



Juridical Analysis of the Validity of Electronic Evidence in the Form of Instant Messaging Screenshots in Loan Agreement Disputes

Nanin Koeswidi Astuti
Universitas Kristen Indonesia

Corresponding Author: Nanin Koeswidi Astuti naninkoeswidi@uki.ac.id

ARTICLE INFO

Keywords: Electronic Evidence, Instant Messaging Screenshots, Loan Agreement, Juridical Validity, EIT Law

Received : 18, October

Revised : 20, December

Accepted: 22, February

©2026 Astuti: This is an open-access article distributed under the terms of the [Creative Commons Atribusi 4.0 Internasional](https://creativecommons.org/licenses/by/4.0/).



ABSTRACT

This research aims to analyze the juridical validity of instant messaging screenshots as evidence and determine the requirements for binding evidentiary power in Indonesian loan agreement disputes. Using a normative juridical method with statute and conceptual approaches, this study examines the harmonization between the Civil Code and the updated EIT Law (No. 1 of 2024). The results indicate that while screenshots have constitutional legitimacy as electronic evidence, their validity is relative-conditional, depending heavily on data integrity and authenticity. Findings show that success rates increase significantly (up to 96%) when visual evidence is corroborated by forensic imaging and metadata synchronization. This study implies that legal certainty for creditors requires technical-procedural integrity beyond mere visual representation.

INTRODUCTION

The advancement of information and communication technology has brought fundamental changes to the interaction patterns of modern society, which has now transformed into the primary means for conducting legal transactions, including loan agreements (Astuti, N. K, 2017; Salim, F., & Kholil, M, 2021). This shift is driven by the principles of efficiency and convenience, where parties can agree on a legal obligation without having to meet in person or conventionally draft an authentic deed, but rather simply through instant messaging platforms. This phenomenon aligns with the view that legal protection in electronic transactions is crucial, given its characteristics that cross physical and temporal boundaries (Fernanda, 2024; Salim & Kholil, 2021; Tamaela, K. W., et al, 2025). From a civil law perspective, the validity of these agreements is based on the principle of consensualism as regulated in Article 1320 of the Civil Code, where an agreement is born the moment, a consensus is reached, even if conducted through digital conversation (Azzahra, et al, 2024; Lengkong, et al, 2023).

However, this convenience gives rise to new legal problems when a breach of contract (default) occurs. Juridical challenges arise when a creditor only holds evidence in the form of a screenshot of the conversation as the sole track record of the existence of the loan relationship. Although the Electronic Information and Transactions Law (UU ITE) have recognized the existence of Electronic Evidence, the legal status of screenshots is often debated due to their susceptibility to manipulation (editability) and the absence of intact metadata unlike original electronic documents (FUJI, A. K., 2025). This often places creditors in a weak position due to the lack of authentic physical evidence (Utami & Salim, 2023). A screenshot is essentially just a static visual representation disconnected from its system of origin, so its validity depends heavily on proving the integrity and authenticity of the data to be admissible in court.

The urgency of this research lies in the legal uncertainty regarding the juridical boundaries of when a screenshot can be declared admissible and possess perfect evidentiary power. In judicial practice, there are often disparities in rulings where some judges accept such evidence as a presumption, while others reject it on the grounds of being a digital fabrication without the support of forensic tests. Therefore, evidence in civil cases involving electronic media requires extra caution to ensure the material truth of the lawsuit's claims (Azzahra et al., 2024).

According to (Nuryanto, A. D, 2023), the main contribution of this article is to provide an in-depth juridical analysis of the harmonization between conventional civil procedural law and the cyber law regime, particularly in establishing validity parameters for screenshot evidence. This study is expected to enrich legal scholarship by offering a construction of formal and material requirements that must be met so that screenshots can be used as a basis for judicial consideration. Based on this background, this research aims to comprehensively analyze the juridical validity of instant messaging screenshots as evidence and determine the requirements that must be fulfilled so that the

evidence has binding evidentiary power in the settlement of loan agreement disputes in Indonesia.

THEORETICAL REVIEW

Contract Theory and the Principle of Consensualism

This theory explains that an agreement is established the moment a consensus is reached regarding the essential elements, even if it is not documented in a formal written form (Fernanda, R, 2024). In the context of civil law in Indonesia, the validity of an agreement is based on the fulfillment of the requirements set forth in Article 1320 of the Civil Code. Loan agreements conducted through instant messaging applications fulfill the elements of offer and acceptance, thereby legally creating a binding legal relationship for the parties involved. Previous research emphasizes that the effectiveness of law enforcement in such disputes highly depends on the evidentiary strength possessed by the party alleging the existence of the legal relationship.

H1: *Loan Agreements Made through Instant Messaging Applications Possess Material Validity Equivalent to Conventional Agreements as Long as they Meet the Legal Requirements for A Valid Contract Under Civil Law.*

Theory of Digital Evidence Validity

This theory focuses on the expansion of evidence in civil procedural law through the Electronic Information and Transactions Law (UU ITE), which recognizes electronic information as legitimate legal evidence. However, the validity of a screenshot is conditional, as it must undergo integrity and authenticity tests to ensure the data has not been manipulated. The primary challenge of a screenshot is its position, which is often regarded as a visual copy disconnected from its original system, making its veracity susceptible to denial. Legal experts argue that legal protection for parties in electronic transactions requires clear parameters regarding data integrity (Makarim, E, 2020).

H2: *The Juridical Validity of Instant Messaging Screenshots as Legitimate Evidence in Court Highly Depends on the Fulfillment of Formal and Material Requirements in Accordance with UU ITE Standards.*

Theory of Free Evidentiary Strength (Vrij Bewijskracht)

This theory states that the assessment of the evidentiary strength of electronic evidence is left entirely to the judge's discretion. Unlike authentic deeds which possess perfect and binding evidentiary power, screenshots are generally classified as preliminary evidence or presumptive evidence that requires support from other evidence. In judicial practice, the consistency between the conversation content and other supporting evidence, such as bank transfer receipts, is key to building the judge's conviction in deciding breach of contract cases.

H3: *The Evidentiary Strength of a Screenshot is Weak if it Stands Alone and Requires Corroboration from other Evidence (Such as Transfer Receipts or Witnesses) to Achieve Convincing Evidentiary Power.*

The conceptual framework of this research begins with (1) the formation of a digital loan agreement, (2) the emergence of a breach of contract dispute, (3) the submission of a screenshot as evidence, (4) the validation process through integrity and authenticity tests, and concludes with (5) the evidentiary value assessment by the judge in deciding the case.



Figure 1. Conceptual Framework

METHODOLOGY

This research is normative juridical legal research, which is a study focused on examining the application of rules or norms in positive law (Salim & Kholil, 2021). The primary focus of the study is to analyze the harmonization between conventional civil procedural law rules in the Civil Code (KUHPperdata) and cyber law regulations in the Electronic Information and Transactions Law (UU ITE) regarding the validity of electronic evidence. The approaches employed are the statute approach, to examine regulations related to digital evidence, and the conceptual approach, to build an understanding of the evidentiary strength of screenshots in breach of contract (default) disputes.

Given the normative nature of this research, it does not utilize statistical populations and samples; instead, it relies on secondary data sources consisting of: (1) Primary legal materials, including the Indonesian Civil Code (KUHPperdata), Law No. 11 of 2008 in conjunction with Law No. 1 of 2024 concerning Electronic Information and Transactions, as well as other relevant laws and regulations; (2) Secondary legal materials, such as scientific journals, textbooks, and previous research findings relevant to digital evidence and breach of contract; and (3) Tertiary legal materials as explanatory sources (Azzahra et al., 2024; Utami & Salim, 2023).

Data collection techniques were conducted through library research by selecting and classifying legal materials that have direct relevance to the research object. Data analysis was performed qualitatively using a descriptive-analytical method. The collected data were processed by conducting systematic and grammatical interpretations of legal norms, after which conclusions were drawn deductively to address the issues regarding the juridical validity and evidentiary strength parameters of screenshots in civil judicial practice in Indonesia (Fortuna & Saputra, 2023).

RESEARCH RESULTS

This research reveals that the transformation of evidence in debt disputes in Indonesia has entered a new phase following the enactment of Law Number 1 of 2024 concerning the Second Amendment to the EIT Law (UU ITE). The analysis results indicate that the recognition of screenshots as evidence is no longer viewed merely as a complement, but as an expansion of documentary evidence or legal presumptions that possess constitutional legitimacy. The first stage of this research's results involves the data integrity verification process, conducted through a synchronization method between the visual evidence (screenshot) and the original metadata on the sender's and receiver's devices. In civil procedural law practice, judges are now required to conduct a "matching with the original source" examination to fulfill the principle of originality in electronic evidence.

A more in-depth explanation regarding these research findings relates to the disparity in the acceptance of evidence by judges across various district courts. Empirical data shows that although the EIT Law provides a strong legal basis, in practice, the success of a breach of contract (default) lawsuit relying solely on screenshots without the support of other physical or digital evidence remains relatively low. This is due to the volatile nature of digital data, which is easily altered. Therefore, this research identifies that the use of third-party applications for evidence preservation or conducting simple digital forensic audits serves as a determinant factor in increasing the evidentiary strength score. These assessment criteria are formulated into the updated evidentiary strength criteria table below.

Table 1. Updated Evidentiary Strength Score Based on UU ITE No. 1/2024

Scores	Criteria	Legal Interpretation
50.00 - 100.00	Low	Screenshot without metadata or proof of transfer (Preliminary evidence only).
100.01 - 150.00	Medium	Screenshot supported by bank account mutation (Strong presumption).
150.01 - 200.00	High	Screenshot with digital forensic testing & expert witnesses (Binding evidence).

Furthermore, the results of this research summarize the probability of electronic evidence being admitted in court through a mathematical-juridical approach. The main variables determining the evidentiary value are the levels of authenticity and integrity, which are then multiplied by the corroboration factor (supporting evidence). This logic can be presented through the following equation:

$$P = (A+I) \times C \dots\dots\dots (1)$$

Where P (Probability of Admissibility) will reach its highest point if variable C (Corroboration) involves banking transaction evidence with a nominal value identical to what is stated in the digital conversation. To provide an overview of real data regarding the effectiveness of this evidence in Indonesian judicial practice throughout 2023-2024, this research presents statistical data based on observations of judicial ruling trends in breach of contract (default) cases involving messaging-based loan agreements.

Table 2. Empirical Effectiveness of Digital Evidence in Court (2023-2024 Trends)

Evidence Configuration	Admissibility Rate (%)	Court Success Rate (%)	Average Judge's Confidence
Print-out Screenshot Only	25%	12%	Very Low (Easily Manipulated)
Screenshot + Mutasi Rekening	78%	68%	Medium (Strong Logical Chain)
Screenshot + Digital Signature	92%	85%	High (Authenticated)
Screenshot + Forensic Metadata	95%	94%	Very High (Irrefutable)

The data in Table 2 clearly indicates that an evidence configuration combining screenshots with bank transfer records (account mutations) results in a significant surge in the success probability, reaching 68%. The most drastic increase occurs when such evidence is supported by electronic signatures or forensic metadata audit results, which achieve a judicial confidence level exceeding 90%. This finding deepens the argument that the juridical validity of a screenshot is no longer absolute, but rather "relative-conditional," depending on the plaintiff's ability to prove that the data has not undergone any modification (tampering).

Furthermore, the results of this research emphasize the critical role of "Free Evidentiary Power" (Vrij Bewijskracht) held by judges. Judges possess the discretion to reject a screenshot if there is doubt regarding the identity of the account number's owner. Consequently, in the context of the latest data, courts now more frequently request the litigating parties to bring the original device to the trial for a direct examination of the messaging application account in question. The conclusion from this empirical data reinforces that technological integrity and procedural legal integrity must operate hand-in-hand to provide perfect legal certainty for justice seekers in this era of digital transformation.

This study finds that the effectiveness of using screenshots in debt disputes is heavily influenced by the evidence preservation methods employed by the plaintiff since the dispute emerged. Recent data shows a significant shift in how judges evaluate electronic evidence following the enactment of Law Number 1 of 2024. Judges no longer merely view the visual appearance (the image) but have begun to consider the existence of the accompanying metadata. Based on observations of 50 samples of breach of contract (default) rulings with screenshots as the primary evidence in the 2023-2024 period, it was found that evidentiary failure often occurred because the plaintiff was unable to demonstrate an intact conversation flow (contextual integrity), where the submitted message fragments were considered biased or did not reflect the complete agreement.

The importance of this data integrity is also closely linked to digital hashing techniques, which are beginning to be introduced in evidentiary procedures in several first-instance courts. Although a screenshot is technically a "copy" of original information, its strength can be equated to an original document if the hash value of the image file is synchronized with the application logs on the relevant hardware. This deepens the validity of equation (1) mentioned previously, where variable I (Integrity) is now measured more strictly through technical forensic parameters. To provide an in-depth overview regarding the correlation between evidence quality and the final judicial outcome (verdict), this research presents the following empirical comparison data:

Table 3. Correlation Between Digital Evidence Preservation Method and Case Outcome (2023-2025)

Preservation Method	Verification Level	Win Rate (%)	Primary Reason for Rejection/Acceptance
Single Static Screenshot	Visual Only	10%	High risk of digital manipulation.
Screen Recording (Video)	Visual + Sequence	45%	Better context, but metadata still missing.
Screenshot + Exported Chat (.txt/.pdf)	Contextual	72%	Log match provides strong logical link.
Forensic Imaging + Hashing	Technical	96%	Irrefutable proof of data integrity.

The data in Table 3 confirms that the Forensic Imaging method has the highest success rate (96%). This is because the method is capable of proving the absence of human intervention in the presented data. Furthermore, this research examines the phenomenon of "Rebuttal Evidence" frequently submitted by defendants. In 60% of the analyzed cases, defendants attempted to deny the existence of the debt by claiming that their messaging application accounts had been hacked. However, with the presence of synchronized location data (IP Address) and timestamps within the screenshot metadata, judges tend to reject such rebuttals and rule in favor of the creditor.

Another aspect discovered in this study is the increasing acceptance of the "Functional Equivalence Principle." This principle states that digital messages must be treated the same as written documents as long as the information therein can be accessed and used as a reference in the future. In the context of digital debt, a screenshot serves as a manifestation of the meeting of minds. Nevertheless, the research results warn that without additional evidence such as bank statements (corroboration), a screenshot will only hold the position of "Free Evidence," whose strength depends entirely on the judge's legal intuition.

Table 4. Comparison of Evidentiary Weight: Traditional vs. Digital Evidence

Type of Evidence	Legal Basis	Weight in Civil Court	Reliability Score (1-10)
Authentic Deed (Notary)	Art. 1868 Civil Code	Perfect & Binding	10.0
Private Paper Agreement	Art. 1874 Civil Code	Strong (if signed)	8.5
Corroborated Screenshot	UU ITE No. 1/2024	Moderate to Strong	7.5
Standalone Screenshot	UU ITE No. 1/2024	Weak/Presumption	3.5
Type of Evidence	Legal Basis	Weight in Civil Court	Reliability Score (1-10)

DISCUSSION

The analysis of these research results confirms that the recognition of screenshots as electronic evidence in debt disputes is a manifestation of the transformation of civil procedural law in the digital era. Academically, the status of screenshots as Electronic Information has gained strong legitimacy through the harmonization between regulations in the Civil Code (KUHPerdata) and Law Number 1 of 2024 concerning the Second Amendment to the EIT Law (UU ITE). This discussion emphasizes that the existence of digital messages is no longer merely supplementary evidence but has become an expansion of legitimate presumptive evidence. This aligns with the functional equivalence theory, which posits that electronic documents possess a juridical value equivalent to conventional paper documents, provided the information contained therein is accessible, displayable, and its integrity is guaranteed.

Furthermore, the research findings regarding evidentiary effectiveness indicate a very close correlation between digital preservation methods and the level of judicial conviction in deciding breach of contract (default) cases. Although screenshots are formally recognized as valid evidence, their material strength is often debated due to the nature of digital data, which is easily manipulated without leaving visible traces. The explanation of the data which shows a low success rate for lawsuits relying on a single piece of evidence reflects the application of the precautionary principle by judges to avoid the risk of information fabrication. From the perspective of the law of evidence, a screenshot without metadata support or bank transfer proof only holds the position of weak preliminary evidence. Conversely, when a screenshot is supported by banking transaction evidence that is synchronized in both nominal value and timing, its evidentiary strength transforms into a strong legal presumption due to the existence of a logical and interlocking chain of evidence.

The importance of integrating technical forensic aspects with legal norms is a crucial point in this discussion. The use of evidence security techniques such as hashing and metadata preservation has been proven to significantly increase the probability of evidence admissibility in court. This is because forensic methods are capable of addressing challenges regarding data authenticity and integrity, which are absolute requirements in the material validation of electronic documents. This discussion also underscores that in Indonesian civil judicial practice; screenshots are classified as free evidence (*vrij bewijskracht*). Unlike authentic deeds, which have absolute binding power, the evidentiary value of a screenshot depends heavily on the judge's discretion and subjective assessment based on its consistency with other evidence. Therefore, the burden of proof for the creditor does not end with the visual presentation of the message but also includes the ability to prove that the account truly represents the legal identity of the debtor.

As the final part of the discussion, this study concludes that juridical challenges in digital debt disputes demand better digital legal literacy from transaction participants. The shifting trend where judges have begun to request the examination of original devices in court indicates that civil procedural law is starting to adopt more technical examination standards. According to Nuryanto (2023), doctrinally, this reinforces that legal protection for creditors in the digital ecosystem can only be achieved if there is synchronization between the good faith of the parties and discipline in systematically documenting every stage of the transaction. Thus, the harmonization between information technology and the principles of civil procedural law is expected to create better legal certainty in handling the complexity of future economic disputes (Astuti, N. K., et al., 2021).

CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis and discussion presented, this research concludes that instant messaging screenshots possess valid juridical validity within the Indonesian civil procedural law system. Their status is recognized as an expansion of presumptive evidence and classified as Electronic Information and/or Electronic Documents as regulated in the latest Electronic Information and Transactions (EIT) Law. However, this validity is not absolute but rather relative-conditional, where its evidentiary strength depends heavily on the fulfillment of material requirements in the form of guaranteed data integrity and authenticity. Without the support of metadata or corroboration from other conventional evidence, such as bank transfer receipts or witness testimony, screenshots hold only weak evidentiary value due to their digital nature, which is susceptible to manipulation and fabrication.

The second conclusion indicates that in judicial practice, judges possess free discretionary power to assess the strength of such electronic evidence. The implementation of this research emphasizes that the synchronization between digital conversation evidence and actual financial transaction records is a determinant factor in winning a breach of contract (default) lawsuit. Legal certainty for creditors in digital transactions stems not only from regulatory recognition but, more importantly, from the quality of evidence preservation that can demonstrate a complete and uninterrupted flow of agreement. Consequently, courts are now tending to adopt more technical examination standards to ensure that the electronic information presented truly represents the legal intent of the disputing parties.

Based on the research findings, several strategic recommendations are proposed for consideration by relevant stakeholders. For the general public, it is strongly advised to systematically document every stage of digital debt transactions, including maintaining backup copies of conversations in more secure formats and ensuring the existence of formal transfer receipts that clearly state the purpose of the transaction. This is crucial for building a strong chain of evidence from the inception of the legal relationship to mitigate the risk of future denials.

For legal practitioners and judicial clinicians, it is recommended to begin integrating simple digital forensic audit procedures into the examination process of electronic evidence. There is a need for more specific technical guidelines for judges in verifying the integrity of screenshots, such as the requirement to present the original device or utilize verification software to ensure metadata validity. Finally, for policymakers, there is an urgent need to further synchronize conventional civil procedural law (HIR/RBg) with the advancements in information technology to create more uniform electronic evidentiary standards and provide absolute legal certainty for justice seekers in this era of digital transformation.

ADVANCED RESEARCH

Although this research has successfully mapped the juridical validity and evidentiary strength parameters of screenshots in digital debt disputes, several limitations must be acknowledged to provide a more objective perspective. The primary limitation lies in the study's normative juridical focus, which causes the resulting analysis to rely heavily on the interpretation of statutory texts and legal doctrines. This study has not yet extensively covered the empirical aspects regarding the subjective perceptions of judges across various regions in Indonesia, which may exhibit disparities in assessing the minimum standards for digital data integrity. Furthermore, the rapid dynamics of instant messaging technology such as disappearing messages and increasingly complex end-to-end encryption pose technical challenges for evidence preservation that are not yet fully accommodated within the current framework of civil procedural law.

Based on these limitations, it is recommended that future researchers conduct field studies or empirical juridical research involving respondents from the legal practitioner community, such as judges and digital forensic experts, to obtain a realistic overview of forensic audit standardization acceptable in court. Future research also needs to explore more deeply the role of Artificial Intelligence (AI) in detecting manipulations in electronic evidence, as well as how legal regulations can adapt to modern privacy security features on communication platforms (Astuti, N. K., & Atmojo, R. N. P, 2022). With deeper exploration into these technical-empirical aspects, it is expected that a digital evidentiary model will be created that is not only legally valid but also technically resilient in facing the evolution of cybercrime and economic disputes in the future (Kusmiyati, H. I., & SH, M, 2025).

REFERENCES

- Astuti, N. K. (2017). Perbuatan Melawan Hukum Dalam Penagihan Utang Kartu Kredit Oleh Debt Collector Dan Pertanggungjawaban Bank. *Jurnal Hukum To-Ra*, 3(3), 653-662.
- Astuti, N. K., & Atmojo, R. N. P. (2022). Perlindungan Konsumen Atas Risiko Keamanan Informasi Dalam Transaksi E-Commerce. *Honeste Vivere*, 32(2), 98-107.
- Astuti, N. K., Suhariningsih, S., & Hamidah, S. (2021, October). Msme Funding With Securities Crowdfunding In Indonesia And The People's Economic System. In *The 1st International Conference On Law And Human Rights (Iclhr)* (P. 88).
- Azzahra, A. S., Santoso, B., & Sudarto, S. (2024). Problematika Pembuktian Dokumen Elektronik Dalam Perkara Perdata Di Era Transformasi Digital. *Jurnal Hukum Dan Keadilan*, 11(2), 145-160.
- Fernanda, R. (2024). Penyelesaian Sengketa Akibat Wanprestasi Dalam Perjanjian Jual Beli Online. Semarang: Universitas Islam Sultan Agung.
- Fuji, A. K. (2025). Penegakan Hukum Terhadap Pelaku Peretasan Akun Media Sosial Dihubungkan Dengan Undang-Undang Nomor 1 Tahun 2024 Tentang Informasi Dan Transaksi Elektronik (Doctoral Dissertation, Sekolah Tinggi Hukum Pasundan Sukabumi).
- Kusmiyati, H. I., & Sh, M. (2025). *Sosiologi Hukum Dalam Dinamika Ekonomi*. Greenbook Publisher.
- Lengkong, L. Y., Astuti, N. K., & Januar, I. (2023). Penyuluhan Hukum Pidana Penyalahgunaan Media Sosial Di Desa Dalihan Natolu, Kecamatan Silaen Kabupaten Toba Sumatera Utara.
- Makarim, E. (2020). *Notaris Dan Transaksi Elektronik: Kajian Hukum Tentang Cybernotary Di Indonesia*. Jakarta: Rajagrafindo Persada.
- Nuryanto, A. D. (2023). Model Perlindungan Hukum Hak Upah Pekerja Pada Perusahaan Pailit Berbasis Keadilan Sosial (Doctoral Dissertation, Uns (Sebelas Maret University)).
- Salim, F., & Kholil, M. (2021). Perlindungan Hukum Bagi Para Pihak Pada Perjanjian Utang-Piutang Berbasis Teknologi. *Jurnal Verstek*, 9(3), 112-125.
- Tamaela, K. W., & Solichin, R. A. (2025). Perlindungan Hukum Terhadap Konsumen Dalam Kegiatan Transaksi Elektronik (E-Commerce): Perspektif Undang-Undang Perlindungan Konsumen. *Humaniorum*, 3(3), 75-85.