

Developing A Governance Framework For Digital Assets In Vietnam: Legal, Security And Blockchain-Based Policy Perspectives

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Abstract

This article examines the development of digital assets in Vietnam in the context of digital transformation, the digital economy, and blockchain adoption. Although Vietnam has a high level of participation in digital asset activities, its legal framework and supervisory capacity remain under development. Using a qualitative approach, including legal analysis, policy comparison, and secondary document analysis, the article analyzes three main issues: the legal recognition of digital assets, cybersecurity risks in digital asset trading and custody, and the role of blockchain in enhancing transparency, authentication, and governance. Based on this analysis, the article proposes an integrated governance model for Vietnam that combines legal classification, licensing and supervision, cybersecurity standards, AML/CFT compliance, regulatory sandbox mechanisms, and blockchain applications in the real economy.

Keywords: Digital assets; crypto-assets; blockchain; digital asset governance; cybersecurity; digital economy.

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I. Introduction

The development of the digital economy has accelerated the emergence of new forms of assets, such as crypto-assets, tokens, non-fungible tokens (NFTs), stablecoins, and tokenized real-world assets. These assets create opportunities for financial innovation, e-commerce, capital mobilization, and supply chain governance. At the same time, they raise significant challenges related to legal recognition, cybersecurity, investor protection, and anti-money laundering. In Vietnam, the Law on Digital Technology Industry has initially recognized digital assets as assets represented in the form of digital data, created, stored, transferred, and authenticated by digital technologies (National Assembly of Vietnam, 2025).

In this context, Vietnam is moving from a stage in which digital assets lacked a clear legal status to a stage in which they are gradually being recognized and officially regulated. Resolution No. 05/2025/NQ-CP on the pilot implementation of a crypto-asset market reflects the Government's efforts to develop a controlled, transparent, and risk-based market for digital assets (Government of Vietnam, 2025). Nevertheless, several issues remain to be clarified, including ownership rights over digital assets, asset classification, licensing conditions for service providers, investor protection, tax policy, accounting standards, and the settlement of cross-border disputes.

Beyond legal issues, digital assets are highly dependent on technological infrastructure, including digital wallets, private keys, trading platforms, smart contracts, and custody systems. This dependence gives rise to various risks, such as cyberattacks, fraud, loss of private keys, data breaches, market manipulation, and illicit transactions. According to the Financial Action Task Force, the regulation of virtual assets and virtual asset service providers should be based on a risk-based approach, particularly in relation to anti-money laundering and counter-terrorist financing (Financial Action Task Force, 2025). Therefore, digital asset governance is not merely a matter of legal recognition, but also concerns supervisory capacity, technological risk management, user protection, and inter-agency coordination.

Although previous studies have addressed cryptocurrencies, blockchain, anti-money laundering, and legal frameworks for virtual assets, these issues have often been examined separately. Limited research has integrated digital asset law, cybersecurity, investor protection, blockchain applications, and a governance model suited to Vietnam's institutional context. This constitutes an important research gap, especially as Vietnam records a high level of participation in crypto-asset activities while its legal framework and supervisory capacity remain under development. Against this background, the article seeks to answer three research questions. First, what legal and security challenges do digital assets pose in Vietnam? Second, what lessons can Vietnam draw from international experience in digital asset regulation? Third, what governance model should Vietnam adopt to control risks while promoting blockchain-based innovation?

Accordingly, the article makes three main contributions. First, it systematizes key legal and security issues associated with the development of digital assets in Vietnam. Second, it provides a selective comparison of digital asset governance experiences from the European Union, Singapore, Japan, and South Korea to derive relevant policy implications. Third, it proposes an integrated governance model for digital assets in Vietnam, combining legal classification, licensing and market supervision, cybersecurity, anti-money laundering, investor protection, regulatory sandbox mechanisms, and blockchain applications in the real economy.

With this approach, the article does not treat digital assets merely as speculative financial instruments. Instead, it situates them within the broader strategy of digital economy development, risk governance, and technological innovation. The ultimate objective is to contribute to the development of a safe, transparent, risk-controlled, and value-creating digital asset market in Vietnam.

II. Literature Review

Concept and Classification of Digital Assets

Digital assets constitute a broad concept, encompassing assets that are created, stored, transferred, and authenticated in the digital environment. Under Vietnam’s Law on Digital Technology Industry, digital assets are understood as assets under the Civil Code that are represented in the form of digital data and are created, issued, stored, transferred, and authenticated by digital technologies in the electronic environment (National Assembly of Vietnam, 2025). This approach indicates that digital assets are not limited to cryptocurrencies, but also include tokens, non-fungible tokens (NFTs), stablecoins, tokenized real-world assets, and property rights existing in the form of digital data.

By contrast, the Financial Action Task Force defines “virtual assets” as digital representations of value that can be digitally traded or transferred and may be used for payment or investment purposes (Financial Action Task Force, 2021). The Markets in Crypto-Assets Regulation of the European Union defines “crypto-assets” as digital representations of value or rights that can be stored and transferred electronically using distributed ledger technology or similar technology (European Union, 2023). Therefore, it is necessary to distinguish digital assets in a broad sense from virtual assets and crypto-assets in a narrower sense.

The classification of digital assets is important because each type of asset entails different legal regimes and regulatory risks. Stablecoins raise concerns regarding reserves, liquidity, and financial stability; NFTs are closely associated with intellectual property rights and digital asset valuation; while tokenized real-world assets depend on the legal link between the token and the underlying asset. Accordingly, a digital asset governance framework should be based on economic function, technological infrastructure, risk level, and the rights of asset holders.

Table 1. Classification of Digital Assets and Regulatory Risks

Type of asset	Main characteristics	Regulatory risks
Digital assets	A broad concept referring to assets existing in the form of digital data	Ownership, transfer, storage
Virtual assets / crypto-assets	Tradable and transferable on digital platforms or blockchain networks	AML/CFT, fraud, price volatility
Stablecoins	Tokens pegged to fiat currency or other assets	Reserves, liquidity, financial stability
NFTs and RWA tokenization	Represent unique digital assets or tokenized real-world assets	Intellectual property rights, underlying assets, enforcement of rights

Source: Author’s synthesis.

Ownership, risks, and investor protection

Digital assets pose new challenges to the traditional theory of ownership. Under civil law, ownership generally consists of the rights of possession, use, and disposition. However, in the digital environment, rights over assets are often associated with technical control, such as control over private keys, digital wallets, or custodial accounts. This raises the question of whether the person who technically controls a digital asset should automatically be regarded as its lawful owner.

The UNIDROIT Principles on Digital Assets and Private Law emphasize the role of “control” in determining rights over digital assets, including the ability to prevent others from using the asset, to obtain benefits from it, and to transfer it to another person (UNIDROIT, 2023). Nevertheless, technical control does not always coincide with legal ownership. Where digital assets are misappropriated through cyberattacks, fraud, or unauthorized access to private keys, the person controlling the asset on a blockchain may not necessarily be its lawful owner.

In addition to ownership issues, digital assets generate various risks for investors and markets, including high price volatility, fraud, market manipulation, loss of private keys, attacks on trading platforms, custody risks, and cross-border disputes. Therefore, digital asset regulation should not be limited to legal recognition. It must

also address investor protection, segregation of customer assets, information disclosure, insurance or reserve funds, complaint-handling mechanisms, and digital financial literacy.

International standards, Blockchain, and research Gaps

Digital asset regulation has attracted increasing attention from many countries and international organizations due to the cross-border nature of these assets, the high speed of transactions, and their relative anonymity. The Financial Action Task Force recommends that jurisdictions adopt a risk-based approach to virtual assets and virtual asset service providers, particularly with regard to customer due diligence, transaction monitoring, record-keeping, suspicious transaction reporting, and the implementation of the Travel Rule (Financial Action Task Force, 2021, 2025). At the regional level, the European Union's Markets in Crypto-Assets Regulation establishes a regulatory framework for issuers of crypto-assets and crypto-asset service providers, with an emphasis on information transparency, investor protection, market abuse prevention, and financial stability (European Union, 2023).

Blockchain represents an important technological infrastructure for the development and governance of digital assets. This technology can support transaction recording, verification of control, historical traceability, data transparency, and the automation of certain obligations through smart contracts. One notable application is the tokenization of real-world assets, which refers to the representation of real assets or traditional financial assets as tokens on a distributed ledger (OECD, 2024). However, blockchain does not automatically resolve legal issues such as ownership, fraud, disputes, valuation of underlying assets, custody liability, or the enforcement of investor rights. Therefore, blockchain should be regarded as a governance-supporting tool rather than a substitute for law and regulatory authorities.

The above review suggests that existing studies have provided an important foundation for understanding digital asset law, virtual asset regulation, blockchain, and investor protection. Nevertheless, much of the literature still approaches these issues separately, focusing mainly on cryptocurrencies, anti-money laundering, blockchain technology, or legal frameworks for virtual assets. A notable research gap lies in the absence of an integrated governance model that simultaneously combines legal classification, licensing and market supervision, cybersecurity, anti-money laundering, investor protection, regulatory sandbox mechanisms, and blockchain applications in the real economy. This gap provides the basis for proposing a digital asset governance model suited to the Vietnamese context.

III. Research Methodology

This article employs a qualitative research approach, combining legal analysis, policy analysis, and international comparison. This approach is appropriate for the research objectives because digital assets represent an emerging field that simultaneously involves law, digital finance, cybersecurity, anti-money laundering, and blockchain technology. The study relies on secondary data collected from Vietnamese legal documents, materials issued by the Financial Action Task Force, OECD, UNIDROIT, the European Union, and regulatory authorities in Singapore, Japan, and South Korea, as well as market reports and academic studies related to digital assets, crypto-assets, blockchain, and tokenization. The European Union, Singapore, Japan, and South Korea are selected for comparison because they represent jurisdictions with relatively developed experience in digital asset regulation. Their regulatory models are analyzed according to key criteria, including asset classification, licensing mechanisms, custody and protection of customer assets, AML/CFT compliance, stablecoin regulation, transaction supervision, and their relevance for Vietnam. On this basis, the article derives policy implications and proposes a digital asset governance model suited to the Vietnamese context.

IV. Results And Discussion

Findings from the Vietnamese context

The analysis shows that digital assets in Vietnam are in a transitional stage, moving from spontaneous development toward gradual legal recognition and controlled regulation. Vietnamese users show a high level of participation in crypto-asset activities, as reflected in international adoption indicators (Chainalysis, 2025). However, these indicators mainly reflect user activity and on-chain participation, rather than the official market scale or legal safety.

Legally, the recognition of digital assets in the 2025 Law on Digital Technology Industry marks an initial legal foundation for this asset class (National Assembly of Vietnam, 2025). Resolution No. 05/2025/NQ-CP on the pilot crypto-asset market further reflects Vietnam's cautious approach, emphasizing risk control and supervised market development rather than absolute prohibition (Government of Vietnam, 2025).

However, the framework still requires clarification in key areas such as asset classification, ownership rights, licensing, custody, taxation, accounting, investor protection, and cross-border dispute resolution. This indicates that Vietnam's challenge lies not only in recognizing digital assets, but also in building clear operational mechanisms for a safe and transparent market.

In terms of security and compliance, digital assets pose risks related to money laundering, fraud, cyberattacks, private key theft, price manipulation, and asset loss due to their cross-border, fast-moving, and technology-dependent nature (Financial Action Task Force, 2021, 2025). Therefore, regulation should be connected with customer identification, suspicious transaction reporting, blockchain tracing, technology audits, data protection, and inter-agency coordination.

Blockchain applications should also be considered beyond cryptocurrency. They may support traceability, logistics, finance, e-commerce, agriculture, healthcare, education, data management, and public services. Real-world asset tokenization can improve liquidity and automate transactions, but it does not automatically resolve legal issues concerning ownership, fraud, valuation, custody, or enforcement of rights (UNIDROIT, 2023; OECD, 2024).

International experience and policy implications for Vietnam

International experience shows that developed jurisdictions do not generally approach digital assets through absolute prohibition. Instead, they tend to establish regulatory mechanisms based on asset classification, licensing of service providers, user protection, anti-money laundering, and technological risk supervision (Financial Action Task Force, 2021; European Union, 2023). However, each model reflects different institutional conditions, supervisory capacities, and levels of market development. Therefore, Vietnam should adopt a selective approach rather than mechanically replicating foreign models.

The European Union represents a prominent model of establishing a unified legal framework through the Markets in Crypto-Assets Regulation, which emphasizes crypto-asset classification, information disclosure obligations, licensing of service providers, and investor protection (European Union, 2023). Singapore reflects the cautious approach of a digital financial center, focusing on licensing standards, anti-money laundering, technology risk management, and user protection (Monetary Authority of Singapore, 2025). Japan has early experience in registering and supervising crypto-asset exchange service providers, with particular attention to the segregation of customer assets and the responsibilities of service providers (Financial Services Agency, 2025). South Korea is notable for its strong user protection orientation, including requirements on cold-wallet storage, insurance or reserve funds, and the monitoring of abnormal transactions (Financial Services Commission, 2023).

Table 2. Comparison of Digital Asset Regulatory Experience and Policy Implications for Vietnam

Criteria	European Union	Singapore	Japan	South Korea	Implications for Vietnam
Regulatory approach	Unified legal framework across the EU	Cautious licensing and risk management	Registration and supervision of exchanges	User protection and control of unfair trading	Avoid absolute prohibition; adopt risk-based regulation
Licensing	CASPs under MiCA	Digital payment token service providers	Crypto-asset exchange service providers	VASPs	Establish a clear licensing mechanism
Custody	Obligations to protect clients	Technology risk governance	Segregation of customer assets	Cold wallets, insurance, or reserve funds	Develop custody standards and compensation mechanisms
AML/CFT	Compliance with EU/FATF standards	Strict requirements	Linked to registration mechanisms	FIU supervision	Combine KYC, digital identity, and transaction tracing
Stablecoins	Specific regulatory provisions	Cautious supervision	Certain regulatory framework	Increasing supervision	Regulate reserves, audits, and information disclosure

Source: Author’s synthesis.

Based on these models, Vietnam can draw several policy implications. First, it is necessary to build a clear classification system for digital assets in order to determine the appropriate regulatory regime for each asset type, particularly crypto-assets, stablecoins, NFTs, and tokenized real-world assets. Second, Vietnam should establish licensing mechanisms for trading platforms, custodians, token issuers, and other digital asset service providers. Third, investor protection standards should be strengthened through the segregation of customer assets, risk disclosure, technology audits, insurance, or reserve funds. Fourth, digital asset governance should be closely linked to AML/CFT compliance, digital identity, blockchain transaction tracing, and international cooperation (Financial Action Task Force, 2025).

However, the application of international experience must take into account Vietnam’s enforcement capacity, including the supervisory capacity of regulators, technological human resources, inter-agency data sharing, business readiness, and the awareness of individual investors. Therefore, a phased regulatory approach appears more appropriate. In the initial stage, Vietnam should prioritize asset classification and controlled pilot

mechanisms. In the next stage, it should establish licensing, custody, investor protection, and AML/CFT mechanisms. Finally, blockchain applications in the real economy can be expanded on the basis of reliable data and transparent supervisory mechanisms.

Discussion: Paradoxes in Digital Asset Governance

Digital asset governance is not simply a matter of issuing new regulations, but requires balancing several policy tensions. Three key paradoxes can be identified: the market paradox, the technology paradox, and the regulatory paradox.

The market paradox reflects the gap between Vietnam's high level of crypto-asset participation and its still-developing legal framework, supervisory capacity, and investor protection mechanisms. If this gap persists, risks such as fraud, market manipulation, asset loss, and cross-border disputes may increase. However, treating digital assets only as risks may cause policymakers to overlook their potential for innovation in digital finance, e-commerce, traceability, and real-world asset tokenization.

The technology paradox concerns the dual nature of blockchain. While blockchain can enhance transparency, traceability, transaction recording, automation, and financial flow monitoring, it also raises risks related to private key loss, smart contract vulnerabilities, identity mismatches, asset recovery, and data immutability. Therefore, blockchain should not be seen as a universal solution. On-chain records do not automatically establish lawful ownership, and tokenization is meaningful only when legal mechanisms for registration, custody, and enforcement of underlying rights exist (OECD, 2024; UNIDROIT, 2023).

The regulatory paradox lies in balancing control and innovation. Excessive regulation may discourage innovation and drive firms abroad, while premature liberalization without licensing, custody, audits, AML/CFT compliance, and investor protection may increase financial and legal risks. Vietnam should therefore adopt a risk-based and phased regulatory approach.

Such an approach should begin with clear classification of digital assets, followed by controlled pilots for selected activities. Vietnam should then develop mechanisms for licensing, custody, disclosure, technology audits, and investor protection, before expanding blockchain applications in the real economy based on reliable data and adequate supervisory capacity.

Policy Gaps Requiring Further Improvement

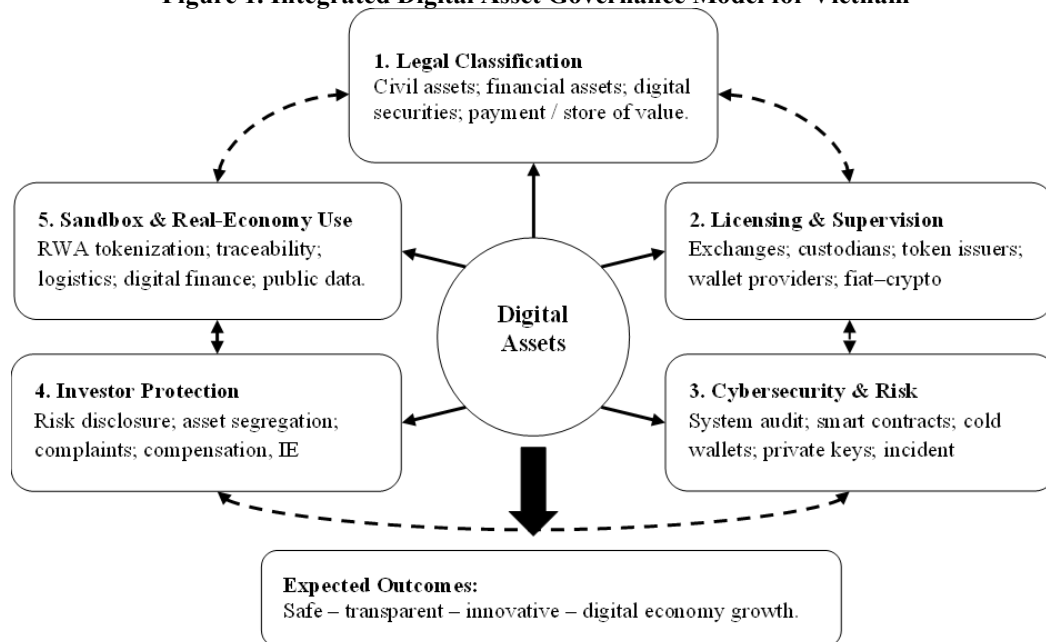
Despite the recognition of digital assets and the pilot implementation of the crypto-asset market, Vietnam's digital asset governance framework requires further improvement in several areas. First, tax and accounting mechanisms should be clarified, including taxable value determination, financial statement recognition, valuation, and auditing of digital assets. Second, custody and customer asset protection need stronger rules on asset segregation, cold-wallet storage, cybersecurity audits, insurance, and reserve funds. Third, dispute resolution and personal data protection should be strengthened, particularly regarding jurisdiction, applicable law, enforcement of judgments, asset recovery, and the protection of KYC, transaction, and wallet data. Fourth, Vietnam should develop a specific framework for stablecoins, covering reserve assets, audits, disclosure, liquidity risks, and financial stability, while also enhancing investor education on volatility, private keys, digital wallets, fraud risks, and asset protection responsibilities.

Overall, Vietnam's digital asset governance framework should extend beyond legal classification and market licensing to cover taxation, accounting, custody, data protection, dispute resolution, stablecoin regulation, and investor education.

V. Proposed Model

Based on the analysis of the Vietnamese context, international experience, and the identified policy gaps, this article proposes an Integrated Digital Asset Governance Model for Vietnam, as presented in Figure 1.

Figure 1. Integrated Digital Asset Governance Model for Vietnam



Source: Author's elaboration.

The proposed model places digital assets at the center of a multilayered governance framework comprising five key dimensions: legal classification; licensing and supervision; cybersecurity and risk management; user and investor protection; and regulatory sandbox mechanisms linked to real-economy applications. This structure reflects the complex nature of digital assets, which intersect with civil law, financial regulation, cybersecurity, anti-money laundering, data protection, and technological innovation.

The legal classification layer provides the foundation for distinguishing crypto-assets, stablecoins, NFTs, utility tokens, security tokens, and tokenized real-world assets based on their economic function, holder rights, technological features, and risk levels. The licensing and supervision layer focuses on digital asset service providers, requiring standards on financial and technological capacity, risk management, AML compliance, disclosure, audits, and customer asset protection. The cybersecurity layer emphasizes system security, smart contract audits, private key management, incident reporting, and recovery mechanisms. The user and investor protection layer addresses information asymmetry through risk disclosure, asset segregation, complaint mechanisms, compensation or reserve funds, and investor education.

Finally, the sandbox and real-economy application layer enables controlled experimentation with models such as asset tokenization, traceability, logistics, digital finance, and public services. Blockchain is viewed as an enabling technology that supports transparency, traceability, and automation, but it cannot replace legal recognition, regulatory oversight, investor protection, or enforcement capacity. Accordingly, the model aims to support the development of a safe, transparent, risk-controlled, and innovation-oriented digital asset market in Vietnam.

VI. Conclusion

Digital asset development is an inevitable trend in the context of digital transformation, the digital economy, and blockchain adoption. In Vietnam, the legal recognition of digital assets and the pilot crypto-asset market mark a shift toward controlled regulation. However, challenges remain in asset classification, ownership, licensing, cybersecurity, AML, investor protection, and cross-border disputes. This article proposes an integrated digital asset governance model for Vietnam, combining legal classification, licensing and supervision, cybersecurity, investor protection, and sandbox-based real-economy applications. The model aims to support a safe, transparent, risk-controlled, and innovation-oriented digital asset market.

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