

# The Effectiveness of Use of Electronic Signatures in Managing Banking Transactions Based on *ITE* Law

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## ABSTRACT

The development of information technology that is used to assist human needs for the realization of an easier life has caused various changes, including the transition to electronic signatures. This study will present how the implementation of electronic signatures in banking transactions and the effectiveness in the use of electronic signatures for banking transactions based on the ITE Law. The government in regulating electronic signatures through legal policies and supervision of various legal institutions so that the focus in this paper is carried out with empirical normative juridical research methods by examining legal events in society. This study examines primary data and then secondary data consisting of primary, secondary and tertiary legal materials. The data collection method in this study was carried out through books, articles, and community behavior related to the problems studied. The type of research approach used is a qualitative research approach through the description, collection and interpretation of primary and secondary data. The data collected during the research will be analyzed using descriptive analysis techniques to get answers to the problems studied. The results of the research are expected to show that the use of electronic signatures in banking transactions is a collaboration between the Electronic Certification Operator (PSrE) and the bank itself. The effectiveness of the use of electronic signatures for banking transactions based on the ITE Law has fulfilled the elements as referred to in Article 11 and Article 12 paragraph 2 of the ITE Law related to the secure and safe use of electronic signatures by PSRE. The effectiveness of the use of electronic signatures for banking transactions can also be reviewed based on PP No. 71 of 2019 concerning the Implementation of Electronic Systems and Transactions, as seen in Articles 60 to 64 that banking transactions in their implementation have used certified signatures. Based on Article 41 of POJK No. 77 of 2016 contains that the loan agreement can use an electronic signature. In this case, the author is of the opinion that electronic signatures in banking transactions are in line with applicable legal regulations and are effective in their use.

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## ABSTRAK

Berkembangnya teknologi informasi yang dipergunakan untuk membantu kebutuhan manusia demi terwujudnya kehidupan yang lebih mudah menyebabkan berbagai perubahan diantaranya adalah peralihan menjadi tanda tangan elektronik. Penelitian ini akan menyajikan bagaimana pelaksanaan tanda tangan elektronik dalam transaksi perbankan dan efektivitas dalam pemanfaatan tanda tangan elektronik terhadap transaksi perbankan berdasarkan UU ITE. Pemerintah dalam mengatur tanda tangan elektronik melalui kebijakan hukum dan pengawasan dari berbagai lembaga hukum sehingga fokus dalam penulisan ini dilakukan dengan metode penelitian yuridis normatif empiris dengan cara meneliti peristiwa hukum dalam masyarakat. Penelitian ini mengkaji data primer dan selanjutnya data sekunder yang terdiri dari bahan hukum primer, sekunder dan tersier. Metode pengumpulan data pada penelitian ini dilakukan melalui bahan buku, artikel, dan perilaku masyarakat yang berhubungan dengan masalah yang diteliti. Jenis pendekatan penelitian yang digunakan adalah pendekatan penelitian kualitatif melalui deskripsi, pengumpulan dan interpretasi data primer dan sekunder. Data yang dikumpulkan selama penelitian akan dianalisis dengan menggunakan teknik analisis deskriptif untuk mendapatkan jawaban atas permasalahan yang diteliti. Adapun hasil penelitian yang diharapkan menunjukkan bahwa penggunaan tanda tangan elektronik dalam transaksi perbankan merupakan kerjasama antara Penyelenggara Sertifikasi Elektronik (PSrE) dengan bank itu sendiri. Efektivitas pemanfaatan tanda tangan elektronik terhadap transaksi

perbankan berdasarkan UU ITE telah memenuhi unsur-unsur sebagaimana dimaksud dalam Pasal 11 dan Pasal 12 ayat 2 UU ITE terkait dengan pengamanan dan penggunaan tanda tangan elektronik oleh PSrE yang terjamin dan aman. Efektivitas pemanfaatan tanda tangan elektronik terhadap transaksi perbankan dapat juga ditinjau berdasarkan PP No 71 Tahun 2019 tentang Penyelenggaraan Sistem dan Transaksi Elektronik, sebagaimana dilihat pada Pasal 60 sampai 64 bahwa transaksi perbankan dalam pelaksanaannya telah menggunakan tanda tangan tersertifikasi. Berdasarkan Pasal 41 POJK No 77 Tahun 2016 memuat bahwa Perjanjian pinjam meminjam dapat menggunakan tanda tangan elektronik. Dalam hal ini penulis berpendapat bahwa tanda tangan elektronik dalam transaksi perbankan telah sejalan dengan peraturan hukum yang berlaku dan efektif penguannya.

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## I. INTRODUCTION

The presence of information technology makes all kinds of fields of human needs can be fulfilled easily. So far, the fastest development of information technology and the most influential on human life is the internet. This can be proven from the development of information technology in the aspect of digitization. The change from analog to digital technology allows communication to contain very rich information of all kinds (data, text, sound, image, color, motion) together with the information technology can also be combined, converted, and presented in various forms (Kasemin,2015). Along with the very rapid development of Information and Electronic Technology, the phenomenon of Electronic Signatures has also emerged as a medium used in electronic transactions and various community activities at large.

Another benefit of the presence of information technology in human life is being able to increase the effectiveness of performance from various aspects, both in terms of business, education, finance, health, and in government. In addition, information technology also helps save time in human work and the information obtained is more accurate and certain because information technology is unlimited and always evolving. The real manifestation of this can be seen in the changes in the use of documents in daily life, where physical documents have turned into electronic documents. For example, correspondence that was usually sent through the post office can now be sent by electronic mail or *e-mail*.

Indonesia, based on Article 1 paragraph (3) of the 1945 Constitution of the Republic of Indonesia, is a legal state that cannot be separated from the influence of technological developments. According to Jimly Asshiddiqie, the concept of the rule of law serves as a means to realize and achieve the goals of the Indonesian state, namely to protect all Indonesian people, promote public welfare, educate the nation's life and participate in implementing world order based on independence, eternal peace and social justice. (Asshiddiqie, 2009).

Along with the development of electronic documents, the things that include the documents themselves must develop so that the use of information technology can run optimally. It is undeniable that one part of an important document that can be used as a benchmark for whether or not an important document is legal is the signature. The use of signatures and documents is an inseparable unit and their use is absolute. The signature will be used when a person is 17 years old and used when making the Identity Card (KTP).

The use of a signature is usually used in a document or letter. This is intended to prove the authenticity of the document or letter and also to prove the authenticity of the identity of the person who signed the document. For example, if there is the same document and it is addressed to people who have the same name, then the signature can be a differentiator so that the document is not misused or confused with other people. Digital signatures can provide greater assurance of document security than traditional signatures. This is because the recipient of the message can check whether the correct message came from the correct sender and whether the message has been modified after being signed, either intentionally or unintentionally (Sitompul,2001). An electronic signature appears in an electronic document which is not a written document ( *non-paperless* ). Based on this, the concept of electronic signature is not in accordance with the legal principle which states that a document must be viewable, sent, and stored in paper form. Along with technological advancements that continue to develop, considering that Indonesian law is more adaptable to Dutch law, where electronic signatures in that country have been recognized as having the same legal force as written signatures and have high accuracy, it is appropriate for the information and technology began to be accommodated into the procedural law system in Indonesia (Uns,2022). The use of signatures is often positioned as proof of approval, presence or officialization of an individual. If viewed from its position in a document, it can be said that the signature is the final stage of the absoluteness of a document. For example, a letter of agreement or power of attorney that is not signed by the competent authority will not be recognized and will be considered null and void.

The use of signatures itself has started from BC, and its use continues to grow today. The use of wet signatures is usually done with ink, which is used to scratch or stamp documents and contracts. In other words, a wet signature is a signature used on paper-based documents and can only be signed with a pen after the printing of the document is complete.

In line with the development of information technology that affects human life from various sides where Information technology or Information Technology is a field that is growing rapidly from year to year (Tharo,2002). Where the history of the development of information technology can be divided into 4 (four) eras, including: Pre-Mechanical Era; Mechanical Era; Electromechanical Age; Electronic Age.

So one of the things that is developing is the signature. Changes in signature styles and patterns follow technological developments from wet (conventional) signatures to electronic (digital) signatures. The development of electronic signatures has started a long time ago and has been running for decades, so it can be said that electronic signatures are not a new technology anymore. The development of the use of electronic signatures itself began in 1976 until 1999, Technology has been able to embed electronic signatures into documents and convert them into PDF files. In the same year, the United States passed the *UETA (Uniform Electronic Transactions Act)* which later confirmed the legal power of digital signatures in government affairs and business transactions. The United States Congress itself even set June 30 as "*National ESIGN Day*" (National Digital Signature Day) (Priyi.id,2022).

The development of electronic signatures is still ongoing and is still being refined to this day, so that its use can be easier and more useful for humans. Where electronic signatures are considered to have many advantages, they are easier, faster, more efficient and more environmentally friendly because their use does not use paper. However, the use of electronic signatures must also comply with the official and standard as contained in the ITE Law so that its validity can be recognized in the eyes of the law.

Prior to Law Number 11 of 2008 concerning Information and Electronic Transactions, there was no special regulation that included legal protection for electronic signatures. However, electronic signatures are considered personal data or privacy (privacy), so they must be protected. Privacy relates to various forms of how a human being gives access to others to obtain personal information, take part in private ownership and personal decisions ( Budhijanto,2010).

Along with the rapid growth of information technology in Indonesia, the Law of the Republic of Indonesia Number 19 of 2016 concerning Amendments to Law Number 11 of 2008 concerning Information and Electronic Transactions was established. This Law aims to regulate information systems, documents and electronic signatures as contained in articles 5 to 14. Other regulations governing electronic signatures are Government Regulation of the Republic of Indonesia Number 71 of 2019 concerning the Implementation of Electronic Systems and Transactions and Regulations Financial Services Authority (POJK) No.77/POJK.01/2016 concerning Information Technology-Based Borrowing-Lending Services.

The rapid economic and business growth in the era of globalization has encouraged the use of electronic signatures. So that its use cannot be avoided and will continue to grow and increase in the following years, especially in banking transactions. This time, on this valuable opportunity, it will be presented how the effectiveness of using electronic signatures in the management of banking transactions based on the ITE Law will be presented.

Given the importance of using electronic signatures especially in the economic sector by Banks, and in terms of the laws and policies that regulate it, based on the description on the background above, the following problems can be formulated:(1) How is the implementation of electronic signatures in banking transactions?, (2). How effective is the use of electronic signatures for banking transactions based on the ITE Law?The government in regulating and supervising the use and implementation of electronic signatures requires concrete steps and of course through national strategic policies. Government policies can be seen through legal products made jointly between the legislature and the executive, including laws and other regulations to support their use in banking transactions. In line with the problems in this paper, the purpose of this paper is as follows: (1)To find out how the implementation of electronic signatures in banking transactions.(2)To find out how effective the use of electronic signatures for banking transactions is based on the ITE Law.

## II. RESEARCH METHODS

This writing is done by examining the object of study on community behavior. The behavior of the people studied is the behavior that arises as a result of interacting with the existing norm system. This interaction appears as a form of public reaction to the implementation of a positive legal provision and can also be seen from community behavior as a form of action in influencing the formation of a positive legal provision (Fajar & Ahmad,2010). This study uses two types of data, namely primary data and secondary data that are interconnected related to the use and application of electronic signatures in the management of banking transactions.

Research conducted on the community is in the form of a questionnaire (questionnaire) with parties related to electronic signatures such as electronic signature service providers that facilitate verification and use. Where the way to collect it is by asking questions that are directly related to the use of electronic signatures in banking transactions to respondents to be answered via the internet. The types of questionnaires (questionnaires) are divided into two, namely, open and closed. The questionnaire used in this study is an open questionnaire where the author gives questions and no answer options are provided so that respondents have the freedom to answer according to their opinions.

Research conducted on library sources whose discussion is related to electronic signatures and banking transactions. Whether in the form of "Law Number 19 of 2016 Amendments to Law Number 11 of 2008 concerning Information and Electronic Transactions, Government Regulation Number 71 of 2019 concerning System Operations and Electronic Transactions and OJK Regulation Number 77 of 2016 concerning Technology-Based Borrowing-Lending Services. Information". In addition to these three regulations, books, journals, articles and documents containing information related to the use of electronic signatures in banking transactions are also used in this study. Other supporting sources

of meaning and also as a diversion of foreign language terms. Language dictionary whose function is to fix Indonesian grammar, encyclopedias, and others.

The approach of this research is qualitative research which means research that intends to understand the phenomena of what is experienced by the research subject holistically, and by means of description in the form of words and language, in a special natural context and by utilizing various scientific methods (Moleong,2006). The approach taken is based on the main material, namely the results of interviews and by examining theories, legal principles and laws and regulations or other government regulations related to the research in this paper which is then linked to analyzes of the materials presented. online in various internet media both presented by the government, non-governmental institutions, and others. However, the author also provides responses or opinions of the author in conducting research so that the research objectives can be obtained as intended in the formulation of the problem above.

### III. RESULT AND DISCUSSION

Humans as social beings of course always demand a fast, precise and safe need, not least in terms of signatures and transactions. With some weaknesses such as being difficult to identify, difficult to account for and easy to imitate, of course the general public has the right to expect a technological change that can provide solutions to problems that arise in conventional signatures. Transactions, especially banking transactions are also a method whose implementation will continue to be sought for development. Especially with the presence of banking business rivals such as the fintech (financial technology) business, banks are certainly required to expand and deepen the services they offer so that they can always be utilized and function properly.

The development of the use of electronic signatures for the purposes of banking transactions also runs parallel to the presence of a pandemic problem in the world which has resulted in reduced mobility and meetings between humans. With the use of electronic signatures and digital banking transactions is a solution from the conventional way. The two main topics of discussion of this thesis are also related to each other which emphasizes the use of electronic signatures in the management of banking transactions which will use Law Number 19 of 2016 concerning amendments to Law Number 11 of 2008 concerning Information and Electronic Transactions.

#### 1. Implementation of Electronic Signatures in Banking Transactions

A signature is generally an asset that represents an individual in granting authority or approval of a contract or agreement to other parties and agencies. The signature is also an identity of each individual itself. A letter or writing containing a clear and clear statement or agreement is not perfect as a letter or deed if it is not signed, so it is not valid to be used as written evidence (Haahap,2015) . This strengthens the element of authenticity of the media content submitted by the person who signed it. The conditions for a valid agreement are: Agree with those who bind themselves; The ability to make an engagement; A certain thing; A lawful reason.

Article 1320 1st and 2nd BW are referred to as subjective requirements because they relate to the subject or the parties to the agreement. If the subjective conditions fail to be met, then agreement can be cancelled. Article 1320 3rd and 4th BW are referred to as requirements objective because it relates to the object of the agreement as an act carried out the parties (legal subjects). If the objective conditions are not met, then the agreement is void by law (Niuewenhuis, 1985).

Financial transactions in banking are included in the agreement because the agreement occurs between an individual and a banking institution and fulfills the legal requirements of an agreement. The use of signatures on these transactions is also absolute because agreements made between individuals and banks usually contain material values in them.

Along with the times, of course, the banking industry also continues to evolve which makes things like signing easier. From this problem, conventional signatures began to switch to electronic

signatures. Apart from credit agreements, there are lots of electronic signature features that can simplify the way banking works, for example in opening an account and applying for a credit card.

The definition of electronic signature based on the Law of the Republic of Indonesia Number 19 of 2016 concerning Amendments to Law Number 11 of 2008 concerning Information and Electronic Transactions (UU ITE) Article 1 Paragraph (12) reads: "Electronic Signature is a signature consisting of on Electronic Information that is attached, associated or related to other Electronic Information used as a means of verification and authentication."

The electronic signature work system itself if it is based on the above rules is through an electronic or digital certificate. Electronic certificates are usually issued by Electronic Certification Operators (PSrE). Then the Electronic Certification Operator (PSrE) will contact the Electronic System Operator (PSE) to be able to issue an electronic signature for use. In Indonesia alone, there are eight Electronic Certification Providers (PSrE) that have been recognized by the Ministry of Communication and Information (Kominfo), of which there are two institutional PSrE and six Non-Agency PSrE consisting of: Agency for the Assessment and Application of Technology / iAUTHENTIC (PSrE Agencies); Electronic Certification Center (Institut PSrE); PT. Digital Identity Privy (Non-Agency PSrE); PT. Clear Signature Joint / Sign Aja! (Non-Agency PSrE); PT. Indonesia Digital Identity / VIDA (Non-Agency PSrE); PT. Tilaka Nusa Teknologi (Non-Agency PSrE); PT. Net Internusa / Digisign Solutions (Non-Agency PSrE); Public Company for Printing Money of the Republic of Indonesia / PERURI (Non-Agency PSrE ).

The use of electronic signatures itself generally aims to avoid the risks that can occur when conducting transactions because the system of electronic signatures is protected by a mathematical encryption system that has been proven reliable and obtains appropriate legal protection. Electronic transactions are non-faceted, do not use original signatures (non-sign) and are borderless (a person can conduct electronic transactions with other parties even though they are in different countries) using information technology (Listyana, et.al, 2015). At this time, electronic signatures are the most trusted way to obtain documents both agreements and transactions online. Electronic signatures are made using cryptography techniques, and public key cryptography and are obtained through a prior agreement transaction, this is based on Article 1320 of the Civil Code ( Hudzhaifah,2015). The concept of electronic signature itself, if known from the world of computerized security, is the application of computer techniques to information.

Electronic signatures can be made through one of the 8 (eight) Electronic Certification Providers (PSrE) in Indonesia: Download the Electronic Certification Operator (PSrE) application; Create and register an account with personal data (NIK, phone number, email address, photo ID card, and others); The data will be verified by the PSrE, when it has been verified, the individual is required to use a one time password (OTP) as a double key; If you want to sign a document, then the individual needs to upload the document and place the signature in the desired position; Enter the OTP sent to the individual phone number and the document is ready to be signed.

Verification of electronic signatures from electronic documents that have been signed can be done in 2 ways, namely: Verification through the website or application of the Electronic Certification Provider (PSrE) and Verification through the Kominfo PSrE website.

To verify, the verified document must be in the form of a PDF, then upload the file to the PSrE or Kominfo website. If the uploaded document has a certified electronic signature, after the upload is complete, data such as: Valid Digital Signature which means that the electronic signature on the document is genuine and can be verified; The Document Has Not Been Changed which means that since the document was signed, the contents of the uploaded document have never been changed; Verified Signer Identity which means that the signer uses an electronic certificate that has been verified by PSrE and the electronic certificate is still in use or has not expired; This Document Has a Timestamp which means that the document is signed according to the time which refers to the world clock or available server so that it can be known when the document was signed; This Document Supports LTV which means that the electronic certificate of the signer uses the Long-Term Validation

(LTV) feature, so that the electronic signature can still be verified even if the electronic certificate has expired.

With electronic signatures in banking transactions, credit agreements, credit card applications and account openings can be done online in the sense that they can be done anytime and anywhere without having to come to the bank branch office again. Individuals only need to fill in the link provided by the banking party related to the proposed facility via handphone . Next is to verify the identity of the individual himself (NIK, NPWP, address and other required data). The stages of using an electronic signature at the time of submission are:

- a. After verifying identity, the individual will receive an email containing the user and password as their identity.
- b. The email received will contain a link linked to an electronic signature service provider application where the individual can view, check and sign his/her credit agreement document.
- c. When viewing the selected document, the individual is required to login by entering the user and password sent to the verification email.
- d. Once the verification is complete, then the individual can start the electronic signing process.
- e. When the electronic signing process has been completed, the individual will be asked to confirm and verify once again using the code sent via email and sms.
- f. Furthermore, individuals only need to wait for the loan application to be processed and disbursed.

The process of using an electronic signature in opening an account is also almost the same as applying for a credit card, the difference is that when applying for a credit card, an individual will receive an SMS and be transferred to the application for an electronic signature. Meanwhile, when opening an account, the account will be active and successful if the individual has filled out complete data, verified data via video call with Customer Service (CS) staff, electronically signed and created SMS banking PIN .

The use of electronic signatures in banking transactions still seems new and needs to be further developed and added advantages. However, electronic signatures are indeed one of the unavoidable electronic developments. And the Covid-19 pandemic is the right time where we are required to reduce the intensity of face-to-face meetings.

## **2. The Effectiveness of Using Electronic Signatures on Banking Transactions Based on the ITE Law**

The effectiveness of electronic signatures on banking transactions can also be seen from the contents of the Law of the Republic of Indonesia Number 19 of 2016 concerning Amendments to Law Number 11 of 2008 concerning Information and Electronic Transactions (UU ITE). In Article 11, it can be seen that electronic signatures have legal and absolute legal force and can be used for transaction purposes. So along with its development, electronic signatures are believed to be present as a solution to the deadlock and problems of conventional signatures. So that the proof of the electronic signature is legal and of course it can function as the basis for the use of electronic signatures. An electronic signature can be called authentic if it meets the theory of authenticity both technically and legally (Makarim,2015). There are several legal provisions governing the implementation of electronic signatures and their use in electronic transactions, for example internationally (UNCITRAL and ECC), regional (European Community Directive) and nationally (UETA in the US, Digital Signature Act in Malaysia, Electronic Transaction Act in Singapore and UU ITE in Indonesia).

Electronic signatures that are legal and effective and have legal force according to the ITE Law must have appropriate data and are related to the certification provider as stated in Article 12 Paragraph 2 of the ITE Law. The use of Electronic Signatures for Banking Transactions is in line with the ITE Law as stipulated in Article 12 that the use of electronic signatures provided through electronic signature providers has used guaranteed and safe systems and technologies such as level 3 or 4 security and 2-factor authentication so that it can be proven. authenticity and accountability.

In the development, various Electronic Signature services in Financing Submissions have emerged, which of course offer various kinds of convenience. These various facilities are used to help facilitate the needs between service users and banks. Effectiveness of electronic signatures on banking transactions can also be seen from Government Regulation Number 71 of 2019 concerning the Implementation of Electronic Systems and Transactions which explains that if there is misuse of electronic signatures by other parties who are not entitled to it, the signer is exempt from losses that arise afterwards. Article 60 of Government Regulation Number 71 of 2019 also confirms the use of certified and uncertified electronic signatures. In its application in banking transactions, all electronic signatures issued are official and certified because they are held by the National Certification Operator (PSrE) which has been recognized by the Ministry of Communication and Information.

POJK Number 12 / POJK.03/2018 concerning the Implementation of Digital Banking Services by Commercial Banks Article 11 paragraph (1) states that in conducting business relations with customers or prospective customers through Digital Banking Services, Banks are required to: (a) search for customers or prospective customers , and (b) leveraging on information and supporting documents of customers or prospective customers. Therefore, supervision related to electronic signature data is also regulated in Articles 61 to 64, as it is understood that the use of electronic signatures in banking involves two factors of authentication and verification. This can be seen with the OTP at the last step when the individual will sign the banking transaction so that the user 's identity can be confirmed. Therefore, its use will minimize negligence or misuse of the signature owner.

Based on the Financial Services Authority Regulation Number 77 of 2016 as contained in Article 41 which confirms that the loan agreement between the lender and the borrower can use an electronic signature. Where banking transactions are included in the agreement because they have binding legal force, the legal basis governing electronic signatures is in line with applicable laws and effective use.

The use of electronic signatures today is also not something new where the increase in the use of electronic signatures is also caused by the Covid-19 pandemic . The use of electronic signatures for banking transactions has also become a natural thing. Respondents' opinions are also in line with the author's literature research, namely all respondents agree with the importance of using signatures. For respondents, the signature is part of creating an agreement that represents ourselves for the actions taken.

The legal rules governing electronic signatures are solidly known as the Law of the Republic of Indonesia Number 19 of 2016 concerning Amendments to Law Number 11 of 2008 concerning Information and Electronic Transactions. Based on the answers obtained from the respondents, all respondents have heard of the ITE Law. Respondents also think that the ITE Law is a strong enough legal basis to provide protection for electronic signatures. Another respondent who is also aware of the presence of Government Regulation No. 71 of 2019, Perkominfo No. 11 of 2018 concerning the Implementation of Electronic Certification, as well as the Regulation of the Financial Services Authority itself is sufficient and another respondent believes that there is a need for regulations that regulate more specifically and provide a reflection more specific security and effectiveness scores on the use of electronic signatures.

Conventional signatures are also easy to imitate and their authenticity does not exist and is difficult to prove, therefore it has low authenticity effectiveness. The use of electronic signatures is very helpful in matters of speed and accuracy as well as the authenticity of the signature itself. Electronic signatures can speed up the document validation process and maintain the security of users because they are bound by digital certificates that are connected to one NIK (Population Identification Number) and cannot be manipulated because there is legality.

The future of using electronic signatures is quite bright. Because electronic signatures have a future and their use will be mandatory in the future, especially with the rapid development of

globalization. With legal regulations that are continuously being developed and electronic signatures are signatures consisting of electronic information that is attached, associated or related to other electronic information including electronic contracts that are used as a means of verification or authentication.

#### IV. CONCLUSION

The development of this increasingly modern era, of course, the use of electronic signatures involves various important sectors and fields. Its use is also important because the signature serves to show the validity of a document or agreement. Therefore, the government and economic actors are competing to create safe, fast, and appropriate conditions regarding the use of electronic signatures in banking transactions.

Based on the description as stated in the previous section regarding the implementation of electronic signatures in banking transactions and how the effectiveness is based on the ITE Law, the following conclusions can be drawn:

1. The use of electronic signatures in banking transactions includes account opening, credit card applications and credit agreements. The process that involves the use of electronic signatures in banking transactions is when the customer has finished verifying his identity online, the customer will receive an email that will be connected to the PSrE application and the customer can sign the document electronically with a verification code to be sent. The implementation of electronic signatures in banking transactions provides convenience for customers as well as for the bank itself.
2. The effectiveness of the use of electronic signatures for banking transactions based on the ITE Law is reviewed in Article 11 and Article 12 of the ITE Law, PP No. 71 of 2019 concerning the Implementation of Electronic Systems and Transactions Article 60-Article 64 and POJK No. 77 of 2016 in Article 41 where the implementation the electronic signature has fulfilled the elements contained in the article. So that electronic signatures in banking transactions are in line with applicable regulations and effective use

Suggestions that can be given to the Electronic Certification Operator (PSrE) as the identity holder of the electronic signature user must continue to provide the best service in its implementation and continue to improve the security of the server used to avoid things that can cause data leakage, and always based on applicable laws.

The government should continue to review and deepen the legal rules governing electronic signatures because their use continues to advance according to the times. In addition, the government must also continue to provide education and knowledge to the public because there are still many people who do not understand or do not know about its use.

The public as users of electronic signatures should also be responsible for their personal data (identity) by not sharing it with anyone. In addition, in its use, it must also obey and comply with government recommendations and legal rules in Indonesia.

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