries on Adult Digital Bank Account Ownership (Percentage in 2021 and Predicted Percentage in 2026)

No.	Countries	2021	2026
1	Brazil	32.08%	50.39%
2	Indonesia	24.90%	39.02%
3	Ireland	24.77%	35.47%
4	Vietnam	23.34%	41.64%
5	Poland	22.03%	33.17%
6	Switzerland	21.62%	33.74%
7	Malaysia	20.36%	37.86%
8	Japan	20.14%	24.39%
9	German	19.33%	27.58%
10	Hungary	18.82%	33.89%
11	Austria	18.52%	29.13%
12	Philippines	18.34%	36.18%
13	Singapore	17.95%	30.11%
14	Hong Kong	17.70%	32.00%
15	UEA (Uni Emirat Arab)	17.17%	30.55%
	Average	16.73%	27.93%
16.	Italy	16.23%	26.63%
17.	Great Britain	14.99%	21.24%
18.	Noray	14.65%	24.47%

19.	Portugal	14.31%	27.87%
20.	Spain	14.19%	22.96%
21.	Australia	13.21%	20.12%
22.	French	13.16%	17.87%
23.	New Zealand	11.99%	20.39%
24.	Netherlands	11.91%	24.40%
25.	Sweden	11.56%	20.97%
26.	Denmark	11.40%	20.33%
27.	Mexico	11.24%	31.63%
28.	Finland	10.60%	16.65%
29.	Canada	9.25%	15.92%
30.	United States	6.00%	11.30%

Source: (Laycock, 2021)

Through the data presented in the table above, it reveals that Indonesia is in the second position as the country with the most digital bank account owners. Based on the survey, in 2021, 24,90% (twenty four point ninety percent) of Indonesian people are recorded to have accounts in digital banks. This number is projected to increase to 39.02% (thirty nine point zero two percent).

From the data shown previously, it can be concluded that both digital banking and digital banking services have developed and will play an important role in creating a digital ecosystem in the future. However, such a situation will certainly create various challenges, especially in the legal field.

2. Legal Challenges for Digital Banking Consumer Protection in Indonesia

The development and creation of a digital ecosystem certainly raises various challenges. In the field of Digital Banking itself, both in terms of digital banking services and digital banks, there are several challenges that arise as a reaction to the development and the existence of these technologies. The following are some of the challenges from a legal perspective.

Innovative and Safe Business

The first legal challenge of digital banking is how far the digital banking system can be implemented while maintaining 2 (two) important aspects at the same time, improving customer service through innovative business models and still providing security for customer transactions, no loss to customers due to the implementation of the digital banking system. In this case, the existing of *Peraturan Otoritas Jasa Keuangan/POJK* (Indonesian Financial Services Authority Regulation) must be strengthened by more specific laws and regulations on digital banking consumer protection (Christiawan, n.d). Today, there is no further regulation regarding this matter. The regulations provided by Indonesia in the field of digital

banking are very limited. There are 2 (two) regulations from OJK that regulate the existence of digital banking and digital banking services, namely POJK No. 12/POJK.03/2018 which regulates digital banking services carried out by banks before the emergence of digital banks that have full digital services and POJK No.12/POJK.03/2021 which provides a legal basis for the existence of digital banks, but does not regulate in detail its implementation and further regulation.

Prudential and Sustainable Digital Banking Business

All banks in conducting their business must always maintain the prudential principle or also known as the precautionary principle, this is as regulated in Article 2 of Indonesian Banking Law which reads: "*Perbankan Indonesia dalam melakukan usahanya berasaskan demokrasi ekonomi dengan menggunakan prinsip kehati-hatian*" (Translate: Indonesian banks in carrying out their business are based on economic democracy by using the precautionary principle). The prudential principle means that the bank in managing and carrying out its business activities must implement it carefully for the purpose of maintaining the health of the bank (Dendhana, 2013). This is a mandatory, considering that banks are public trust institutions that function to maintain a country's monetary stability through healthy financial transactions. This prudential principle also applies to the Digital Bank system which is regulated in Article 24 letter (b) of POJK No.12/POJK.03/2021 which essentially stipulates that a bank that runs a business as a digital bank must have the ability to manage digital business that applies prudent and sustainable principles. However, even though it has been regulated, the provisions stated in the POJK are still incomplete, so in order to apply 'binding' and imperatives, it is necessary to provide parameters, criteria and measures of 'prudent' and how to apply the prudential principles in digital systems of banking (Christiawan, n.d).

Risk Management Aspect

Risk management by juridical definition, can be seen in Article 1 point (3) in POJK No. 18/POJK.03/2016 (Indonesian Financial Services Authority Regulation Number 18) Regarding the Implementation of Risk Management for Commercial Banks which reads: "*Manajemen Risiko adalah serangkaian metodologi dan prosedur yang digunakan untuk mengidentifikasi, mengukur, memantau, dan mengendalikan Risiko yang timbul dari seluruh kegiatan usaha Bank*" (Translate: Risk Management is a series of methodologies and procedures used to identify, measure, monitor, and control risks arising from all Bank business activities). Its implementation is mandatory for all banks in Indonesia, in order to minimize risks that can cause losses for banks. According to Adiwarmarman Karim in his book "*Bank Islam: Analisis Fiqh dan Keuangan*", the objectives of implementing risk management are divided into several things, they are: "(1) Providing information about risks to regulators; (2) Ensuring the bank not to suffer an unacceptable loss; (3) Minimizing losses from various uncontrolled risks; (4) Measuring risk exposure and concentration; (5) Allocating capital and limiting risk." (Fasa, 2016).

The obligation of the implementation also works to digital banks. This can be seen through Article 24 letter (c) of *POJK No.12/POJK.03/2021* (Indonesian Financial Services Authority Regulation Number 12) which requires adequate risk management for a bank that runs a business as a digital bank. Risk management here is the process of assessing and proper transaction related to customer transactions (Christiawan, n.d).

The focus of risk management as referred to Article 24 letter (c) of *POJK No.12/POJK.03/2021* is the standard for assessing and qualifying digital transactions, which the regulations have not been issued, either in the form of laws and regulations, or guidelines. It is reported from *Hukum Online*, that the purpose of adequate risk management is to make banking transactions run without causing any harm to both customers and the bank itself, so even though it is held digitally, the banking intermediation function can still be maintained.

Governance and IT Capability Requirements for Digital Bank Directors

Digital banks in running their business must meet one of the requirements related to governance and competency requirements in IT field for digital bank directors. This is stated in Article 24 letter (d) of *POJK No.12/POJK.03/2021*. This obligation is a challenge because *OJK* itself as the institution that oversees the financial industry in Indonesia and which is tasked with conducting fit and proper tests for directors of the banking industry, has not issued special regulations regarding the application and graduation standards for fit and proper tests for candidates for managing directors of digital banks. In this case, obviously the graduation standards between conventional banks and digital banks cannot be equated, considering that both conventional banks and digital banks have different governance. For conventional banks themselves already have standards and fit and proper tests regulated by *POJK No. 27 /POJK.03/2016* (Indonesian Financial Services Authority Regulation Number 27). The absence of regulations and standards for digital banks can certainly lead to questions about the credibility and ability of directors in running a digital bank, as well as increasing the risk of chaos and customer distrust to the bank's ability to run its business.

Consumer Protection of Personal Data and Risk of Data Leakage

Trust is the basis and the main foundation in the banking industry. In order to safeguard and maintain it, apart from the healthy banking and the banking intermediation function, another important aspect is the legal protection of personal data. Customer personal data is important because online users will not conduct digital transactions if they feel that the security of their personal data is threatened. One of the protections on personal data relates to how customer data will be discussed, including sensitive data from customers or exchanged with irresponsible parties which will cause financial losses to Bank customers. Article 24 letter (e) of *POJK No.12/POJK.03/2021* states that the operation of digital banks is required to

protect the security of customer data. Indonesia has not provide regulations or laws relating to the protection of personal data, so it can be said that there is a recht vacuum. However, it is known that Indonesia is trying to process the preparation of Rancangan *Undang-Undang Perlindungan Data Pribadi/RUU PDP* (Indonesian Personal Data Protection Bill) (Veratika, 2021). This lack of regulation poses a threat to privacy and personal data management, such as data leakage. Certainly, this will lead to fatal and destructive things if the regulations do not yet exist.

Throughout 2020 in Indonesia, a series of cases related to data leakage and illegal data access have occurred, the parties experiencing it are quite diverse from e-commerce platform companies to government institutions. The following are cases of data leakage that occurred in Indonesia in 2020.

Table 6. Cases of Data Leakage in Indonesia

No.	Institution/Platform	Type of Institution/Platform	Type of Cases
1.	Tokopedia	Online Marketplace	Leakage of user data and merchant data.
2.	<i>BPJS Kesehatan</i>	Government Institution	Population data leak
3.	Bhinneka.com	Online Marketplace	Customer data leak
4.	Bawaslu	Institusi Pemerintahan	Population data leak
5.	KreditPlus	Financing Platform	Customer data leak
6.	Cermati	Fintech Platform	User data leak
7.	Shopback	Online Marketplace	Illegal access to user data
8.	RedDoorz	Online Hotel Booking Platform	User data leak

Source: OJK (2021)

The data leak case can apply in any industry, including digital banking. Thus, the government and other parties must be aware of this issue. In addition, regulations on the protection of personal data must immediately exist in Indonesia. Reported from the Jakarta Post, Pratama Persadha, head of *Pusat Penelitian Keamanan Sistem Komunikasi dan Informasi/CISSReC* (Indonesian Research Center for Communication and Information System Security), said that digital banks must increase vigilance and implement adequate mitigation systems to protect customers from online crime. The ratification of Indonesian Personal Data Protection Bill, he continued, remains important to ensure the protection of consumer data because it will enable consumers to hold financial institutions accountable as organizers of the digital transaction system (Karyza, 2021).

Digital Bank's Contributive Efforts to the Development of a Digital Financial Ecosystem

As explained in Article 24 letter (f) of *POJK No.12/POJK.03/2021* that digital banks must be able to contribute to the development of a digital financial ecosystem

and/or financial inclusion. Digital implementation with other supporting ecosystems, such as the use of e-money and the integration of the use of digital banks for trade practices/real sector and e-commerce, is to realize a cashless and cardless society (Christiawa, n.d). Like the previous issue, the regulations still do not have projections and instructions to implement this obligation. Based on this explanation, the challenges in implementing digital banking cover 6 aspects, they are: an innovative and secure business; a prudent and sustainable digital banking business; adequate risk management aspects; governance and IT capability requirements for digital bank directors; consumer protection of personal data and the risk of data leakage; and the contribution of digital banks to the development of the digital financial ecosystem. Each aspect leads to the same thing, it is the absence of particular regulations governing each of these aspects. Basically, these aspects must be fulfilled in order to maintain consumer rights and legal protection for consumers. If there are no regulations to implement, the level of transaction risk will be high, so it will lead to customer distrust in the banking industry in general and the digital banking industry in particular.

Conclusion

Digital banking and digital banking services have developed and will play an important role in creating a digital ecosystem in the future. This can be seen from the significant development of digital banking in Indonesia and the opportunities that exist. However, such a situation will create various challenges, especially in the legal field. Basically, digital banking in Indonesia has regulations but only limited to two things, digital banking services and regulation on the legal status of the existence of digital banks in Indonesia. For digital banking services, it is regulated in *POJK No. 12/POJK.03/2018*. Meanwhile, the legal status of the existence of digital banks in Indonesia is regulated in *POJK No.12/POJK.03/2021*. The challenges in implementing digital banking include 6 (six) aspects, they are an innovative and secure business; a prudent and sustainable digital banking business; adequate risk management aspects; governance and IT capability requirements for digital bank directors; consumer protection of personal data and the risk of data leakage; and the contribution of digital banks to the development of the digital financial ecosystem. Each aspect leads to the same thing, it is the absence of particular regulations governing each of these aspects. Basically, these aspects must be fulfilled in order to maintain consumer rights and legal protection for consumers. If there are no regulations to implement, the level of transaction risk will be high, so it will lead to customer distrust in the banking industry in general and the digital banking industry in particular.

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