

(Research) Article

## The Role of Notaries in Preventing the Misuse of Fintech and Crypto Assets for Money Laundering: Risk Analysis and Required Due Diligence Framework

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**Abstract:** The rapid development of financial technology (fintech) and crypto assets has created a paradox in the global financial system: while promoting inclusion and efficiency, it also opens new vulnerabilities for money laundering offenses. Notaries, as public officials and legal professionals involved in various financial and business transactions, are at the forefront of preventing this misuse. This article analyzes the specific risks of money laundering through fintech and crypto assets and formulates the due diligence framework required by notaries in carrying out their preventive functions. The research method uses a normative juridical approach with doctrinal analysis of regulations and international standards, enriched with case studies and best practice references. The findings indicate that notaries face three main challenges: (1) difficulty in identifying parties in virtual transactions, (2) the volatility and relative anonymity of crypto assets, and (3) the gap between the speed of technological innovation and regulatory adaptation. This article proposes an Enhanced Digital Due Diligence (ED3) model that integrates digital verification technology, blockchain forensic analysis, and a dynamic risk-based approach. This framework is expected to strengthen the role of notaries as gatekeepers in the rapidly evolving digital financial ecosystem while maintaining the profession's relevance in the era of digital transformation.

**Keywords:** Crypto Assets; Due Diligence; Fintech; Money Laundering Crime; Notary.

Received: 11 November 2025

Revised: 18 December 2025

Accepted: 16 January 2026

Published: 30 January 2026

Curr. Ver.: 30 January 2026



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## 1. Introduction

### 1.1. Background

The digital revolution in the financial sector has transformed the landscape of global economic transactions. Financial technology (fintech) and crypto assets not only represent technological innovation but also a new paradigm in the concept of value, transactions, and trust in the financial system [1]. The exponential growth of the global crypto asset market reaching a market capitalization of over USD 2 trillion in 2024, along with the proliferation of fintech platforms covering digital payments, peer-to-peer lending, and decentralized finance (DeFi) services, has created a complex parallel financial ecosystem [2].

However, the dark side of this innovation emerges in the form of vulnerabilities exploited for illegal activities, including money laundering offenses. The Financial Action Task Force (FATF) in its latest report highlighted a significant increase in the misuse of crypto assets and fintech platforms for money laundering, with estimated illegal transaction values reaching USD 8.6 billion in 2023 [3]. Certain technical characteristics such as pseudonymity (not absolute anonymity), decentralization, and cross-border transaction speed make digital assets attractive tools for financial crime perpetrators [4].

In the context of Indonesian law, notaries hold a strategic position as public officials authorized to create authentic deeds and involved in various significant business transactions. Law Number 30 of 2004 concerning the Office of Notary and Law Number 8 of 2010 concerning Money Laundering Crime place notaries as parties obligated to participate in the prevention and eradication of money laundering [5]. This obligation becomes increasingly crucial along with the proliferation of transactions involving digital assets and fintech platforms in contemporary notarial practice.

## 1.2. Problem Statement

Notaries currently face a dilemma between facilitating financial technology innovation and fulfilling legal obligations as gatekeepers in preventing money laundering. Existing regulations, such as Commodity Futures Trading Regulatory Agency (Bappebti) Regulation Number 8 of 2021 concerning the Implementation of Physical Crypto Asset Markets, are not yet comprehensively integrated with notarial legal frameworks and anti-money laundering measures [6]. This regulatory gap creates legal uncertainty and operational challenges for notaries in conducting due diligence on transactions involving fintech and crypto assets.

This research identifies three critical research questions: (1) What are the characteristics of Money Laundering Crime risks in fintech and crypto asset transactions relevant to notarial practice? (2) To what extent are notaries' obligations and responsibilities in preventing the misuse of fintech and crypto assets for Money Laundering Crime according to positive Indonesian law? (3) What due diligence framework is required by notaries to effectively prevent the misuse of fintech and crypto assets for Money Laundering Crime?

## 1.3. Objectives and Contributions

This article aims to analyze the specific risks of money laundering through fintech and crypto assets in the context of notarial practice, examine the legal obligations of notaries in preventing such misuse, and formulate a comprehensive and adaptive due diligence framework. The academic contribution of this research lies in integrating three usually fragmented domains of knowledge: notarial law, financial technology regulation, and anti-money laundering policy. Practically, this article is expected to serve as an operational guide for notaries and policymakers in anticipating Money Laundering Crime risks in the digital era.

## 2. Literature Review

### 2.1 Evolution of Notarial Obligations in Money Laundering Crime Prevention

The role of notaries in preventing money laundering has undergone significant evolution over the past two decades. Initially viewed as mere legal formalities, notaries are now considered frontline defenders in anti-money laundering systems [7]. A study by [8] shows that the implementation of Know Your Customer (KYC) principles among Indonesian notaries remains suboptimal, with compliance rates reaching only 65% in 2023. Research by [9] identifies three main obstacles: lack of technical understanding of modern financial products, absence of clear standard procedures, and conflict between reporting obligations and professional confidentiality principles.

In an international context, a comparative study by [10] between notaries in the Netherlands, France, and Indonesia shows significant variation in due diligence approaches to digital transactions. Notaries in jurisdictions with advanced fintech regulations like the Netherlands have adopted digital verification tools and algorithm-based risk analysis, while in Indonesia methods remain conventional and manual.

### 2.2 Risk Characteristics of Fintech and Crypto Assets from a Money Laundering Crime Perspective

Fintech and crypto assets create unique Money Laundering Crime risks due to their technological characteristics. According to [11], there are four characteristics that increase vulnerability: (1) near real-time transaction speed, (2) cross-jurisdictional capability without geographical barriers, (3) higher levels of anonymity or pseudonymity compared to traditional financial systems, and (4) technical complexity hindering understanding and supervision by authorities.

Research [12] categorizes Money Laundering Crime risks in crypto assets into three layers: risks at the protocol level (blockchain design), risks at the application level (exchange platforms and digital wallets), and risks at the user level (individual security practices). Meanwhile, [13] focuses on risks in the DeFi (Decentralized Finance) ecosystem that enables

complex financial transactions without centralized intermediaries, creating unprecedented identification and tracking challenges.

### **2.3 Regulation of Fintech and Crypto Assets in Anti-Money Laundering Frameworks**

Global regulation of fintech and crypto assets in the context of money laundering prevention is developing rapidly. FATF revised their recommendations in 2021 to explicitly include Virtual Asset Service Providers (VASPs) within the scope of anti-money laundering regulation [14]. These recommendations require VASPs to implement KYC principles, suspicious transaction reporting, and transaction record maintenance. However, implementation of these FATF recommendations is not uniform across countries, creating regulatory arbitrage that can be exploited by criminals [15].

In Indonesia, the regulatory framework is still in development. In addition to Bappebti regulations, Bank Indonesia has issued Regulation No. 22/23/PBI/2020 concerning Digital Payments which includes aspects of money laundering prevention [16]. However, a study by [17] shows that there is no effective integration between financial sector regulations and the obligations of legal professions such as notaries in the context of digital Money Laundering Crime prevention.

## **3. Proposed Method**

This research uses normative juridical research methods with a multidisciplinary approach integrating legal, technological, and public policy perspectives. Primary data consists of analysis of legislation related to Money Laundering Crime, the notary profession, and regulations on fintech and crypto assets in Indonesia. Secondary data includes national and international academic journals, publications from FATF and other international institutions, and best practice reports from other jurisdictions.

Analysis is conducted through three stages: first, identification of specific Money Laundering Crime risks in fintech and crypto asset transactions; second, evaluation of the adequacy of existing notarial obligations against these risk characteristics; third, formulation of an adaptive due diligence framework based on risk-based approach principles. Critique and evaluation of existing regulations is conducted using effectiveness, compliance, and alignment with international standards as parameters.

## **4. Results and Discussion**

### **4.1. Mapping Money Laundering Crime Risks in Fintech and Crypto Asset Transactions Relevant to Notarial Practice**

#### **4.1.1. Risks in Property Transactions Involving Digital Payments**

Notaries are frequently involved in property transactions that increasingly use digital payments. The main risk lies in fund source layering through fintech payment platforms or conversion to crypto assets before being used for property payments [18]. A case study by [19] shows modus operandi where money launderers use digital wallets with false identities to pay property transaction deposits, with notaries failing to identify discrepancies due to verification tool limitations.

#### **4.1.2. Misuse of Legal Entities and Beneficial Ownership in Fintech Businesses**

Establishment of legal entities for fintech businesses or crypto asset investments creates loopholes for money laundering if notaries do not conduct thorough due diligence on beneficial ownership. Research [20] found that 40% of fintech companies in Southeast Asia have complex ownership structures using nominee directors, potentially concealing the actual responsible parties. Notaries creating incorporation deeds for these companies often lack capacity or authority to trace ownership to the ultimate individual level.

#### **4.1.3. Use of Smart Contracts in Business Transactions**

The use of smart contracts in various business transactions requiring notarial deeds creates new complexities. While smart contracts provide efficiency, their self-executing and immutable nature makes it difficult for notaries to ensure compliance with legal provisions and identify involved parties [21]. Risk increases when smart contracts are used for complex derivative transactions or asset tokenization that can become money laundering instruments.

**Table 4.1.** Mapping of Money Laundering Crime Risks in Fintech/Crypto Asset Transaction Types Involving Notaries

Transaction Type	Risk Characteristics	Risk Level	Potential Money Laundering Crime Modus
Property sale with crypto payment	High-value conversion, price volatility, buyer identification	High	Placement through crypto exchanges, layering via multiple wallets, integration via property
Fintech company establishment	Complex ownership, new regulators, innovative business models	Medium-High	Concealment of beneficial ownership, laundering through company operations
Capital deposit in crypto assets	Subjective valuation, unclear asset source, high liquidity	High	Over-valuation of assets, injection of illegal funds as business capital
Smart contracts for business agreements	Automation, irreversibility, separation from formal law	Medium	Hidden clause insertion, use for disguised illegal transactions
Inheritance/donation of digital assets	Asset identification, valuation, ownership legality	Medium	Transfer of illegal wealth between generations, tax avoidance

## 4.2. Analysis of Notarial Legal Obligations in Preventing Fintech and Crypto Asset Misuse

### 4.2.1. Legal Basis and Scope of Obligations

Notaries' obligations in preventing Money Laundering Crime in Indonesia primarily originate from the Money Laundering Crime Law and Minister of Law and Human Rights Regulation No. 37 of 2018 concerning the Implementation of Anti-Money Laundering and Terrorism Financing Prevention Programs for Legal Service Providers [22]. This regulation requires notaries to conduct Customer Due Diligence (CDD), report suspicious transactions, and maintain transaction records. However, implementation for fintech and crypto asset transactions is not specifically regulated, creating interpretation uncertainty.

### 4.2.2. Professional Responsibility versus Technical Capability

There is a gap between legal responsibilities imposed on notaries and the technical capacity they possess to fulfill these responsibilities in the context of fintech and crypto assets. A survey of 150 notaries in Java and Bali by [23] shows that only 28% feel they adequately understand blockchain technology, and only 15% have access to sophisticated digital identity verification tools. This gap creates liability issues where notaries could face legal sanctions for failures actually stemming from systemic incapacity.

### 4.2.3. Conflict between Innovation and Compliance

Notaries face conflict between facilitating financial technology innovation (as part of business and service development) and conservative compliance obligations. Overly strict regulations without considering technological characteristics could drive transactions overseas or to informal channels (off-chain), actually increasing Money Laundering Crime risks [24]. Conversely, overly permissive approaches could weaken notaries' effectiveness as gatekeepers.

### 4.3. Enhanced Digital Due Diligence (ED3) Framework for Notaries

Based on analysis of risks and constraints faced by notaries, this article proposes an Enhanced Digital Due Diligence (ED3) framework consisting of five pillars:

#### 4.3.1. Digital Identity Verification Protocol

Notaries need to adopt digital identity verification systems meeting FATF and local regulator standards. This system should integrate: (1) identity document verification through Optical Character Recognition (OCR) and validation against government databases, (2) biometric verification such as facial recognition or fingerprints, (3) liveness detection to prevent recording or photo use, and (4) blockchain-based digital identity giving data control to identity owners [25]. Partnerships with licensed digital identity verification service providers could be practical solutions for individual notaries or small offices.

#### 4.3.2. Blockchain Forensic Analysis Capacity

For transactions involving crypto assets, notaries require basic blockchain forensic analysis capability or access to such service providers. This analysis includes: (1) fund source tracing (on-chain analysis) to ensure assets don't originate from illegal activities, (2) analysis of suspicious transaction patterns, and (3) wallet address ownership verification [26]. Basic blockchain analysis training and collaboration with forensic blockchain companies like Chainalysis or CipherTrace could be developed as part of notaries' continuing professional education.

#### 4.3.3. Dynamic Risk-Based Approach with Digital Parameters

The Risk-Based Approach mandated by FATF needs adaptation with digital risk parameters. These parameters include: (1) crypto asset type (privacy coins like Monero have higher risk than Bitcoin), (2) fund sources (mining, trading, or unknown), (3) transaction origin jurisdiction (based on FATF risk assessment), and (4) transaction patterns (mixer/tumbler, peel chain, or normal transactions) [27]. Notaries need to develop dynamic risk assessment matrices regularly updated based on technological developments and crime modus.

#### 4.3.4. Smart Contract Legal Compliance Review

For transactions involving smart contracts, notaries require review protocols to ensure compliance with substantive law. This protocol includes: (1) smart contract code analysis to identify hidden functions, (2) assessment of compliance with applicable legal provisions, (3) verification of dispute resolution mechanisms, and (4) review of upgradeability and termination mechanisms [28]. Collaboration with smart contract audit experts could become part of due diligence for high-value transactions.

#### 4.3.5. Integrated Reporting and Record-Keeping System

Integrated reporting and record-keeping systems meeting technological principles while remaining compliant with legal requirements. This system should: (1) securely and immutably record digital transactions, (2) facilitate reporting to the Financial Transaction Reports and Analysis Centre (PPATK) via API, (3) maintain data confidentiality according to Personal Data Protection Law, and (4) enable comprehensive audit trails [29]. Development of centralized systems by the Indonesian Notary Association (INI) could provide efficiency and standardization.

**Table 4.2.** Comparison of Traditional Due Diligence Framework vs Enhanced Digital Due Diligence (ED3)

Due Diligence Aspect	Traditional Framework	Enhanced Digital Due Diligence (ED3)
Identity Verification	Physical documents, direct face-to-face	Multilayer digital verification with biometrics and blockchain identity
Fund Source Validation	Bank accounts, certificates	On-chain analysis, forensic tracing, digital asset origin validation
Transaction Monitoring	Conventional financial reports	Real-time monitoring with alert systems for suspicious patterns
Documentation	Separate physical and digital archives	Integrated system with blockchain-based record keeping
Risk Analysis	Static parameters based on transaction value	Dynamic risk assessment with digital parameters and ML algorithms
Reporting	Manual to PPATK	API integration with PPATK systems, automated reporting for certain thresholds

## 5. Comparison

### 5.1 Theoretical Implications

This research expands gatekeeper role theory in digital contexts, demonstrating that notaries' effectiveness as financial system gatekeepers depends not only on formal regulation but also technological adaptation capacity. Ayres and Braithwaite's Responsive Regulation theory [30] finds new relevance in this context, where pyramidal regulation approaches need adaptation for actors with technical characteristics like notaries in digital transactions.

The concept of legal certainty in contract and notarial law also requires redevelopment to incorporate new technological elements. This research aligns with [31] proposing the concept of "techno-legal certainty" integrating substantive legal certainty with technical predictability of digital systems.

### 5.2 Practical Implications and Policy Recommendations

#### 5.2.1. For Notaries and Professional Organizations

The Indonesian Notary Association needs to develop: (1) Professional Standards for Digital Due Diligence, (2) Continuing Education Programs on Fintech and Crypto Assets, (3) Technical Resource and Consultation Centers, and (4) Integrated Digital Identity Verification Platforms [32]. Individual notaries need to invest in digital capacity building and network with technology experts.

#### 5.2.2. For Regulators and Policymakers

Required developments: (1) Specific regulations governing notarial due diligence obligations for fintech and crypto asset transactions, (2) Technical guidelines from PPATK and Financial Services Authority (OJK) on suspicious transaction indicators in digital sectors, (3) Incentives for technology adoption by notaries, and (4) Collaboration frameworks between notaries, VASPs, and regulators [33].

#### 5.2.3. For Legal Education

Notary education curricula and master's programs need to include courses on: Financial Technology Law, Blockchain Analysis for Law, Digital Due Diligence, and Digital Asset Regulation [34]. Interdisciplinary education with technology or computer science faculties could develop required competencies.

### 5.3 Research Limitations and Future Research Agenda

This research has limitations regarding empirical data on digital due diligence effectiveness among Indonesian notaries, given that technology adoption remains in early stages. Future research could: (1) measure ED3 implementation effectiveness through experimental studies, (2) analyze comparisons with more advanced jurisdictions, (3) explore Artificial Intelligence applications in notarial due diligence, and (4) research personal data protection aspects in digital due diligence contexts [35].

### 6. Conclusions

Fintech and crypto assets represent significant evolution in the global financial landscape, bringing efficiency and inclusion benefits but also complex Money Laundering Crime risks. Notaries as public officials and legal professionals have crucial roles in preventing misuse of this innovation for illegal activities. However, this role's effectiveness depends on notaries' ability to adapt to new technological characteristics.

This article identifies specific Money Laundering Crime risks in fintech and crypto asset transactions relevant to notarial practice, analyzes existing legal obligations, and proposes a comprehensive Enhanced Digital Due Diligence (ED3) framework. ED3 integrates digital identity verification, blockchain forensic analysis, dynamic risk-based approaches, smart contract compliance review, and integrated reporting systems.

Implementation of this framework requires multi-stakeholder collaboration between notaries, professional organizations, regulators, and technology providers. Continuing education and investment in digital capacity become prerequisites for notaries to remain relevant and effective as gatekeepers in the digital era. With appropriate approaches, notaries can not only reduce Money Laundering Crime risks but also become catalysts for responsible and legally compliant financial technology adoption..

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