EVALUATING QUALITY OF CHATBOTS AND INTELLIGENT CONVERSATIONAL AGENTS OF BCA (VIRA) LINE

Luthfi Nurul Hidayah Mudofi\textsuperscript{1}, Wardah Yuspin\textsuperscript{2}

Muhammadiyah University of Surakarta, Indonesia
\textsuperscript{1}luthfinurul26@gmail.com \textsuperscript{2}wy204@ums.ac.id

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ABSTRACT

\textbf{Background:} The use of technology in the financial sector greatly supports its productivity. Including the use of Artificial Intelligence or Artificial Intelligence that makes activities in the financial sector faster and more efficient. PT. Bank Central Asia also implemented Artificial Intelligence technology by launching a chatbot feature called VIRA. Although this vira provides various conveniences this feature has a disadvantage of this feature is that the account can be accessed without using a pin, but only with a card number and OTP code.

\textbf{Aim:} This research aims to look at the legal protection of the use of VIRA chatbots in BCA customers' banking activities.

\textbf{Method:} This research is included in the type of empirical juridical legal research with library research and vira application observation.

\textbf{Findings:} The results showed that BCA customers can only access personal data using VIRA. The main facilities of chatbot VIRA are more general information services and promotions for customers. In addition, the account is not automatically logged out, so when the phone is lost others may be able to access the account of the mobile phone owner through VIRA.

KEYWORDS artificial intelligence, chatbot, VIRA

INTRODUCTION

Artificial intelligence (hereinafter referred to as AI) is a part of computer science that makes computer machines do the same work as humans do (Kusumadewi, 2003). Such as the ability to answer customer diagnoses and questions, planning and scheduling, control, handwriting, voice, and face recognition. When compared to human performance, this AI technology can help with tireless data processing (Suheriadi, 2018).

The main purpose of making Artificial Intelligence is to make the machine smarter, for example, computers, the machine was made which initially could only be used for typing so developed its function so that it can be used in various things such as playing games, multimedia, editing, and others (Wijaya, 2018). The utilization of AI is also done for entrepreneurial purposes, namely making machines more useful and can improve processing accuracy.

Artificial intelligence or AI increases the speed, precision, and effectiveness of human efforts. In the industrial sector, the production effectiveness of the use of AI will increase rapidly. It is estimated that there will be at least a 40% increase in production for companies that will adopt AI in 2023. In financial institutions, AI techniques can be used to identify which transactions are likely to be fraudulent, adopt quick and accurate credit scores, and facilitate sharp data management tasks manually (SAS Insights, 2021).
Artificial intelligence will not only have an effect on the revolution but also have the effect of disruption in almost every industry (Anwar, 2019). This is certainly in addition to having an impact on products and services, but will also affect the daily lives of people around the world.

On the one hand, artificial intelligence will bring social-economic opportunities and challenges that need to be observed early on (Kusumawardani, 2019). AI at large also offers the prospect of increased productivity and accelerated innovation in the business field (Sihombing & Shaputra, 2020).

In the process of implementing AI usefully in Indonesia, the Agency for the Assessment and Application of Technology (BPPT) has published the National Strategy of Indonesian Artificial Intelligence 2020-2046. However, the order is still in the direction stage of policy in general and does not regulate in detail. In fact, there are many companies that develop and implement AI technology in their activities in Indonesia. The business sector that implements AI is generally strategic sectors such as Health, E-Commerce, and Banking (BRIN, 2020).

The application of AI also has great benefits for the banking industry in Indonesia. Especially in the digital era like today where banks are required to provide fast and practical services. There is a lot of potential use of AI to support the advancement of the banking industry in Indonesia. According to McKinsey & Company, there are several advantages to using AI in banking services. First, increasing revenue through increased service personalization to customers and employees. Second, lower spending through the efficiency of automation technology, reduced error rates, and better utilization of resources. Such as the use of AI for credit analysis, customer data security to customer service.

There are many ways that financial institutions can be used to be winners in this digital era, one of the best and relatively cheap ways to do this is to use a conversational user interface called a chatbot. With the growth in popularity of today's messaging platforms and the declining cost of storage in the cloud, as well as their short implementation time, the presence of chatbots is considered a lifesaver. By introducing chatbots as digital agents to interact with customers, banks will be able to improve the customer experience, reduce human customer service costs, streamline operations, and serve more people, more quickly through a variety of different channels. Banks love chatbots because it allows them to provide their customers with personalized, as well as consistent, services. Customers feel comfortable interacting with digital assistants on a daily basis, and along with the development of technology these services are designed to make customers feel like they are talking to a banker.

PT Bank Central Asia Tbk. or BCA also launched a virtual assistant service to serve customers through a chat facility called VIRA. Accessible information includes information and promotions about BCA products and services. BCA Director Santoso said that Indonesia is one of the countries with an active community of social media users in the world. Innovation in the form of a virtual assistant becomes a necessity in itself.

The presence of VIRA on the Google Assistant platform is a new feature that aims to facilitate the public in conducting information searches and promotions about BCA. In the early stages, users can access the latest promo information and the location of the nearest BCA ATM on VIRA in Google Assistant. To access the Google Assistant, set the language on your device to Indonesian and update the Google Search app to the latest version. To be able to connect with VIRA, users only need to type or give a voice command that is "Ok Google, Talk to Bank BCA" then Google Assistant will automatically connect or direct users to communicate directly.
with VIRA. After that, when it is connected to VIRA, then users can chat or again give commands in the form of voice, can also choose from the menu that is already available, or by typing more specific keywords.

VIRA is a banking service based on chat applications (Virtual assistants) that can be accessed through several popular chat applications, namely: LINE, Facebook Messenger, Kaskus Chat, and now can be through Google Assistant. Currently, VIRA can help find out information and promotions about BCA and information related to banking transactions. Although VIRA provides many conveniences and advantages in banking transactions, it can still be a weakness in the form of accounts that can be accessed without using pins, but only with card numbers and using OTP codes. By looking at these weaknesses, in this study, the author conveyed the main formulation of the problem in this study, namely: "What is the legal protection of the use of VIRA Chatbot in LINE applications?"

METHOD
The approach method used in this research is an empirical juridical research method because this research to be studied is a law related to the utilization of VIRA chatbot artificial intelligence used by Bank Central Asia. In addition, this study also conducted data collection using observations. The second step by means of observations made on (VIRA is opened on the line) which is done in one month that is opened on the line application.

The data sources presented include secondary data, which is data obtained or collected by the author from written sources such as primary legal materials related to the issues that the author examines, namely:
1) Law No. 8 of 1999 on Consumer Protection;
2) Law No. 10 of 1998 on Banking
3) Bank Indonesia Regulations No. 7 and 6 of 2005 on Transparency of Bank Product Information and Use of Customer Personal Data.
4) Financial Services Sector Consumer Protection No. 14 of 2014 on Confidentiality and Security of Consumer Data or Personal Information

A secondary legal material that provides an explanation of primary legal materials, such as legal rules, legal principles, and legal basis for the implementation of financial sector activities using artificial intelligence. And the latter uses tertiary legal materials that provide clues and explanations about primary legal data and secondary legal data. The technique used for data collection is with literature studies because it is done by searching, studying, collecting data materials related to the Mechanism of Application of Artificial Intelligence Chatbot VIRA in Banking Activities of Central Asia Bank Customers.

RESULTS AND DISCUSSION
The term chatbot or can be called chatterbot is a robot chat service / virtual figure with AI intelligence that mimics human conversation through voice or text messages or even both. A chatbot is one of the artificial intelligence technology based on audio and text that is able to simulate how to behave and speak like a human as a conversation partner. The response provided by the chatbot depends on the input keyword that is initiated. Chatbots will reply to keywords with the most similar patterns from textual databases. The components of the chatbot consist of the main program and brain file. Bot program serves to access input from the user
then parsing and forward to the brain file so as to generate a response. Botprogran components consist of scanners and parsers. Vocabulary, personality, and knowledge are stored in brain files. The more knowledge that chatbots have, the larger the size of the brain file.

Chatbots began to be developed around the 1960s. Initially, a chatbot is a computer program that tries its purpose to deceive people who chat as if with humans when in fact with machines. Over time, chatbots continue to progress. Chatbots were developed to simulate real human conversations. This is to answer the human desire to be able to speak to a computer using the language used by humans.

The history of chatbots dates back to the development of the ELIZA chat application in 1966 and Parry in 1972. The development of ELIZA at that time was used to stimulate written conversation. One of the important studies in the field of artificial intelligence is natural language processing. Generally, the field of AI is still weak in empowering specialized software or programming languages that are specifically created with narrower functions.

The way it works is still purely based on pattern matching techniques without reasoning skills. The same technique was used by ELIZA in 1966. Over time, the development of chatbots is increased by combining a variety of functional features so that it is easier to use.

As an illustration, chatbots can be found on various platforms and the form can be a simple basic program to answer some questions or the most sophisticated in the form of a digital assistant that has a high level of personalization whose intelligence continues to increase as the information that the program gets. In its application, chatbots are more often used as a virtual companion or service of a website, application, or other sectors that can help a business to be closer to its customers. There are reasons for that such as getting rid of routine tasks and simultaneous processing of multiple requests from users. In addition, the incredible speed in processing user requests with chatbots helps gain customer loyalty.

In short, this chatbot is a virtual conversation where one party is a chat robot that aims to facilitate work and also as a means of entertainment. This chatbot feature has been used in various industries to convey information. In addition, chatbots can also perform tasks, such as whether bots, then help select and order grocery bots, help make flight reservations, help provide solutions for something (Life advice bot), and bots as friends to chat with such as the SimSimi application. Chatbots are one of the new tools designed to simplify the interaction between humans and personalized computers. The form is usually a service that is always ready to help user complaints or questions.

Chatbots are now growing, especially after the computer world can now do data mining better and the presence of machine learning. Microsoft, the company led by Nadella, is one of the companies that are quite serious about chatbot technology. Microsoft has just introduced a chatbot called Rinna. A chatbot that plays a 19-year-old woman who can be invited to chat through the Line application in Indonesian.

Not only that, the trend of using chatbots is increasing, including in the banking industry. There are several reasons why the banking industry should use this technology, namely to increase revenue, increase customer satisfaction and improve employee quality.

Major banks in Indonesia already have AI robots to help their customers' banking activities. With chatbot technology or messaging services that robots will answer automatically when they ask questions or complaints. One of the banks that has used chatbot technology is Bank Central Asia (BCA). BCA’s chatbot feature is named VIRA which stands for Virtual
Assistant Chat Banking). VIRA was launched to assist BCA customers in knowing information and promotions about BCA. VIRA can be accessed through several platforms such as Facebook Messenger, Kaskus Chat, LINE, and is now also accessible in the Google Assistant.

Customers who want to use vira chatbot facilities can register using the LINE application, by searching for the Official Account of Bank BCA. If the customer has not registered the customer can click the option listed in the menu about banking services, the banking service will provide provisions where the user must read, understand, and agree to the terms of Virtual Assistant Chat Banking or VIRA Bank Central Asia before registration and after that, the customer can register by entering the 16 digit number listed on the valid BCA passport card, still active, and not blocked and lastly choose the e-Banking Mobile number that you want to register on vira service to send OTP.

The Customer is solely responsible for any consequences arising from the correctness of the data registered at the time of VIRA registration. Users must maintain the security of mobile devices including maintaining password confidentiality and ensuring mobile devices including chat applications contained on the phone are not accessed by any other party. In addition, users or customers must take the necessary measures to secure the phone from malware or things that can potentially harm the chat application and the data in the chat application used by the customer user.

VIRA'S terms of use at Bank Central Asia are that customer users will be responsible for every banking transaction made, including but not limited to the error of selecting the transaction menu. For this reason, customer users must follow the instructions in conducting banking transactions. The customer user is also fully responsible for the use of information, the customer's e-Banking Mobile Number, account/user ID in the chat application, mobile device used by the customer user, including in the event of misuse of the user ID mobile device, and chat application.

By using VIRA, the customer hereby gives consent by pressing the "Yes" button in the terms section. To Bank Central Asia to send or forward user data and banking transactions through third parties (chat application providers). Bank Central Asia is not responsible for misuse or leakage of user data and banking transactions by other parties or transactions including chat application providers. Customer users will also be charged a Short Message Service (SMS) delivery fee for any transaction that requires OTP such as registration. In mobile devices in which there is a chat application, stolen or lost, customers must immediately contact Halo BCA to block banking on VIRA.

Blocking banking transactions on VIRA will be carried out by BCA until BCA receives a blocking opening application from customers. As long as the notification of theft or loss of mobile devices has not been received by BCA, then every banking transaction made using the customer's an account/user ID becomes the customer's responsibility. BCA reserves the right to block Banking Transactions on VIRA, refuse transactions, and/or close business relationships with Customers in the event of:

1) The Customer does not comply with the provisions of applicable law;
2) The Customer does not comply with the provisions of requests for information and supporting documents in accordance with applicable law;
3) The Customer is known and/or should be suspected of using false documents and/or providing incorrect data to BCA;
4) The Customer conveys information that is in doubt of its truth;
5) The Customer has a known source of transaction funds and/or should be suspected of coming from the proceeds of a criminal act (BCA, 2022).

VIRA can be closed or cataloged by customer users by selecting the vira service closing menu available in the Banking Transaction feature. VIRA provides many kite facilities provided to customer users, through the Banking Transaction feature, customer users can access information about accounts connected to BCA Passport Cards used for VIRA registration and BCA customer credit cards that have been registered by customer users on VIRA.

Through the banking transaction feature, customers can access information about accounts connected to BCA Passport Cards used for VIRA registration and BCA Credit Cards. registered by the Customer with VIRA. Customers who have registered BCA credit card with VIRA will automatically be able to access BCA Credit Card information services on Klik BCA individual, m-BCA, and SMS BCA, as well as vice versa throughout The Customer, registers the service using the same BCA Passport Card as the BCA Passport Card used for VIRA registration. If the Customer later deletes the registration of the BCA Credit Card to VIRA, the BCA Credit Card becomes inaccessible to Klik BCA Individu, m-BCA, and SMS BCA, according to The opposite is true.

Based on the description, VIRA features provide many benefits for BCA customers. However, VIRA has a fairly risky weakness that is related to the personal data of customers who have the possibility of leakage because the VIRA feature accessed in the LINE application cannot be automated logout. The risk that occurs if the gadget or mobile phone is lost in an automatically unlocked condition both the gadget and its LINE application, people who find our gadgets can easily access this VIRA feature in our LINE application because it is not logout automatically if we close it. Although this feature is limited to transaction information only, the information is still private that should not be known to others such as the amount of balance that has our account, account mutation, to whomever we send funds, can even see credit card transactions along with the remaining limits if we have. This certainly causes discomfort for us if our financial secrets are known by others. Especially if it is known that we have a large amount of balance, this information can also be a trigger or motivation for someone to commit crimes such as stealing or breaking into accounts. Given that today everyone desperately needs money to provide for his life many justify all means including confiscating the property of others. Not only other people but the closest relatives themselves can also be perpetrators. So that in the condition of the gadget is not lost even vira features are still considered risky and prone to be broken into especially close relatives who are more likely because a little more must know our other personal information such as full name, date and year of birth, and the name of the biological mother. This is what sometimes worries its users.

According to Article 40 paragraph (1) of Law No. 10 of 1998 on Amendments to Law No. 7 of 1992 on Banking which states that banks are obliged to keep confidential information about the depository and deposited customers, except in the case of Article 41, Article 41a, Article 42, Article 43, Article 44, and Article 44a. Under the Article, it may indicate that the
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Bank has a very strict nature of confidentiality. Where the bank is prohibited to open or disseminate customer data because it is considered a bank secret.

Banking activities that are often carried out today are internet-based activities, such as internet banking, mobile banking, also including chatbot services. These facilities provide accommodation for banking activities through a computer or mobile phone network anytime and anywhere quickly, easily, and securely because it is supported by the system. Strong security. This is useful to ensure the security and confidentiality of data and transactions made by customers. In addition, these facilities can increase the speed of service and reach in banking activities. In the development of banking technology, the Bank must pay attention to aspects of customer protection, especially security related to customer privacy.

With AI on banking activities, there is also a negative impact in making a transaction, customers or prospective customers can make a transaction using documents, which makes it difficult for banks to check a document (Frederica & Murwaningsari, 2021). Personal data owned by customers can be misused by irresponsible parties.

Misuse of a person's data or personal data on the internet is largely more directed towards things of a commercial nature. But it does not rule out the possibility, the misuse of a person's personal data is intended for other adverse things. Taking, leaking, providing customer or prospective customer data without the victim's knowledge is the wrong action and has violated the law, because of data theft (Nasution, 2015).

Victims who have been harmed by the data that has been leaked are very dangerous because it can be used to buy, doing bad activities using the victim's name. In this case, the banking sector in Indonesia must have AI network protection that must be strong, because hackers can access, get anything and anytime from the bank it targets (Setiono, 2019).

This has happened in Bank Indonesia, for example, customers who just opened an account, hackers were able to get the data quickly. As for hackers who pretend to be officials who work in a bank, but commit fraud against customers or prospective customers by using the officials of a bank.

The principle of bank secrecy in this regulation cannot be applied properly to the legal protection of the personal data of customers of digital banking service providers (Utama, Iqṣandri, Susanty, & Permana, 2021). Due to legal protection of customer personal data, this provision is limited to data stored and collected by banks, and customer data of online banking service providers not only data stored and collected but also data transmitted by bank customers. A computer that executes transactions from the client terminal.

Banks that conduct bank secret leaks can be threatened with imprisonment of at least 2 years and a minimum fine of Rp. 4,000,000,000,- (Four billion Rupiah) or a maximum fine of Rp. 8,000,000,000,- (Eight billion Rupiah) as stipulated in Article 47 paragraph (2) of the Banking Law. However, the penalty can only ensnare the bank parties, namely commissioners, directors, and employees of the bank itself. While the leaking of customer data that occurs in the application of AI is done by hackers or parties outside the bank, there is no penalty that can ensnare the data thieves.

Article 1 paragraph (1) of the Consumer Protection Act explains "all efforts that ensure legal certainty to provide protection to consumers". Consumer Protection Law aims to ensure legal certainty to consumers as well as business actors. Article 1 paragraph (2) of the Consumer
Protection Law explains that "every user of goods and/or services available in society, whether for the benefit of themselves, families, others, or other living beings and not to be traded".

In banking activities, customers can be curated as consumers who use a service from business actors and business actors from banking activities are the bank itself. The Banking Law affirms that every consumer is entitled to legal protection and certainty. So, if there is a leak of secrets or customer data that occurs in the application of AI the Banking Law can be a pressure to hold accountable from business actors, namely the bank itself.

As is the case with the VIRA chatbot as a production facility for BCA customers. This feature can be accessed through social media applications, one of which is LINE. However, in using this feature, customers do not need a PIN for registration. Customers only need a card number and OTP code sent to a mobile number registered with Bank BCA. However, this feature can be accessed on different numbers (LINE application numbers that are not the same as the Bank's registered number). This means that VIRA can be accessed by others on its device by capitalizing (Stealing) card numbers and OTP codes.

Some of the potential personal data breaches that may occur are as follows:

A and B are siblings. A is the brother and B is the brother. Each has a LINE social media account on their mobile phone. Once the B found the ATM card of the A in the living room next to the mobile phone A. Then the B idly opened the mobile phone of the A and it was not locked. B is getting prankster by trying to log in to the VIRA account belonging to si A on his handphone. By inputting the ATM card number A and opening the mobile phone of si A to get an SMS in the form of OTP, the B can log in to the VIRA si A account without the need for the ATM PIN of A. So that the B can find out the balance information owned by si A and the account mutation without being known by the A.

Although the VIRA chatbot feature can only access information in the form of promotions, ATM balance checks, account mutations, and credit cards, the information is still a personal information. Based on Article 28D paragraph (1) of the 1945 Constitution it is explained that Everyone is entitled to security and protection, Article 28D paragraph (1) of the 1945 Constitution reads "everyone is entitled to fair legal recognition, guarantee, protection and certainty and equal treatment before the law". The protection of customers or prospective bank customers must be based on the benefits, benefits, balance, security, and safety of consumers and legal certainty. The rights of consumers to obtain security, comfort, in consumer goods or services, and the right to obtain compensation.

Account balances and mutations are not information that is too important for others to know. But still knowing this information is a violation of privacy against others. For example, when there is a party who accidentally knows the account owner's balance is very much, it could be someone motivated to commit theft and encouraged to become a criminal, and then finally he tries to dig up other information related to the account and try to be able to break into it.

Another example, this feature can be used to spy on someone about to whom the funds owned by the account owner are channeled. This feature indirectly also provides a means for wives to be able to check account mutations secretly. But still, even if done by a legal wife, this act violates privacy. For certain needs can be used as evidence, for example in the case of infidelity.
In addition, technology and information in this day and age are so sophisticated. Sometimes this momentum is misused by certain individuals to commit a crime. In fact, there are many ATM break-ins with card numbers and chip copies. This event also indirectly requires account users to also be careful and vigilant in sharing personal information such as full name, birth certificate, birth mother's name, and much more.

Article 4(A) of the Consumer Protection Act also mentions the right of consumers to enjoy comfort, security, and protection in consuming goods and/or services, especially in this case with regard to the safety of consumers themselves(Astrini, 2015). Implementing the implementation in the establishment of laws against cybercrimes is based on Indonesian criminal law is one of the establishments of Law No. 11 of 2008 on Information and Electronic Transactions (hereinafter referred to as the "ITE Law"). The ITE Law is a special form to regulate various human activities in the field of information and communication technology, but nevertheless, the scope and category of cybercrime, in addition to other ite laws also regulate cyber crimes. The criminalization of cybercrimes in Indonesian laws and regulations has implications for efforts to combat cybercrimes in Indonesia (Jondong, 2020).

Legal protection provided to customers for personal data they have something that needs to be known, especially for the customer himself. Bank Indonesia as a regulator and supervisor of banking activities in Indonesia issued Bank Indonesia Regulation No. 9/15/PBI/2007 on the Application of Risk Management in the Use of Information Technology in Commercial Banks, so that every bank that uses information technology, especially internet banking, can minimize the risks arising in connection with these activities. The regulation is used because Indonesia until now has not had regulations that specifically regulate internet banking, on the other hand, internet banking in the implementation of its activities using information technology in its use of information technology requires an arrangement of risks that occur, then risk management is made regulated by Bank Indonesia.

And other provisions regarding the protection of customers in the financial services sector according to Article 25 and Article 31 paragraph (1), paragraph (2), paragraph (3) of Financial Services Authority Regulation No. 1/POJK.07/2013 on Consumer Protection of the Financial Services Sector, namely Article 25 mentions that Financial Services Business Actors must maintain the security of deposits, funds, or consumer assets that are in the responsibility of financial services business actors. Article 31 paragraph (1) states that Financial Services Business Actors are prohibited in any way, providing their data and/or consumer information to third parties. Article 31 paragraph (2) states that prohibition, as referred to in paragraph (1), is excluded in the event that the consumer gives written consent; and/or required by law. Article 31 paragraph (3) states that in the event that a Financial Services Business Actor obtains the data and/or personal information of a person and/or a group of persons from another party and the Financial Services Business Actor will use such data and/or information to carry out his or her activities, the Financial Services Business Actor shall have a written requirement that the other party in question has obtained written consent from a person and/or group of such persons to provide data and/or information personal referred to any party, including Financial Services Business Actors.

Based on the description, it can be concluded that Indonesia already has several regulations that can accommodate Customer complaints related to the use of VIRA features if in the future there is a data leak. However, at the beginning of vira registration, Bank BCA contains the
provision that the Customer is also responsible for his own data. Thus, Bank BCA does not bear 100% of data leaks caused by VIRA. This means that to use this application, customers need a self-regulation and government regulation approach.

The use of VIRA features in banking activities still requires many improvements. This needs to be a concern for the safety and comfort of BCA Customers in conducting banking activities.

CONCLUSION

VIRA features launched by Bank BCA provides many benefits to facilitate banking activities such as the latest promotional information updates, ATM balance checks, account mutation checks, registering for credit cards, information of the nearest ATM machine, and much more.

However, this feature still provides less extra security because VIRA accounts can be accessed on LINE numbers that are not the same as the Bank’s registered number. In addition, there is no need for an ATM PIN or access code to make transactions, so it can be a loophole for leakage of customer personal data.

This makes VIRA feature very potentially in violation of the laws and regulations in Indonesia, namely Article 40 paragraph (1) of Law No. 10 of 1998 on Amendments to Law No. 7 of 1992 on Banking, which states that the Bank shall keep confidential information about its deposit and deposit customers, except in the case in Article 41, Article 41a, Article 42, Article 43, Article 43, Article 44, and Article 44a. The article reflects that the Bank shall make strict efforts to maintain the security of customers’ personal data. In addition, this feature is feared to violate Article 4 (A) of Law No. 8 of 1999 on Consumer Protection which also mentions the right of consumers to enjoy comfort, security, and protection in consuming goods and/or services, especially in this case related to the safety of consumers themselves. Customers certainly cannot enjoy the comfort if they feel their personal data is threatened with leaks when using the services provided by the Bank. Therefore, Bank BCA needs to be careful and reevaluate the vira feature work system because it is feared that it can reduce customer satisfaction with discomfort and worry.

For Bank BCA, VIRA features need to be equipped with ATM PIN or access code as well as mobile banking. In addition, there needs to be a new policy that VIRA accounts can only be accessed on the same LINE number as the customer's registered number.

For BCA Customers, it is necessary to be vigilant and careful in maintaining personal data, not carelessly putting ATM cards and mobile phones, and not sharing personal information such as the date of birth, the name of the biological mother, to others. In using the VIRA application, customers should provide a passcode key for the LINE application or a passcode key on the mobile phone so that others cannot access the OTP code carelessly and without permission.

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