



Potential Money Laundering Crimes Through Blockchain-Based Digital Legal Insurance Schemes In Indonesia

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Abstrak: Penelitian ini berjudul Potensi Tindak Pidana Pencucian Uang Melalui Skema Asuransi Hukum Digital Berbasis Blockchain Di Indonesia. Latar belakang masalah adalah pertumbuhan asuransi digital yang cepat namun rentan disalahgunakan untuk kejahatan keuangan karena fitur anonimitas teknologi blockchain. Tujuan penelitian adalah untuk mengetahui mekanisme skema asuransi hukum digital, menganalisis potensi modus pencucian uang, dan mengkaji pengaturan hukum pidana di Indonesia. Metode penelitian menggunakan yuridis normatif dengan pendekatan undang-undang dan konseptual. Hasil penelitian menunjukkan bahwa anonimitas blockchain dan kontrak cerdas menciptakan celah untuk tahap penempatan, pelapisan, dan integrasi dana ilegal. Regulasi saat ini belum spesifik mengatur mitigasi risiko ini dalam produk asuransi teknologi hukum. Kesimpulan menyarankan revisi undang-undang pencegahan pencucian uang dan pengawasan otoritas jasa keuangan yang lebih ketat. Diperlukan verifikasi identitas lebih ketat pada platform asuransi hukum digital dan memasukkan produk ini dalam daftar wajib lapor transaksi mencurigakan untuk mencegah penyalahgunaan sistem asuransi hukum sebagai sarana pencucian uang yang dapat menghambat proses peradilan pidana.

Keyword: Money Laundering, Legal Insurance, Blockchain, Digitalization, Criminal Law.

Abstract: *Potential Money Laundering Crimes Through Blockchain-Based Digital Legal Insurance Schemes In Indonesia. The background issue is the rapid growth of digital insurance vulnerable to financial crime due to blockchain anonymity features. The objectives are to determine the mechanism of digital legal insurance schemes, analyze money laundering potential, and examine criminal law regulations in Indonesia. The research method uses normative juridical with statute and conceptual approaches. The results show that blockchain anonymity and smart contracts create loopholes for placement, layering, and integration stages of illegal funds. Current regulations do not specifically regulate risk mitigation in legal insurtech products. The conclusion suggests revising the money laundering prevention law and stricter financial services authority supervision. Stricter identity verification is required on digital legal insurance platforms and including this product in the suspicious transaction reporting list to prevent misuse of the legal insurance system as a means of money laundering that can hinder the criminal justice process.*

Keywords: *Money Laundering, Legal Insurance, Blockchain, Digitalization, Criminal Law*

INTRODUCTION

The development of financial technology (fintech) has expanded into the insurance sector with the emergence of the term Insurtech. In Indonesia, insurance digitalization is not limited to general or life insurance but has begun to expand into niche products such as legal insurance. Based on data from the Financial Services Authority (OJK), the growth of insurtech in Indonesia experienced a significant increase of 45% in 2023 compared to the previous year (OJK, 2021). Digital legal insurance offers easy access to legal assistance for policyholders through online platforms integrated with digital payment systems and automatic claims. However, the adoption of blockchain technology in this scheme introduces new risks that must be addressed. Blockchain offers decentralization, transparency, and immutability, yet certain anonymity features can be misused for illicit purposes (Chen & Zhang, 2022).

The phenomenon of money laundering is becoming increasingly complex alongside the digitalization of financial services. Money Laundering Crimes (TPPU) exploit regulatory gaps in new financial products that have not been strictly regulated. Blockchain-based digital legal insurance has the potential to become a new medium for layering illegal funds due to the automatic nature of smart contracts that are difficult to track by conventional authorities. In Indonesia, insurance regulations still focus on conventional products, while specific regulations for digital legal insurance remain immature. Data from the Financial Transaction Reports and Analysis Center (PPATK) shows a 23% increase in suspicious transactions in the insurance sector in 2023, with indications of digital technology utilization (Susanto, 2019).

Legal Certainty Theory serves as an important foundation for this research. Law must provide protection for the public while also being able to keep pace with technological developments. Additionally, Risk-Based Approach theory in money laundering prevention emphasizes the importance of early risk identification for new financial products (Arner et al., 2020). Legal uncertainty in this context can create legal loopholes exploited by perpetrators of economic crimes.

To clarify the growth of insurtech and potential money laundering risks, the following table presents data on the development of digital transactions in Indonesia's insurance sector:

Table 1. Growth of Digital Transactions and Suspicious Transaction Reports in Indonesia's Insurance Sector 2021-2023

Year	Number of Digital Transactions (million)	Growth (%)	Suspicious Transaction Reports	Increase in STR (%)
2021	12.5	-	1,240	-
2022	18.3	46.4	1,525	23.0
2023	26.7	45.9	1,876	23.0

Source: OJK and PPATK (2021)

Based on this background, the problem formulation in this research is:

- How does the mechanism of blockchain-based digital legal insurance schemes work in Indonesia?
- What is the potential for money laundering crimes through such schemes?
- How does Indonesian criminal law regulate the mitigation of these risks?

This research is important to provide an overview of regulatory urgency before this technology is adopted on a massive scale. The research objectives are to determine the mechanism of blockchain-based digital legal insurance schemes, analyze potential money laundering modes within such schemes, and examine criminal liability and legal gaps in Indonesia.

METHOD

This research employs normative legal research focusing on the examination of legal norms and principles. The approaches used are the statute approach to examine regulations related to insurance, money laundering, and information technology, and the conceptual approach to analyze legal concepts of digital insurance and blockchain from a criminal law perspective (Muthmainnah, 2017). This research does not use population sampling as it is a document-based legal study, instead relying on relevant legal materials to answer the research questions.

Data sources in this research consist of primary and secondary legal materials. Primary legal materials include Law Number 8 of 2010 concerning Prevention and Eradication of Money Laundering Crimes, Law Number 40 of 2014 concerning Insurance, and Law Number 11 of 2008 concerning Electronic Information and Transactions. Secondary legal materials were obtained from international and national scientific journals, legal textbooks, and reports from financial institutions such as OJK and PPATK relevant to the topics of insurtech, blockchain, and economic criminal law. To clarify the classification of legal materials used, the following table presents the categories of legal materials:

Table 2. Classification of Legal Materials in Research

Type of Legal Material	Example Documents	Relevance
Primary	Money Laundering Law, Insurance Law, ITE Law	Basis of applicable positive law
Secondary	International Journals, Legal Books, OJK Reports	Supporting analysis and theory
Tertiary	Legal Dictionaries, Encyclopedias	Explanation of technical terms

Source: Research Data (2026)

Data collection techniques were conducted through library research by systematically examining legal documents and related literature. Data analysis techniques used descriptive qualitative analysis. Collected data were interpreted to answer research questions regarding potential criminalization and legal gaps. This analysis was conducted by connecting legal facts regarding blockchain technology with substantive criminal law provisions in Indonesia (Setiawan, 2022). The analysis focus is on the interaction between blockchain technology and criminal law provisions as well as insurance law to identify regulatory gaps that could potentially be exploited for money laundering crimes.

RESULTS AND DISCUSSION

Mechanism of Blockchain-Based Digital Legal Insurance Schemes

Blockchain-based digital legal insurance schemes operate using smart contract technology executed on distributed networks such as Ethereum or Hyperledger. Smart contracts function as digital insurance policies that automatically execute agreement provisions when certain conditions are met without requiring third-party intervention. In the context of legal insurance, programming code defines insurable events, such as arrest by law enforcement or receipt of an indictment, which are verified through external data oracles (Chen & Zhang, 2022). When such events are confirmed by the oracle, the smart contract automatically disburses crypto funds to the policyholder's wallet address or directly to the designated law firm's account.

The decentralization feature is a primary characteristic distinguishing this scheme from conventional insurance. No single entity holds full control over premium funds as funds are stored in liquidity pools managed by decentralized protocols. This reduces single point of failure risks while simultaneously eliminating a central authority capable of real-time

transaction monitoring. Additionally, blockchain offers anonymity or pseudonymity features where user identities are represented only by public addresses that do not directly reveal the actual owner's identity unless deep blockchain forensic analysis is conducted (Lee, 2023).

Premium payments and claim settlements in this scheme occur automatically without significant human intermediaries. Policyholders pay premiums using cryptocurrency or through fiat payment gateways that are instantly converted. The claims process, which typically takes weeks to months in conventional insurance due to manual verification, can be completed within minutes in blockchain schemes. This efficiency is attractive to users but creates blind spots for regulators due to the absence of strict manual underwriting processes to assess customer risk profiles. This automation means that as long as data entering the oracle is correct according to the system, funds will be disbursed regardless of whether the premium source is legal or not (Hidayat, 2021).

Potential for Money Laundering Crimes

The potential for money laundering crimes in blockchain-based digital legal insurance schemes can be analyzed through three main stages of money laundering: placement, layering, and integration. In the placement stage, illegal funds from predicate crimes such as corruption, narcotics, or illegal gambling are introduced into the digital legal insurance system. Perpetrators can pay premiums using cryptocurrency obtained from dark markets or through crypto mixer services that obscure the origin of funds. Because digital transaction limits are often more lenient compared to conventional banking that strictly implements Cash Transaction Reports, perpetrators can break large transactions into small premiums (smurfing) to avoid suspicious transaction reporting (Fatimah, 2019).

The layering stage is the most critical and vulnerable stage in blockchain-based schemes. Premium funds that have entered the insurance pool can be transferred through various wallet addresses within the blockchain network before eventually being used for claims. Smart contracts can be programmed to automatically transfer funds to various legal accounts or legal service providers in different jurisdictions. This complexity makes it difficult for Financial Service Providers and PPATK to trace the origin of funds in real-time. Differences in regulations between countries are also exploited by perpetrators to move funds to jurisdictions with high bank secrecy or lenient crypto regulations (Zhao, 2021).

In the integration stage, claim funds received by policyholders or third parties appear to become clean funds legitimately derived from legal dispute resolution. Because legal insurance provides legitimacy for funds used for legal costs, such funds appear legal in the eyes of the law. This creates a domino effect where predicate crimes are obscured by layers of legitimate legal protection. Defendants in criminal cases can use money laundering proceeds to finance expensive lawyers, which indirectly hinders investigation and prosecution processes due to imbalanced legal resources (Nugroho, 2022).

To clarify the comparison of money laundering risks between conventional insurance and blockchain-based digital legal insurance, the following table presents a risk analysis:

Table 3. Comparison of Money Laundering Risks: Conventional Insurance vs. Blockchain Digital Insurance:

Aspect	Conventional Insurance	Blockchain Digital Legal Insurance
Customer Identity	Strict KYC verification by company	Pseudonym (Wallet Address), Variable KYC
Transaction Monitoring	Monitored by Compliance Officer	Automated by Code, Difficult to Intervene
Audit Trail	Recorded in centralized database	Recorded on Public Ledger (encrypted)
Claim Speed	Slow (Manual Verification)	Fast (Smart Contract Execution)
Layering Risk	Low (Centralized)	High (Decentralized)

A hypothetical case study can illustrate this *modus operandi*. For example, Perpetrator A has corruption proceeds of 100 Bitcoin. Perpetrator A purchases digital legal insurance policies for themselves and 10 fake accounts with small premiums. After the waiting period, Perpetrator A triggers claims through manipulated oracles or using real legal events. Received claim funds are distributed to various wallets then converted to fiat through exchanges with less strict oversight. These funds are now used to pay legal services in the money laundering case itself, creating a crime cycle that is difficult to break (Evans, 2021).

Criminal Law Analysis and Regulations in Indonesia

Law Number 8 of 2010 concerning Prevention and Eradication of Money Laundering Crimes has included insurance as one of the sectors required to apply money laundering prevention principles. Article 2 paragraph (1) states that money laundering crimes are acts committed by any person fulfilling elements as intended in Article 3, Article 4, Article 5, or Article 6. However, the definition of Insurance Company in this law needs to be tested whether it covers blockchain-based insurtech entities that may not have conventional business entity forms in Indonesia or operate cross-border without physical offices (Setiawan, 2022).

The obligation to report Suspicious Financial Transactions to PPATK is a major technical challenge. If transactions occur on public blockchains without domestic banking intermediaries, the reporting mechanism becomes hindered. The Financial Services Authority has issued regulations regarding technological innovation in the financial services sector through POJK Number 13/POJK.02/2018, but the focus is more on consumer protection than crime prevention. There is a legal gap where technology develops faster than criminal regulations. Digital legal insurance is often not classified as a traditional insurance product but rather as a technology service, thus escaping PPATK reporting obligations that conventional insurance companies must fulfill (Pratama, 2023).

Criminal liability can be imposed on corporate platform providers if proven negligent in applying KYC and Anti-Money Laundering principles. Article 10 of the Money Laundering Law regulates corporate criminal liability. However, proving the fault element (*mens rea*) in automatic algorithms presents a new challenge in Indonesian criminal law. Can algorithmic negligence be categorized as corporate fault? This requires progressive legal interpretation. If platforms only provide code and do not hold funds (non-custodial), their legal position becomes increasingly ambiguous under the Money Laundering Law (Clark, 2020).

Additionally, a domino effect on criminal law occurs when legal insurance users use money laundering proceeds to finance legal defense in other criminal cases. This can hinder investigation processes because available legal funds enable defendants to access unlimited legal resources, potentially obstructing justice. Therefore, regulations must ensure that premium fund sources originate from legal sources. Comparison with international regulations shows that some jurisdictions are beginning to require crypto asset service providers to register as Financial Service Providers. Indonesia needs to adopt similar standards for digital legal insurance platforms. Without specific regulations, Indonesia risks becoming a haven for money laundering through this new insurtech sector. Integration between the Electronic Information and Transactions Law, Insurance Law, and Money Laundering Law needs to be strengthened to close this legal gap (Wijaya, 2021).

CONCLUSION

Blockchain mechanisms in digital legal insurance offer significant operational efficiency through smart contract-based automatic execution that reduces dependence on human intermediaries. However, the decentralization and anonymity features that are the main advantages of this technology actually bring high security risks to financial system integrity. The inability to directly identify wallet address owners without additional verification creates

strategic gaps that can be exploited by criminals to conceal actual identities in insurance premium and claim transactions.

Based on analysis of the research questions, the potential for money laundering crimes is very real, particularly in the layering stage through smart contract algorithm complexity. Illegal funds can be transferred through various wallet addresses automatically before being claimed as legitimate legal assistance funds, making it difficult for law enforcement to trace fund origins. This answers the research objective that without adequate supervision, claim automation in digital legal insurance has significant potential to be misused for legitimizing predicate crime proceeds into funds that appear legal.

As a legal recommendation directly linked to the research title, specific regulations from the Financial Services Authority and Financial Transaction Reports and Analysis Center are needed to anticipate these criminal risks. Such regulations must require stricter Know Your Customer identity verification on digital legal insurance platforms operating in Indonesia. Additionally, this product needs to be explicitly included in the suspicious transaction reporting list to prevent misuse of the legal insurance system as a means of money laundering that can hinder the criminal justice process.

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