

CHALLENGES IN DIGITAL ASSET ACCOUNTING: EMPIRICAL EVIDENCE FROM VIETNAMESE ENTERPRISES

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Abstract: The rapid development of the digital economy has accelerated the adoption of digital assets in business activities in Vietnam. However, the current accounting system has yet to provide specific guidance for their accounting treatment. This study aims to identify and analyze the structural challenges associated with digital asset accounting practices in Vietnamese enterprises. To address the legal gap and the lack of specialized accounting guidance, the study employs a quantitative research approach based on a survey of 382 financial managers and accounting professionals. The data were analyzed using statistical techniques to objectively assess the extent of the impact of the identified barriers. The findings reveal five major categories of barriers hindering accounting practices. First, the absence of a legal definition of digital assets in the 2015 Law on Accounting creates difficulties in recognizing them as legitimate accounting objects. Second, in addition, the complexity of fair value measurement and the absence of a reliable domestic reference market undermine the reliability of financial reporting. Third, the incompatibility between blockchain technology and traditional accounting documentation requirements poses significant risks to internal control systems. In addition, unresolved issues in tax policy, together with limitations in software infrastructure and human resource capabilities, continue to increase the compliance burden on businesses. Based on these findings, the study recommends that regulatory authorities promptly establish a comprehensive legal framework and issue accounting guidance aligned with international standards. It also provides a practical scientific basis for business entities to proactively restructure their internal control processes and enhance the transparency of financial information.

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1. Introduction

The rapid development of the digital economy has accelerated the adoption of digital assets in production, business, and investment activities among Vietnamese enterprises. Transaction volumes and the prevalence of these intangible assets have grown steadily in recent years, reflecting an inevitable shift in the economy's financial structure. However, digital assets are characterized by decentralization, cryptographic mechanisms, and significant price volatility characteristics that introduce

new requirements and pose direct challenges to traditional accounting systems originally designed around principles of legal ownership and verification by intermediary institutions. Current Vietnamese accounting standards (VAS) primarily address tangible assets and conventional intangible assets and lack specific guidance on the recognition, measurement, or presentation of digital assets in financial statements. Internationally, standard-setting bodies such as the IFRS Interpretations Committee (IFRS IC) have begun

providing guidance indicating that digital assets should be classified as either inventories or intangible assets depending on their holding purpose. Nevertheless, the traditional historical cost model exhibits asymmetry by recognizing impairment losses while failing to reflect increases in digital assets' fair value in a timely manner. Moreover, the Financial Accounting Standards Board (FASB) issued a regulation at the end of 2023, effective from the end of 2024, requiring fair value measurement, highlighting the urgent need to update accounting standards to accommodate the operational characteristics of modern financial technologies.

Accounting for digital assets in Vietnam is currently confronted with profound structural and legal challenges. Experts acknowledge that the absence of a clear legal definition under Vietnam's Law on Accounting 2015 is the fundamental reason why enterprises lack a formal basis for recognizing digital assets as accounting objects. As long as digital assets are not legally recognized as a valid category of assets or commodities under the existing legal framework, enterprises remain reluctant to record related transactions because of concerns over their legal validity. This situation has resulted in considerable uncertainty in practice, largely due to the absence of detailed guidance issued by the Ministry of Finance regarding the chart of accounts and accounting treatments specifically applicable to digital assets.

The lack of coordination among regulatory authorities including the State Bank of Vietnam, the Ministry of Finance, and the tax authorities further increases legal risks for enterprises seeking to account for digital assets based on their economic substance while simultaneously complying with stringent regulations governing foreign exchange management and non-cash payment transactions. In the absence of a dedicated legal framework, accountants are compelled to rely almost entirely on professional judgment, which substantially undermines the comparability and reliability of financial information across enterprises operating in the same industry. Beyond legal constraints, the inconsistency between blockchain-based technical evidence and the documentary requirements prescribed by current accounting regulations has created a significant obstacle to effective corporate governance. In practice, enterprises encounter considerable difficulties in verifying ownership through private cryptographic keys, a mechanism that challenges the fundamental principles of segregation of duties and traditional internal control systems. Furthermore, the risk of asset losses arising from technical failures or cyberattacks often exceeds the current control capabilities of organizations, while

the immutable nature of blockchain records prevents accounting errors from being corrected through conventional adjustment procedures. In addition, outdated technological infrastructure and limited human resource capabilities constitute major implementation barriers. Most existing accounting software has not yet been designed to integrate blockchain data directly, and many accounting professionals acknowledge that they lack specialized expertise in digital security. These challenges not only compromise the quality of financial reporting but also increase the risks associated with tax compliance and the independent oversight functions of corporate finance departments.

Against this background, this study aims to identify and analyze the major challenges associated with accounting for digital assets in Vietnamese enterprises across five key dimensions: the legal and regulatory framework, asset recognition and measurement techniques, internal control, tax compliance, and human resource capability. By examining evidence drawn from business practice, the study provides empirical insights into the impact of these systemic barriers while comparing them with international accounting standards and contemporary financial management practices. The findings help clarify the gap between the current regulatory framework and practical business needs, thereby providing a basis for recommending policy refinements and improvements to accounting procedures that are better aligned with Vietnam's evolving economic environment.

2. Theoretical framework on digital assets and digital asset accounting

2.1. The concept of digital assets

In contemporary academic research and legal practice, the concept of digital assets has evolved beyond the traditional notion of electronic files to become a distinct asset category with genuine economic value. Digital assets fundamentally represent ownership rights, financial value, or rights of access to electronic services within the digital environment (World Bank Group, 2020). In Vietnam, the legal recognition of this asset category is explicitly established under the Law on the Digital Technology Industry 2025 (National Assembly, 2025). This legislation formally recognizes digital assets as a category of property under the Civil Code, defining them as digital data that are created, stored, transferred, and authenticated through technological means in an electronic environment. The establishment of this legal status provides a fundamental basis for protecting the property rights of both organizations and individuals while creating a legitimate legal foundation

for the possession, use, and disposition of digital assets. Nevertheless, legal scholars and practitioners continue to emphasize the need for more detailed technical guidance from regulatory authorities to distinguish digital assets that generate economic benefits from ordinary digital data, thereby reducing the risk of legal disputes in business and accounting practice. The classification of digital assets into virtual assets, crypto-assets, and other forms of digital assets reflects a flexible regulatory approach that seeks to promote technological innovation while safeguarding national monetary sovereignty.

At the international level, multilateral financial institutions have sought to establish a common terminology for digital assets. Nevertheless, differences in terminology persist because each institution adopts an approach aligned with its own regulatory priorities. The Financial Action Task Force (FATF) uses the term virtual assets to describe a digital representation of value that can be traded or transferred electronically for payment or investment purposes (Financial Action Task Force, n.d.). This definition deliberately excludes digital representations of fiat currencies and traditional financial securities, thereby focusing regulatory attention on instruments that may facilitate the anonymous transfer of value for money laundering and terrorist financing activities.

By contrast, the International Monetary Fund (IMF) and the World Bank generally adopt the term “crypto-assets” (International Monetary Fund, 2021). These institutions define crypto-assets as digital representations of value based on cryptography and distributed ledger technology, emphasizing their role as a financial innovation with far-reaching implications for the global financial system. Across major economies, legal frameworks likewise reflect distinct legislative strategies aimed at strengthening competitiveness in the digital economy. The European Union, through the Markets in Crypto-Assets Regulation (MiCA), defines crypto-assets broadly as digital representations of value or rights that can be stored and transferred using distributed ledger technology (European Parliament, 2025). In contrast, the legislative framework of the United States adopts the broader term “digital assets” to encompass values recorded on cryptographically secured distributed ledgers, while explicitly classifying certain assets, such as Bitcoin, as digital commodities in order to enhance market liquidity and distinguish them from the more stringent regulatory regime applicable to securities (World Economic Forum, 2024).

A comprehensive understanding of digital assets

also requires careful consideration of their fundamental technical characteristics, as these characteristics directly influence accounting treatments and internal control practices. Unlike conventional digital data, which can be replicated indefinitely without affecting the original, blockchain-based digital assets possess digital scarcity. Through the consensus mechanisms of distributed networks, each unit of a digital asset is either unique or subject to a strictly limited supply, making arbitrary duplication impossible.

Ownership of digital assets is established and protected through a system of public and private cryptographic keys. This cryptographic architecture grants holders of private keys exclusive control over their assets without requiring authorization or verification from any intermediary institution, thereby creating a decentralized ownership mechanism within the digital environment (Chainalysis, 2026). Today, the digital asset ecosystem extends far beyond cryptocurrencies and is expanding rapidly through the tokenization of real-world assets (RWAs). Tokenization transforms ownership rights in traditional physical assets including real estate, works of art, and securities into blockchain-based digital tokens. This transformation enables fractional ownership, addresses the long-standing liquidity constraints associated with high-value assets, and facilitates continuous trading and near-instant settlement in global financial markets (Kraken, 2026).

2.2. Digital asset accounting

Digital asset accounting is undergoing significant transformation in response to the rapid evolution of financial technologies. A fundamental issue in accounting for digital assets is determining the appropriate classification, as this directly influences the recognition criteria, measurement basis, and disclosure requirements. Under the International Financial Reporting Standards (IFRS), cryptocurrencies held for sale in the ordinary course of business may fall within the scope of IAS 2 Inventories, whereas IAS 38 is generally considered applicable in other circumstances. The implication of this classification approach is that digital assets may be initially recognized at cost and subsequently measured using either the cost model or the revaluation model, provided that an active market exists and meets the conditions specified in IAS 38.

From an accounting perspective, this approach is conceptually coherent. However, it also reveals important limitations because many digital assets are characterized by substantial price volatility, continuous trading, and are held primarily for their current market value rather than for long-term operational

use. Applying the traditional accounting model for intangible assets may therefore reduce the relevance of financial information. In particular, impairment losses are generally recognized in a timely manner, whereas increases in value are rarely reflected symmetrically in profit or loss when the cost model is applied (Chou et al., 2022). Chou et al. (2022) found that stakeholders across the financial reporting ecosystem generally agree that the current accounting treatment of crypto-assets under the existing framework is not entirely adequate and that more specific guidance is needed, particularly with respect to measurement and risk disclosure. Similarly, Tiron-Tudor et al. (2024) concluded that contemporary research has focused extensively on debates concerning asset classification, fair value measurement, and the need to develop dedicated accounting standards for crypto-assets.

By contrast, under the United States Generally Accepted Accounting Principles (US GAAP), the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2023-08, which requires certain crypto-assets within its scope to be measured at fair value, with changes in fair value recognized directly in earnings at each reporting date. This approach replaces the traditional intangible asset model that has generally been applied under IFRS, which relies primarily on historical cost and impairment testing. The adoption of fair value measurement enables financial statements to more faithfully reflect market fluctuations in digital asset values. The standard also strengthens disclosure requirements by requiring entities to provide information on changes in crypto-asset holdings, restrictions on ownership rights, and the methods used to determine fair value. This represents a significant shift, reflecting the view that the economic substance of many crypto-assets more closely resembles investment assets with observable market prices than intangible assets in the traditional sense.

Compared with IFRS, the FASB's approach demonstrates a more pragmatic direction in standard-setting, seeking to enhance both the relevance and timeliness of financial information for users of financial statements. Nevertheless, regardless of whether IFRS or US GAAP is applied, accounting for digital assets requires entities to establish robust internal control procedures governing private key access, wallet ownership verification, blockchain transaction validation, impairment assessment or fair value measurement, and the clear distinction between digital assets held for investment purposes and those held for trading activities. From a disclosure perspective, entities

are expected not only to describe their accounting policies but also to explain material risks associated with digital assets, including price risk, liquidity risk, technological risk, legal and regulatory risk, and any restrictions on transferability, where applicable. From an academic perspective, the development of digital asset accounting reinforces a consistent principle: Technology may create new forms of assets; however, accounting can only provide an appropriate treatment by focusing on their economic substance, control rights, and the usefulness of information for users' decision-making in financial reporting (Bellucci et al., 2022; Lazea et al., 2024).

3. Research methodology and survey design

This study adopted a mixed-methods research design, with descriptive quantitative analysis serving as the primary approach to assess the extent to which various barriers affect digital asset accounting. The research was conducted in two sequential stages. The first stage was qualitative in nature and focused on establishing the theoretical and regulatory foundations for the development of the measurement instrument. The author reviewed the 2015 Law on Accounting and relevant circulars guiding the accounting regime for enterprises to identify existing legal gaps, while also referring to the guidance issued by the IFRS Interpretations Committee and the latest standards from the Financial Accounting Standards Board as comparative benchmarks. Synthesizing evidence from authoritative international publications in this field enabled the development of a robust conceptual framework and the construction of a survey instrument covering five major categories of challenges: the legal framework, asset measurement, internal control, tax policy, and human resource capacity.

The second stage consisted of a quantitative survey conducted between January and March 2026. The target respondents were professionals with extensive expertise and direct responsibility for corporate financial management, including chief accountants, chief financial officers (CFOs), and internal auditors working in organizations that either engage in or have an interest in digital asset transactions. A convenience sampling approach was employed through professional networks and with the support of relevant professional associations. Data were collected using a structured questionnaire administered online via Google Forms. A total of 450 questionnaires were distributed, of which 394 were returned, representing a response rate of 87.6%. Following data screening, 12 questionnaires were excluded because they contained incomplete

information or demonstrated internal inconsistencies, resulting in a final analytical sample of 382 valid responses. The sample comprised 220 chief accountants (57.6%), 103 chief financial officers (27.0%), and 59 internal auditors (15.4%).

The collected data were analyzed primarily using descriptive statistical techniques. Frequencies and percentages were employed to quantify the extent to which respondents confirmed each of the specific barriers identified from the theoretical framework. This descriptive quantitative approach enables the study to clearly identify systematic barriers, such as the absence of clear legal definitions or limitations in the compatibility of existing accounting software, thereby establishing a robust empirical foundation for highly practical policy recommendations.

4. Research findings

The empirical findings, derived from responses provided by 382 experts and financial managers, offer concrete evidence of the structural barriers confronting digital asset accounting in Vietnam. These challenges do not exist in isolation; rather, they form an interconnected system of bottlenecks that directly affects the faithful representation and reliability of information presented in financial statements. Based on the survey results, the identified challenges were classified into five major categories: the legal framework, recognition and measurement, internal control, tax policy, and implementation infrastructure. Clearly identifying these categories provides an essential basis for assessing the gap between the current regulatory framework and the practical requirements of the digital economy.

4.1. Challenges related to the legal and regulatory framework

The first difficulty stems from the fact that the legal framework governing digital assets is still in the process of being developed to achieve consistency among state regulatory authorities. The statistical data presented in Table 1 show that as many as 85.1% of respondents identified the lack of a clear legal definition

in legal documents at that time as the core cause. Although regulatory authorities are actively developing regulatory sandbox mechanisms and completing the legal framework for virtual assets, the absence of official legal recognition makes businesses concerned about their legality and leaves them without a solid basis for recognizing digital assets as a legitimate accounting object in their accounting records.

The fact that the regulatory framework is in a transitional stage makes it difficult to classify economic transactions involving digital assets within existing accounting frameworks. This uncertainty was reported by 81.2% of the surveyed enterprises. This finding is fully consistent with previous studies. Specifically, Ezejiofor and Omerbere (2025) emphasized that regulatory ambiguity reduces the transparency of financial reporting in emerging markets; similarly, Sixt and Himmer (2019) pointed to the lack of clear guidance at the global level.

In addition, 75.4% of the survey participants expressed concerns about delays in policy coordination among the State Bank of Vietnam, the Ministry of Finance, and tax authorities. While the State Bank of Vietnam maintains a cautious stance and has not recognized cryptocurrencies as a means of payment in order to control foreign exchange risks, other authorities are still studying the relevant policy framework. As García Martínez and Martínez-Resano (2023) have analyzed, such inter-agency caution is necessary but also creates compliance risks for businesses when they attempt to account for assets based on their economic substance. Finally, 51.8% of enterprises encountered difficulties regarding the timing of transaction recognition. Technical network congestion on blockchains slows the validation process on distributed ledgers, making it difficult for accountants to comply with the accrual principle, particularly when finalizing financial figures at the end of the fiscal year. Therefore, there is currently an urgent need to develop accounting guidance specifically for digital assets to keep pace with the roadmap for upgrading the existing legal framework (Hudu, 2025).

Table 1. Survey results on challenges related to the legal framework

No.	Survey item	Frequency	Percentage (%)
1	Lack of a clear legal definition of digital assets in the 2015 Law on Accounting	325	85.1
2	Absence of detailed guidance issued by the Ministry of Finance	310	81.2
3	Existing regulations governing digital assets in Vietnam remain fragmented and lack coordination across regulatory authorities.	288	75.4
4	Absence of regulations specifying the timing of transaction recognition when transaction confirmation on the blockchain network is delayed	198	51.8

Source: Compiled from the survey results.

4.2. Challenges in the recognition and measurement of digital assets

Challenges related to the recognition and measurement of digital assets continue to present significant obstacles to the preparation of financial statements. As shown in Table 2, difficulties arise as early as the initial classification stage. Specifically, 56.3% of respondents indicated uncertainty over whether digital assets should be classified as inventories under IAS 2 Inventories or intangible assets under IAS 38 Intangible Assets. The current Vietnamese Accounting Standards provide no equivalent guidance specifically applicable to digital assets. Allowing alternative accounting classifications for digital assets may lead to inconsistent accounting treatment, thereby distorting asset valuation and impairing the comparability of financial performance across entities (Luo & Yu, 2024). This finding is consistent with the ongoing debate in the international accounting literature. Luciani Toro et al. (2022) and Pramana et al. (2023) similarly argue that, under International Financial Reporting Standards (IFRS), crypto-assets generally fall between two accounting categories: intangible assets under IAS 38 or inventories under IAS 2, depending on the entity's business purpose. When digital assets are held for sale in the ordinary course of business, classification as inventories is appropriate. Conversely, when they are acquired for long-term investment purposes, recognizing them as intangible assets raises practical issues concerning amortization and the determination of residual value.

Subsequent measurement after initial recognition represents the most significant challenge, reported by 77.2% of surveyed enterprises. Digital assets are traded continuously on a 24-hour, seven-day-a-week global market, resulting in substantial price fluctuations within very short periods. Such extreme volatility renders traditional cost-based impairment models less effective and prevents them from faithfully representing the underlying economic reality (Celestin & Gidisu, 2025). This issue is further emphasized by Simran (2025),

who argues that high market volatility combined with limited liquidity substantially reduces the reliability of conventional valuation techniques. Consequently, accountants face considerable pressure in determining the fair value of digital assets at the reporting date in accordance with IFRS 13. The challenge is further compounded by the fact that 79.1% of respondents reported the absence of licensed domestic digital asset exchanges in Vietnam. The absence of a domestic active market forces enterprises to rely on pricing data from foreign exchanges. Using price data from non-authoritative sources weakens the evidential support for accounting measurements and reduces the faithful representation of amounts reported in the statement of financial position.

Selecting an appropriate cost flow assumption for digital assets also represents a technically challenging issue for 63.1% of surveyed enterprises. Smart contracts enable digital assets to be fractionally divided and traded at extremely high frequencies. Tracking the historical cost of each fractional unit in order to apply the first-in, first-out (FIFO) or weighted average cost method exceeds the processing capabilities of conventional accounting systems. In addition, determining and recognizing impairment losses imposes a considerable administrative burden on 48.4% of enterprises. Under IAS 36 Impairment of Assets, an impairment loss must be recognized in profit or loss when the recoverable amount of an asset falls below its carrying amount. However, in the absence of active and stable markets, together with the lack of detailed guidance from the Ministry of Finance, impairment assessments are often highly judgmental, making it difficult for enterprises and independent auditors to reach a consistent conclusion. To address the measurement challenges associated with impairment testing reported by 48.4% of Vietnamese enterprises, Hubbard (2023) proposed applying the revaluation model for intangible assets, with an optional fair value measurement basis, as a means of improving the decision usefulness of reported earnings in relation to digital assets.

Table 2. Summary of survey results on challenges in the recognition and measurement of digital assets

No.	Items	Frequency	Percentage (%)
1	Difficulty in determining whether digital assets should be classified as inventories or intangible assets (under IAS 2/IAS 38)	215	56.3
2	Significant price volatility creates difficulties in determining fair value at the reporting date	295	77.2
3	Lack of licensed domestic digital asset exchanges to provide reliable benchmark prices	302	79.1
4	Difficulty in determining and recognizing impairment losses	185	48.4
5	Uncertainty regarding the application of FIFO, LIFO, or weighted average cost methods to digital assets involving numerous transactions	241	63.1

Source: Compiled from the survey results.

4.3. Challenges in internal control and documentary evidence

Internal control systems and documentation procedures are undergoing a fundamental transformation in their underlying operating principles. The findings presented in Table 3 reveal a clear mismatch between existing internal control requirements and the technical characteristics of blockchain technology. The most significant challenge, identified by 67.5% of respondents, concerns the verification of asset ownership through private cryptographic keys. Under traditional accounting practice, ownership is typically established through legal documents such as contracts or certificates of ownership. In a blockchain environment, however, ownership is determined entirely by control over the private key. This creates a legal paradox in which an entity may effectively control a digital asset but lacks conventional documentary evidence to substantiate ownership before auditors or tax authorities. Moreover, if the private key is lost or compromised, the entity permanently loses control of the asset, with no legal mechanism currently available to restore ownership. This incompatibility is further reflected in the fact that blockchain transaction records do not yet fully satisfy documentary requirements under contract law or the evidentiary standards applicable in the conventional financial system (Cornelius, 2021). This shift in the mechanism of asset ownership also gives rise to a significant risk of asset loss resulting from technical failures, as reported by 51.3% of respondents. A similar concern was raised by Lapićkaia and Leahovcenco (2022), who argue that auditors require specialized audit procedures and accounting practices to address cybersecurity vulnerabilities and anti-money laundering risks associated with digital assets. Traditional internal control systems are designed to prevent errors through multi-level human authorization

and approval procedures. By contrast, vulnerabilities embedded in smart contracts or cyberattacks may result in immediate and irreversible losses. Because blockchain records are inherently immutable, accountants cannot reverse transactions or record correcting journal entries using conventional accounting procedures. The principle of segregation of duties also presents considerable implementation challenges. Specifically, 42.4% of surveyed enterprises reported difficulties in clearly distinguishing the responsibilities of digital asset custodians from those of accounting personnel. Safeguarding private cryptographic keys requires specialized information technology expertise. In practice, access to digital assets is typically concentrated among a small number of system administrators. This concentration of authority undermines the principle of segregation of duties, weakens independent verification procedures, and substantially increases the risk of internal fraud. The legal validity of accounting documentation also represents a significant challenge, as reported by 66.5% of surveyed enterprises. Under the Vietnamese Law on Accounting, electronic accounting documents must bear legally valid digital signatures that comply with national standards. However, transaction reports exported from international digital asset exchanges are generally generated as electronic data files without official seals or digital signatures recognized under Vietnamese law. This discrepancy between blockchain-based technical evidence, which relies on digitally authenticated transaction records, and the formal documentary requirements prescribed by accounting regulations exposes enterprises to the risk that legitimate business expenses may be disallowed during tax finalization. The absence of legal recognition of blockchain records as valid accounting documentation therefore constitutes a major obstacle to digital business operations.

Table 3. Summary of survey results on challenges in internal control and accounting documentation

No.	Items	Frequency	Percentage (%)
1	Challenges in verifying ownership through private cryptographic keys (private keys)	258	67.5
2	Risk of asset loss resulting from technical failures or cybersecurity incidents beyond current control capabilities	196	51.3
3	Difficulties in implementing segregation of duties between digital asset custodians and accounting personnel	162	42.4
4	Difficulty verifying the legal validity of documentation obtained from foreign digital asset exchanges (which do not bear official seals or digital signatures recognized under Vietnamese law)	254	66.5

Source: Compiled from the survey results.

4.4. Challenges related to tax policy and compliance

Current tax policies and regulatory compliance requirements constitute a major obstacle to improving the transparency of digital asset transactions. The survey findings presented in Table 4 reveal a particularly

challenging situation: 83.2% of surveyed enterprises reported the absence of clear guidance on electronic invoice issuance and value-added tax (VAT) declaration for transactions involving digital assets. Under the Law on Tax Administration, transactions involving the supply

of goods or services must be supported by valid electronic invoices to serve as the basis for tax assessment. However, digital assets have not yet been explicitly classified within Vietnam's national tax framework. Consequently, enterprises are unable to identify appropriate tax codes for counterparties or business activity classifications within the tax authority's electronic invoicing system. The absence of valid invoices exposes enterprises to the risk that tax authorities may disallow all related deductible expenses when determining taxable income for corporate income tax purposes.

Technical difficulties in determining the point at which taxable revenue arises from digital asset exchanges were identified by 72.3% of respondents. Token swap transactions are executed continuously on decentralized platforms without the use of fiat currency. Determining the equivalent value in Vietnamese dong at the time of the exchange is particularly complex because no official government reference exchange rate exists for such transactions. The absence of specific guidance on when gains should be recognized for tax purposes increases the likelihood of inaccurate tax reporting and, consequently, exposes enterprises to a higher risk of administrative tax penalties. This finding is consistent with the evidence reported by Martinčević et al. (2022), who argue that regulatory gaps and inconsistent enforcement have created substantial risks of tax evasion and money laundering across multiple jurisdictions. The challenges associated with tax compliance are therefore not unique to Vietnamese enterprises but represent a broader issue faced by many countries where digital assets have yet to be clearly incorporated into national tax systems.

The divergence between accounting profit and taxable income creates substantial financial management challenges for 55.0% of surveyed enterprises. This finding is consistent with the argument advanced by Havrylenko et al. (2025), who emphasize the need for a harmonized approach to financial accounting and tax accounting in order to improve transparency and enhance comparability. Under international accounting standards, digital assets are often measured at fair value at the reporting date, with resulting valuation changes recognized in the statement of profit or loss. In contrast, the tax authorities recognize income only when it has been realized through transactions settled in fiat currency. This divergence gives rise to significant deferred corporate income tax assets or liabilities, making corporate cash flow planning more challenging.

Concerns over the risk of money laundering and the illicit transfer of funds abroad were reported by 45.8% of respondents. Blockchain technology is characterized by a high degree of pseudonymity and operates across borders, allowing digital assets to be transferred rapidly without passing through the conventional banking system. Consequently, enterprises face considerable difficulties in demonstrating the legitimacy of their business counterparties and the lawful origin of transaction funds when requested by law enforcement authorities. The absence of anti-money laundering regulations specifically designed for digital assets places enterprises in a position of heightened legal risk. To address this issue, regulatory authorities should establish effective information-sharing mechanisms among relevant agencies in order to create a secure business environment, and foster innovation within the digital economy.

Table 4. Summary of survey results on challenges related to tax policy and compliance

No.	Items	Frequency	Percentage (%)
1	Lack of guidance on issuing invoices and declaring VAT for digital asset transactions	318	83.2
2	Differences between accounting profit and taxable income	210	55
3	Risks associated with money laundering or the illegal transfer of funds abroad	175	45.8
4	Difficulty determining the timing of taxable revenue recognition for token swap transactions (Token A exchanged for Token B)	276	72.3

Source: Compiled from the survey results.

4.5. Challenges related to human resources and technological infrastructure

The capabilities of the accounting workforce and the quality of existing technological infrastructure currently pose significant implementation challenges for digital asset accounting. The statistics presented in Table 5 reveal a substantial skills gap, with 72.3% of accounting personnel acknowledging that they lack specialized knowledge of blockchain technology. Accounting for digital assets requires professionals to understand consensus mechanisms, the structure

of blockchain transaction records, and the operating principles of cryptographic digital wallets. This lack of interdisciplinary expertise prevents 64.7% of respondents from independently verifying and reconciling transaction data directly through public blockchain explorers. When accountants are unable to interpret the underlying blockchain records, they become entirely dependent on reports generated by third-party service providers. Such dependence undermines the finance function's ability to perform independent verification and effective oversight within the organization.

The shortage of qualified personnel is compounded by the obsolescence of existing accounting software systems. Survey results indicate that 74.3% of enterprises are using accounting software that does not support the direct integration of data from blockchain networks. Existing accounting systems remain inadequately equipped with the functionalities required to process the technical complexities and valuation challenges associated with digital assets (Elsayed, 2025). The absence of an integrated and automated data infrastructure compels accounting personnel to manually record large volumes of transactions, thereby increasing the risk of errors and inaccuracies in financial reporting. Furthermore, 76.7% of surveyed enterprises reported that the accounting software commonly used in Vietnam does not provide specialized functional modules for preparing financial statements relating to digital assets. These findings reveal a substantial capability gap, consistent with the observations of Lardo (2022), who argued that accounting processes must be fundamentally redesigned and professional education enhanced to equip accountants with the competencies required in the digital era. Similarly, Tussibayeva et al. (2023) emphasized that effective digital asset management requires both the modernization of accounting systems and significant improvements in workforce capabilities. The incompatibility between blockchain-based ledgers

and traditional accounting ledgers further undermines the accurate reporting of changes in asset values and impairment losses. In addition, the lack of interoperability between domestic accounting software and the underlying data architecture of digital assets reinforces the findings of Atadoga et al. (2024), who identified technological integration challenges and workforce capability development as the most significant barriers to the global adoption of modern accounting practices.

The high cost of upgrading technological infrastructure places considerable pressure on 38.0% of surveyed enterprises. Operating a secure digital accounting system requires substantial investment in private key management solutions, advanced data analytics tools, and cybersecurity systems. Small and medium-sized enterprises (SMEs) in Vietnam often face significant financial constraints, limiting their ability to adopt advanced technologies available in international markets. This imbalance in financial and technological capacity across different groups of enterprises has resulted in marked disparities in their ability to comply with regulatory requirements and ensure the transparency of financial reporting. Without comprehensive reforms in professional training and significant upgrades to accounting software, digital asset accounting is unlikely to evolve into a reliable tool for corporate governance and decision-making.

Table 5. Summary of survey results on challenges related to human resources and technological infrastructure

No.	Items	Frequency	Percentage (%)
1	Accountants lack specialized knowledge of digital assets and digital security	276	72.3
2	Existing accounting software does not support the direct integration of blockchain data	284	74.3
3	The cost of investing in security systems and retraining personnel is excessively high	145	38
4	Accounting personnel are unable to independently verify transaction data on blockchain systems because of technical barriers	247	64.7
5	Accounting software used in Vietnam does not support digital asset-related accounting functions for preparing financial statements under current accounting standards	293	76.7

Source: Compiled from the survey results.

5. Solutions and discussion

To address the structural challenges identified in this study, it is essential to establish a comprehensive and coordinated set of solutions spanning both the regulatory and organizational levels. Such an integrated approach is a prerequisite for enhancing the transparency and consistency of digital asset accounting practices in Vietnam.

First, to overcome the regulatory barriers, the legislative authority should amend the 2015 Law on Accounting by incorporating a formal legal definition of digital assets and recognizing them as legitimate accounting objects within the accounting system. Providing a clear legal definition in primary legislation

would establish a solid foundation for the Ministry of Finance to issue detailed implementing regulations governing the chart of accounts, accounting treatments, and financial statement presentation, thereby eliminating the current fragmented application of international accounting standards. At the same time, the State Bank of Vietnam, the Ministry of Finance, and the tax authorities should establish an inter-agency coordination mechanism to harmonize their regulatory approaches. Such coordination would reduce legal uncertainty and enable enterprises to account for digital assets according to their economic substance without facing potential violations of foreign exchange management regulations.

To address the challenges associated with the

recognition and measurement of digital assets, enterprises should proactively adopt the accounting framework developed by the IFRS Interpretations Committee by classifying digital assets as either inventories or intangible assets, depending on the purpose for which they are held. To reduce subjectivity in the measurement of fair value and impairment losses, The State should consider licensing domestic digital asset exchanges or establishing an official list of reputable international exchanges as authorized reference sources for market price data. Standardizing the sources of valuation data would not only improve the reliability of amounts reported in the statement of financial position but also promote greater consistency between enterprises and independent auditors.

Regarding internal controls and the management of legal documentation and accounting evidence, the optimal solution is to implement multi-signature wallet technology to ensure strict segregation of duties between the accounting function and the information technology function. Enterprises should establish robust private key governance procedures to mitigate the risk of asset losses arising from cyberattacks or internal fraud. From a regulatory perspective, the competent authorities should formally recognize blockchain records as a distinct form of electronic accounting evidence, thereby allowing them to serve as valid supporting documentation in place of traditional seals or digital signatures for transaction reports generated by foreign digital asset exchanges.

With respect to tax policy, the tax authorities should issue comprehensive guidance on the issuance of electronic invoices and the declaration of value-added tax (VAT) specifically for digital asset transactions. The regulations should clearly define the timing of taxable revenue recognition for token swap transactions by specifying the exchange rate used to convert transaction values into Vietnamese Dong (VND) at the transaction date. Such guidance would help enterprises avoid errors in tax declarations and reduce the risk of administrative penalties. Greater alignment between accounting profit and taxable income would also alleviate the burden associated with deferred corporate income tax, thereby enabling enterprises to manage cash flow more effectively.

Finally, strengthening implementation capacity requires a comprehensive strategy encompassing both human capital development and technological infrastructure modernization. Higher education institutions should incorporate topics such as blockchain technology, consensus mechanisms, and digital security into accounting curricula to address the current shortage of interdisciplinary expertise. At the same time,

Vietnamese accounting software developers should invest in developing application programming interfaces that enable direct connectivity with blockchain networks, thereby automating transaction recording and blockchain data reconciliation. Modernizing technological infrastructure would not only reduce errors associated with manual data entry but also enhance the faithful representation and accuracy of financial information in the era of the digital economy.

6. Conclusion

This study provides a systematic analysis of the barriers to digital asset accounting in Vietnamese enterprises, highlighting the urgent need for a dedicated regulatory framework. Based on empirical evidence collected from 382 financial managers and accounting professionals, the findings reveal substantial structural barriers that continue to hinder the effective accounting treatment of digital assets in Vietnam. The survey results were synthesized into five major categories of challenges. These encompass inconsistencies in the current legal and regulatory framework, complexities associated with the recognition and measurement of digital assets, and the incompatibility of traditional internal control mechanisms with blockchain-based transactions. In addition, difficulties related to tax compliance, together with limitations in implementation capacity including the professional competencies of accounting personnel and the capabilities of existing accounting software were identified as critical obstacles to the adoption of effective digital asset accounting practices. The findings underscore the urgent need to establish a dedicated accounting framework for digital assets in order to enhance the transparency and reliability of financial reporting. Vietnamese regulatory authorities should promptly issue detailed implementation guidance that incorporates international financial reporting practices for recognizing digital assets as either inventories or intangible assets, depending on the entity's holding purpose. At the enterprise level, organizations should proactively adopt advanced technological solutions, such as multisignature wallet systems, to strengthen risk management while allocating sufficient resources to professional training and the modernization of accounting information systems. The coordinated implementation of these regulatory, technological, and organizational measures will provide a solid foundation for transforming digital asset accounting in Vietnam from a fragmented and reactive practice into a standardized and professionally managed accounting system capable of supporting international integration and the sustainable development of the digital economy.

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