

Evaluation of Risks and Their Impact on Legal Validity in the Implementation of Electronic Notary Deeds in Indonesia

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Abstract. *This study aims to analyze: 1). The risks that arise in the implementation of electronic notarial deeds in Indonesia. 2) The impact of these risks on the legal validity of electronic notarial deeds according to the provisions of the applicable laws and regulations in Indonesia. This type of research is normative legal research. The approach method in this study is a statute approach and a conceptual approach. The type of data in this study is secondary data sourced from primary, secondary and tertiary legal materials. The data collection method uses literature studies. The analysis in this study is prescriptive. The results of the study concluded: 1). The implementation of electronic notarial deeds in Indonesia, based on Article 15 paragraph (3) of Law Number 2 of 2014 concerning the Position of Notary, faces cybersecurity risks (hacking, wiretapping, data loss), legal (unclear regulations, non-compliance with the principle of onmiddellijkheid), technical-operational (lack of notary competence, unstable infrastructure) and socio-ethical (misuse of electronic signatures). This risk violates Article 26 and 31 of the ITE Law, Article 16 paragraph (1) letter m of the Notary Law, Article 1867 and 1868 of the Civil Code, and Article 46 and 59 paragraph (3) of the PP PSTE, thus threatening the validity of deeds as authentic evidence and public trust. Solutions include regulatory harmonization, implementation of encryption and blockchain, Notary training, infrastructure investment and electronic signature certification to ensure legal certainty in accordance with Article 28 D paragraph (1) of the 1945 Constitution. 2). Cybersecurity risks (hacking, wiretapping, data loss), legal (unclear regulations, non-compliance with the principle of onmiddellijkheid), technical-operational (lack of Notary competence, unstable infrastructure) and socio-ethical (misuse of electronic signatures) threaten the validity of electronic Notary deeds. This risk violates Article 26 and 31 of the ITE Law, Article 16 paragraph (1) letter m of the Notary Law, Articles 1867, 1868 and 1869 of the Civil Code, and Articles 46 and 59 paragraph (3) of the PP PSTE, causing the deed to be at risk of losing its authentic status and not being recognized in court. The inconsistency of subordinate norms with the grundnorm of Article*

28D paragraph (1) of the 1945 Constitution creates a hierarchical contradiction. Harmonization of regulations, cybersecurity, notary training, infrastructure investment and electronic signature certification are needed so that electronic deeds are equivalent to authentic deeds.

Keywords: *Electronic; Impacts; Legal; Validity.*

1. Introduction

The development of information and communication technology (ICT) in the digital era has brought fundamental changes to various sectors of life, including the legal system and public services. Technology-based innovation has now penetrated the legal world, particularly in the electronic preparation, storage, and validation of documents, which are beginning to replace conventional methods based on physical documents.¹

In Indonesia, this progress is reflected in the legal recognition of electronic documents and digital signatures through Law Number 11 of 2008 concerning Electronic Information and Transactions (ITE Law), which has undergone significant amendments, most recently with Law Number 1 of 2024 concerning the Second Amendment to the ITE Law. This regulation affirms that electronic information and/or documents have valid legal force as long as they meet the formal and substantial requirements stipulated in the legislation. This paves the way for the use of technology in various legal aspects, including the possibility of digitizing legal deeds that previously only existed in physical form.

Legal recognition of electronic documents and digital signatures opens up significant opportunities for the modernization of notarial practices in Indonesia. A notary is a public official who is responsible for making authentic deeds which can serve as evidence of certain legal acts.² Notaries are a noble, honorable, and lofty legal profession, often referred to as *Officium Nobile*. This is because the profession of notary is closely related to humanitarian professions and is a defender of truth and justice who upholds good faith and professionalism in carrying out their duties.³

The existence of notaries is crucial in society. Notaries play a vital role in ensuring certainty, order, and legal protection for the public regarding the creation of

¹Teguh Prasetyo. (2020). *Hukum dan Teknologi: Menjawab Tantangan Dunia Digital*, Prenadamedia Group, Jakarta, p. 21.

²Faisal Santiago. (2013). Peranan Notaris dalam Transaksi Saham pada Pasar Modal di Bursa Efek Jakarta, *Jurnal Constitutum* Vol. 12 No.2, 507

³Ariy Yandillah, et all. (2015) Tanggung Jawab Notaris Pengganti Terkait Pembuatan Akta Notaris Yang Merugikan Para Pihak Akibat Kelalaiannya, *Jurnal Hukum Universitas Brawijaya*. 2.

authentic deeds.⁴The role of a notary in providing legal certainty and protection for the public is crucial. This role is more of a preventative measure, or a preventive measure, against future legal issues by creating authentic deeds regarding a person's legal status, rights, and obligations under the law, and so on. These documents serve as the most effective evidence in court in the event of a dispute over these rights and obligations.⁵

In carrying out his profession, a notary must be truly capable of providing good services to the public so that no one in the public is harmed.⁶ Article 1 number (1) of Law 30 of 2004 as amended by Law Number 2 of 2014 concerning the Position of Notary states that a Notary is a public official who is authorized to make authentic deeds and has other authorities as referred to in this Law or based on other Laws. There are several other authorities of a Notary in this article, namely guaranteeing the time of making, grosse, copies and extracts of deeds.⁷

Notary service activities in the digitalization era have moved towards electronic-based services known as cyber notaries, so they should be further regulated in the laws and regulations in force in Indonesia.⁸Article 15 paragraph (3) of Law Number 2 of 2014 concerning amendments to Law Number 30 of 2004 states that in addition to the authority as referred to in paragraph (1) and paragraph (2), Notaries have other authorities regulated in statutory regulations. Other authorities referred to in the Article have been explained in the explanation of Article 15 paragraph (3) of Law Number 2 of 2014, which states that what is meant by other authorities regulated in statutory regulations include the authority to certify transactions carried out electronically (cyber Notary), make deeds of endowment pledges and aircraft mortgages.⁹

Notaries play a crucial role and function in the legality of transactions in Indonesia. They are also understood as trusted third parties. Notary services have become a necessity for the public, serving not only in the preparation of deeds but also as witnesses or intermediaries in transactions. However, the Notary Law

⁴Putri A.R. (2011). *Perlindungan Hukum Terhadap Notaris (Indikator Tugas-Tugas Jabatan Notaris yang berimplikasi Perbuatan Pidana)*, Softmedia, Medan. p. 32

⁵Erina Permatasari & Lathifah Hanim. (2017). Peran dan Tanggung Jawab Notaris Terhadap Pelaksanaan Pendaftaran Badan Hukum Perseroan Terbatas Melalui Sistem Online, *Jurnal Akta*, Volume 4 Nomor 3. 401

⁶Andi Prajitno. (2015). *Apa dan Siapa Notaris di Indonesia (Sesuai UUJN Nomor 2 Tahun 2014)*, Perwira Media Nusantara, Surabaya, p. 34

⁷Sujanayasa dan Ariawan. (2016). Kedudukan Saksi Instrumentair, *Acta Comitatus : Jurnal Hukum Kenotariatan*, Volume 1 Nomor 2. 284

⁸Emma Nurita & Raden Ayu. (2012). *Cyber notary: Pemahaman Awal Dalam Konsep Pemikiran*, Refika Aditama, Bandung, p. 4.

⁹Fabela Rahma Monetery & Budi Santoso. (2023). Keabsahan Dan Kekuatan Hukum Pembuktian Akta Notaris : Prespektif *Cyber Notary* Di Indonesia", *Notarius*, Vol 16, No. 2,. 4.

(UUJN) does not explicitly regulate the authority of notaries to create notarial deeds electronically.¹⁰

The discrepancy between the Notary Public Law (UUJN) and the Information Technology Law (UU ITE) regarding the authority of Notaries to make deeds electronically is clearly an obstacle for Notaries. In addition to normative issues, the implementation of electronic notarial deeds also contains legal and technological risks that need to be evaluated comprehensively. A systematic evaluation of the risks involved in implementing electronic notarial deeds is an urgent need amidst the push for digitalization of legal services. These risks can compromise the authenticity of the deed and create legal uncertainty. In practice, this has the potential to undermine public trust in notarial deeds and open up the possibility of legal disputes between parties. Therefore, an in-depth study is needed that not only identifies the potential risks but also analyzes the extent to which these risks could impact the legal validity of electronically executed deeds.

2. Research methods

This research is normative legal research. The approaches used are the statute approach and the conceptual approach. The data used in this study are secondary data sourced from primary, secondary, and tertiary legal materials. The data collection method uses a literature study. The analysis in this study is prescriptive.

3. Results and Discussion

3.1 Risks Arise in the Implementation of Electronic Notarial Deeds in Indonesia

Cyber Notary defined as an effort to utilize and use information technology, for example using computer networks, computers and/or various other electronic media, in its implementation such as via video conference or teleconference in carrying out the duties and authorities as a Notary.¹¹ The development of cyber notaries is expected to play a role in electronic transactions in line with the increasing development of technology found in every Civil Law or Common Law country.¹²

The development of the cyber notary concept was essentially born from the demands of digital transformation in the notary sector. The use of information technology is not limited to online communication between notaries and parties, but also extends to the authenticity of the resulting legal documents. The

¹⁰Emma Nurita, *Op.cit.*, p. 2

¹¹Surya Jaya. (2012). *Cyberspace (Problematika dan Antisipasi Pengaturannya)*, Sinar Grafika, Jakarta, p. 55.

¹²Gana Prajogo, Lydi Ratu Setia Permata & Muhammad Fernando. (2021). Autentikasi Akta Partij Dalam Digital Signature Oleh Notaris', *Indonesian Notary* 3, Nomor 2. 123.

existence of electronic deeds is a logical consequence of notary modernization, as it represents a concrete manifestation of the application of cyber notary in practice. Electronic deeds are positioned as legal instruments produced through digital mechanisms while maintaining the authenticity as stipulated in the Notary Law.

The implementation of electronic notarial deeds in Indonesia is an innovation aimed at modernizing notarial practices in line with advances in information technology. However, this implementation also presents various risks, particularly related to security, legal validity, and technical and operational aspects. The following are some of the risks arising from the implementation of electronic notarial deeds in Indonesia:

1) Cybersecurity Risks

a. Threats of Hacking and Data Interception

The creation of electronic notarial deeds (cyber notary) has not been explicitly regulated in UUJN No. 2 of 2014, although Article 15 paragraph (3) gives Notaries the authority to certify electronic transactions. The civil law system in Indonesia still requires the physical presence of the person appearing, so authentic deeds are still made conventionally. The discourse of cyber notary opens up opportunities for efficiency through the use of video conferencing, electronic signatures, and digital storage, but faces serious challenges in terms of data security. The risk of hacking, manipulation, and leakage of sensitive information can compromise the legal validity of the deed. According to Abdul Ghofur Anshori, document security is key to maintaining public trust in Notaries. Although Law No. 1 of 2024 concerning ITE emphasizes the importance of electronic data protection, uniform technical security standards for Notaries remain a major obstacle to the implementation of electronic deeds in Indonesia.

b. Data Loss or Corruption

Minutes of a deed are original documents of Notarial deeds that are part of the Notary protocol according to the provisions of UUJN No. 30 of 2004 in conjunction with No. 2 of 2014 Article 16 paragraph (1) letter (b). Historically, storage was carried out conventionally in physical form as the primary responsibility of the Notary, without an expiration date as long as the document can still be found. To date, the system for storing minutes remains conventional, because full electronic storage has not been accommodated in Indonesian regulations, even though digitalization is considered urgent for efficiency and mitigating the risk of damage. Notaries are fully responsible for maintaining the security, confidentiality, and integrity of minutes, including the transfer of protocols to other Notaries or supervisory boards in the event of resignation or death. Electronic storage faces serious challenges, such as the risk of data loss due to server failure, cyberattacks, or data corruption, which can damage the

validity of the deed if not accompanied by an adequate backup system. Although PP No. 71 of 2019 requires data redundancy and recovery, the majority of Notaries in Indonesia do not yet have a technological infrastructure that meets these security standards.

2) Legal Risks

Electronic notarial deeds, as part of the cyber notary concept, do not yet have a clear legal status. Although Article 15 paragraph (3) of Law No. 2 of 2014 provides the basis for the use of information technology by notaries, more detailed technical regulations are still not available. This raises doubts regarding the procedures for creating and using electronic signatures, as well as the validation of digital deeds. Without regulatory certainty, electronic deeds risk being rejected as evidence in court because they are deemed not to meet the formal and material requirements as stipulated in the Civil Code. Therefore, strengthening regulations that emphasize the integrity, authenticity, and validity of electronic deeds are needed so that they have legal certainty equal to conventional deeds.

The concept of cyber notary also raises the potential for conflict with the basic principles of notary law, such as the principle of directness (*onmiddellijkheid*) and the principle of presence of parties (*partijvertegenwoordiging*). Based on Article 16 paragraph (1) letter m of the UUJN, a notary is required to read the deed in front of the parties and witnesses to guarantee the validity of their will and identity. Electronic mechanisms through teleconference or digital signatures can be seen as not fully fulfilling these principles, thus raising doubts about the validity of the deed. If the principles of notary law are not adequately accommodated in regulations, electronic deeds have the potential to be considered invalid and weaken legal protection for the parties.

3) Technical and Operational Risks

The implementation of electronic notarial deeds in Indonesia faces serious obstacles related to limited notary technological competence and reliance on digital infrastructure. Many notaries lack a thorough understanding of technical aspects such as electronic signatures, encryption, and digital data management, increasing the risk of operational errors that could impact the validity of the deed. Furthermore, the high reliance on technological infrastructure, particularly a stable internet connection and reliable servers, poses challenges, given the significant digital divide in Indonesia. This situation has the potential to reduce the efficiency, reliability, and equity of electronic notarial services across regions.

4) Social and Ethical Risks

The implementation of electronic notarial deeds faces two main challenges: the potential for misuse of electronic signatures and unequal public access. Electronic signatures are vulnerable to forgery or unauthorized use, threatening

the integrity of the deed, undermining public trust, and creating legal liability for notaries if they fail to verify the identity of the person appearing. Therefore, notaries are required to exercise due diligence through physical inspections, verification by the Civil Registration Department (Dukcapil), and confirmation of supporting documents to ensure the authenticity of identity. Furthermore, the need for technology such as the internet and digital devices creates disparities in access, particularly for communities in remote areas, potentially reducing the inclusiveness of legal services and widening social discrimination.

Poorly managed security and operational risks can lead to non-compliance with regulations, such as Law Number 2 of 2014 or Government Regulation Number 71 of 2019. This can result in electronic notarial deeds being deemed legally invalid. According to notarial law, the validity of a deed depends on compliance with formal and material requirements.¹³ Failure to comply with information technology regulations can invalidate the legal status of electronic deeds, potentially causing losses for the parties involved. The lack of clear procedural standards for creating electronic notarial deeds can trigger legal disputes, especially if the parties question the authenticity or integrity of the deed. Research by Yudha Pratama shows that legal disputes often arise from a lack of technical standards in the application of legal technology.¹⁴ In the context of electronic notarial deeds, inconsistent procedural standards can undermine trust in the electronic legal system. Therefore, strengthening regulations, improving notary competency, and investing in technological infrastructure are needed to minimize these risks.

The implementation of electronic notarial deeds in Indonesia, as outlined in the previous analysis, presents various risks, including cybersecurity, legal ambiguity, technical challenges, and socio-ethical implications. To analyze these risks in depth, Gustav Radbruch's theory of the purpose of law (Triadism Law), which encompasses justice, legal certainty, and expediency, is used as an analytical framework. The implementation of electronic notarial deeds in Indonesia is a progressive step in modernization, but faces various serious risks that could hinder the achievement of Gustav Radbruch's legal objectives: justice, expediency, and legal certainty. The risks of unequal access to technology and the misuse of electronic signatures undermine justice by potentially discriminating against communities in remote areas and harming victims of identity fraud. Cybersecurity threats, the lack of digital competence of notaries, and the potential for data loss diminish the benefits of the law by causing unrest and reducing the quality of service. Meanwhile, unclear regulations and inconsistencies with notarial principles weaken legal certainty, resulting in the potential for electronic deeds to be disregarded as evidence. Based on

¹³Tan Thong Kie. (2017). *Studi Notariat*, Pustaka Reka Cipta, Bandung, p. 78.

¹⁴Yudha Pratama. (2020). Sengketa Hukum dalam Transaksi Elektronik, *Jurnal Hukum dan Teknologi*, Vol. 4, No. 2, 145.

Radbruch's priority principles, justice must be the primary focus, followed by legal benefits and certainty, which can be achieved through strengthening derivative regulations, cybersecurity standards, technology training for Notaries, and equitable distribution of digital infrastructure so that electronic notary services can provide fair, beneficial, and certain legal protection for all Indonesian people.

3.2. The Impact of These Risks on the Legal Validity of Electronic Notarial Deeds According to the Provisions of the Legislation in Force in Indonesia

The principle of a state based on the rule of law guarantees certainty, order, and legal protection, based on truth and justice. To protect human interests, the law must be enforced. However, this implementation must proceed normally, orderly, and effectively. If a violation of the law occurs, enforcement efforts must be taken by the authorized apparatus.¹⁵ Making a deed Notary Public Electronically, this is a demand or desire of the public or the parties, but this does not mean that Notaries can ignore existing legal provisions. According to Djuhad Mahja, the public's interest in the functions and duties of Notaries is to obtain certainty, order, and legal protection, which requires authentic written evidence regarding circumstances, events, or legal acts made before certain officials. Notaries are a position that has an important role in providing legal services to the public who need protection and guarantees to achieve legal certainty.¹⁶ The Civil Code is a general provision governing the authority of a notary as a public official, while the Notary Law serves as a *lex specialis*, regulating the duties and authority of a notary in greater detail. Similarly, the Electronic Transactions and Information Law (ITE) is a special regulation (*lex specialis*) regarding electronic transactions, which were previously regulated conventionally in the Civil Code.¹⁷

The implementation of electronic notarial deeds in Indonesia is an innovation in the modernization of notarial services in line with the development of information technology, as regulated in Article 15 paragraph (3) of Law Number 2 of 2014 concerning Amendments to Law Number 30 of 2004 concerning the Office of Notary. However, this implementation presents cybersecurity, legal, technical-operational, and socio-ethical risks that can impact the legal validity of electronic deeds.

¹⁵Tiara Sanitra. (2019). Pertanggungjawaban Notaris dan Akibat Hukum Pengesahan Pendirian Perseroan Terbatas Melalui Sistem Administrasi Badan Hukum, *Jurnal Lex Renaissance*, No. 1 Vol. 4 (1), 146

¹⁶Djuhad Mahja. (2005). *Undang-Undang Nomor 30 Tahun 2004 tentang Jabatan Notaris*, Durat Bahagia, Jakarta, p. 59.

¹⁷Faza Irfan. (2024). Urgensi Pembaharuan Cyber Notary Dalam Undang Undang Jabatan Notaris Berdasarkan Perkembangan Teknologi, *NOTARIUS*, Volume 17 Nomor 1, 34

1) The Impact of Cybersecurity Risks on the Legal Validity of Electronic Notarial Deeds

Cybersecurity risks, such as hacking, data interception, and data loss or corruption, have the potential to undermine the legal validity of electronic notarial deeds. Based on a legal approach, Article 15 paragraph (3) of the Notary Law permits the use of information technology, but Article 26 of the Information Technology Law requires a secure electronic system to guarantee data integrity. Hacking can result in manipulation of the deed, thus failing to comply with Article 1867 of the Civil Code concerning authentic deeds as perfect evidence. The doctrine of the validity of deeds according to Abdul Ghofur Anshori emphasizes the importance of document security to maintain integrity and public trust.¹⁸ This risk is legally wrong because it damages authenticity, so Notaries are required to implement high-level encryption and multi-factor authentication, in accordance with Article 46 of the PSTE PP regarding system redundancy.

2) The Impact of Legal Risks on the Legal Validity of Electronic Notarial Deeds

The legal risks of electronic notarial deeds primarily lie in the unclear status of their status within the positive legal system. Article 5 paragraph (4) of Law No. 1 of 2024 concerning ITE does indeed open up the opportunity for recognition of electronic deeds as long as they are in line with the Notary Law (UUJN), but the authenticity requirements of Article 1868 of the Civil Code still require a form stipulated by law and made before an authorized official. The absence of derivative regulations from the UUJN regarding cyber notary and the limitation of electronic signatures on relaas deeds in Article 59 paragraph (3) of the PP PSTE adds to the uncertainty, thus risking rejection in court and threatening the principle of authenticity of the deed.¹⁹ Revision of the Law is necessary for harmonization with the ITE Law.

Non-compliance with the principle of direct (*onmiddellijkheid*) and the presence of the parties, as stipulated in Article 16 paragraph (1) letter m of the Notary Law which requires the reading of the deed in the presence of the person appearing and witnesses followed by simultaneous signing to ensure the accuracy and similarity of the contents of the deed with the wishes of the parties, can make the deed invalid if the teleconference does not meet the equivalent requirements. From a doctrinal perspective, according to Sudikno Mertokusumo, legal certainty depends on the application of rules that fulfill the internal structure of norms such as clarity and stability, which have not been met due to the absence of official regulations for the creation of electronic deeds without direct face-to-face meetings. Tan Thong Kie stated that validity depends on

¹⁸Abdul Ghofur Anshori. (2009). *Lembaga Kenotariatan Indonesia: Perspektif Hukum dan Etika*, Pustaka Yustisia, Yogyakarta, p. 45.

¹⁹Rina Yulianti. (2018). Asas Kenotariatan dalam Era Digital, *Jurnal Hukum Bisnis*, Vol. 3, No. 1, 89.

formal and material requirements adapted to electronics.²⁰Lack of technical standards triggers legal disputes,²¹Even though it is a *ius constituendum*, with future regulations that accommodate form, security and authenticity, electronic deeds have the potential to have equal standing with conventional authentic deeds.

3) The Impact of Technical and Operational Risks on the Legal Validity of Electronic Notarial Deeds

The lack of technological competence of Notaries increases the risk of verification errors, violating Article 1 paragraph (1) of the Notary Law concerning the competence of public officials. The Notary competence doctrine according to Abdul Ghofur Anshori emphasizes mastery of technology for the integrity of deeds. As a solution, mandatory technology training is needed by the Ministry of Law and Human Rights. Infrastructure dependency, such as unstable internet can also disrupt the deed creation process, violating Article 46 of the PP PSTE. The Ministry of Communication and Information's report shows the digital divide as a challenge. As a solution, infrastructure investment is needed to guarantee validity across the region.

4) The Impact of Social and Ethical Risks on the Legal Validity of Electronic Notarial Deeds

Electronic signatures are regulated, among others, in Article 1 number 12 of the Information Technology Law. Electronic signatures function as a tool to verify a signature so that it has strong and clear legal force. This electronic signature is divided into 2 (two) parts, namely a signature that has been certified so that it has strong and concrete legal force, there is an electronic signature that has not been certified so that its legal force is not very strong. This is as regulated in Article 60 paragraph (2) of the PP PSTE, namely electronic signatures include certified and uncertified. A certified electronic signature is a signature used as a tool for digital verification using an Electronic Certificate issued by the Indonesian Electronic Certificate Provider (PSrE) which is recognized by Kominfo. While an uncertified electronic signature is of course the opposite of the definition above.²²

Electronic signatures must comply with Article 11 of the Information Technology Law so that their legal force and legal evidence are equivalent to authentic deeds as regulated in the Notary Law. The legal benefit of electronic or electronic

²⁰Tan Thong Kie. (2010). *Studi Notariat dan Serba-Serbi Praktik Notaris*, PT Gramedia Pustaka Utama, Jakarta, p. 102.

²¹Yudha Pratama. (2021). Tantangan Hukum Teknologi dalam Kenotariatan, *Jurnal Hukum dan Teknologi*, Vol. 7, No. 3, 145

²²Selva Omiyani1 (2023). Digitalisasi Tandatangan Elektronik pada Akta Notaris, *Jurnal Ilmiah Mahasiswa Pendidikan Sejarah*, Volume 8 Nomor 4, 3921

signatures is that they will guarantee the legal force of electronic documents sent, thus having Authenticity, Integrity, Non-Repudiation and Confidentiality. Asymmetric cryptography is one form of electronic signature, and it has two keys, namely the public and private keys. A Certification Authority (CA) is one of the institutions that if we want a signature to have strong legal force and legal evidence, must register it with the institution. Therefore, it can be said that the Certification Authority (CA) is a public official.²³

The implementation of electronic notarial deeds presents cybersecurity, legal, technical-operational, and socio-ethical risks that can threaten the legal validity of electronic deeds. The Stufenbau theory describes the legal system as a hierarchical hierarchy of norms, where lower norms must be in harmony with higher norms, culminating in the grundnorm in Indonesia, the 1945 Constitution of the Republic of Indonesia (UUD 1945) which guarantees legal certainty (Article 28D paragraph (1)). Based on Kelsen's Stufenbau theory, cybersecurity, legal, technical-operational and socio-ethical risks threaten the validity of electronic notarial deeds because subordinate norms (UU ITE, UUJN, PP PSTE) are not in line with the grundnorm of the 1945 Constitution, creating a hierarchical contradiction that weakens interlocking norms. The law should be strengthened through derivative regulations (verordnung), technology training, infrastructure investment and electronic signature certification, with supervision by the Constitutional Court to ensure coherence with the staatsfundamentálnorm, so that electronic deeds have the same legal force as authentic deeds.

In general, it is a need for everyone to have legal protection for every electronic transaction. This protection not only takes the form of recognizing the evidentiary value of electronic information but also ensures that the subjective elements of the contractual relationship, which determine the legality of a transaction, are met. This subjective element will be met if there is clarity regarding the legal identities of the parties and their legal capacity.²⁴ To guarantee this, the presence of a notary acts as a deterrent against the possibility of fraud in electronic transactions.

4. Conclusion

The implementation of electronic notarial deeds in Indonesia faces various risks that have implications for their legal validity. Cybersecurity risks in the form of hacking, wiretapping, and data loss have the potential to invalidate the deed's status as authentic evidence. Legal risks arise from unclear regulations in the ITE Law, UUJN, and PP PSTE as well as potential inconsistencies with the principle of

²³Eman Sulaiman, Nur Arifudin, dan Lily Triyana. (2020). Kekuatan Hukum Digital Signature Sebagai Alat Bukti Yang Sah Di Tinjau Dari Hukum Acara Perdata," *Risalah Hukum*, Volume 16, Nomor 2, 05

²⁴Edmon Makarim. (2013). *Notaris dan Transaksi Elektronik, Kajian Hukum tentang Cybernotary atau Electronic Notary, Rajawali Pers, Jakarta*, ed. ke-2., p. 133

onmiddellijkheid, making the deed vulnerable to being rejected in court. From a technical-operational perspective, the low digital competence of Notaries and limited infrastructure give rise to the potential for verification errors, while from a socio-ethical perspective, the misuse of electronic signatures threatens authenticity and public trust. Disharmony between regulations and the principle of legal certainty in Article 28D paragraph (1) of the 1945 Constitution exacerbates this condition, so that clear derivative regulations, increased digital competence of Notaries, and equal distribution of infrastructure are needed so that electronic deeds truly function as instruments of legal certainty, justice, and benefit.

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