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Digital Assets as Collateral in Banking Credit Activities: Legal Challenges and Recommendations for Improving Vietnamese Law

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Abstract
This paper analyzes the potential use of digital assets as collateral in banking credit activities, considering it an inevitable trend in the era of digital transformation. It examines the legal characteristics of digital assets, evaluates Vietnam's current legal framework on the establishment, registration, and enforcement of security interests in digital assets used as collateral in credit transactions. Based on the legal challenges of employing digital assets as collateral in banking credit activities in Vietnam, the paper proposes recommendations for improving the law, thereby protecting the legitimate rights and interests of the parties involved and promoting the development of the financial market in the digital economy.

Keywords: Digital Assets, Collateral, Banking Credit, Vietnamese Law, Digital Technology

1. Introduction

In recent years, the rapid development of digital technologies, particularly blockchain and the tokenization of assets, has facilitated the emergence of various new forms of digitized property. These digital assets not only possess real economic value but also can be transferred, circulated, and independently owned within the online environment. They include cryptocurrencies, virtual assets, non-fungible tokens (NFTs), economically valuable digital data, and other forms of digitized property.[1] Against the backdrop of a fast-growing digital economy, digital assets are gradually becoming highly liquid assets with significant potential in civil and commercial transactions.

Alongside this development, the demand for using digital assets as collateral in credit activities of financial institutions has been increasing rapidly.[2] The use of digital assets as collateral not only diversifies methods of securing loans but also creates new opportunities for borrowers, particularly in the fields of innovation, financial technology, and e-commerce. However, the application of digital assets as collateral also raises considerable challenges for the existing legal framework.

Currently, Vietnamese law—including the 2015 Civil Code, the Law on Credit Institutions (2024, as amended in 2025), and related implementing regulations—has yet to provide clear and comprehensive provisions on the establishment, recognition, and enforcement of security interests in digital assets in banking credit transactions. The absence of specific legal rules leads to numerous practical difficulties, such as determining ownership, valuation, registration of security interests, and mechanisms for enforcement when the borrower defaults.

In this context, a crucial question arises: How can Vietnamese law promptly recognize, regulate, and protect property rights in digital assets when they are used as collateral in banking credit activities? Addressing this issue is not only theoretically significant for the development of the civil and banking legal system but also of great practical importance to the advancement of Vietnam's digital economy.

[1] Đặng Tài An Trang (2025), *Xu thế phát triển của tài sản số*, https://tapchitaichinh.vn/xu-the-phat-trien-cua-tai-san-so.html, accessed on 8 Aug 2025

[2] Hương Giang, Hoàng Giáp (2025), *Tài sản bảo đảm ngân hàng - Những vấn đề quan tâm hiện nay*, https://sbv.gov.vn/vi/w/sbv625815, accessed on 8 Aug 2025

2. Materials and Methods

2.1 Research Approach

This study employs a doctrinal legal research methodology combined with a comparative and analytical approach. The doctrinal component focuses on interpreting and systematizing Vietnamese legal provisions relevant to collateral and secured transactions, while the comparative approach explores how foreign jurisdictions regulate the use of digital assets as collateral in banking credit activities.

2.2 Sources of Data

The research is based primarily on the following categories of materials: (i) The Civil Code 2015, especially provisions on property, security interests, and collateral; (ii) The Law on Credit Institutions 2024 (as amended in 2025) and related implementing regulations; (iii) Decree No. 21/2021/ND-CP on securing the performance of obligations; (iv) Other relevant regulations issued by the State Bank of Vietnam and the Ministry of Justice.

In addition, the research also draws upon a wide range of scholarly and professional materials. Academic articles, textbooks, and legal commentaries on banking law, secured transactions, and digital asset regulation provide the necessary theoretical grounding. These sources are complemented by practitioner-oriented perspectives, including analyses by financial law experts and industry reports produced by fintech associations and professional consultancies. Such literature offers critical insights into both the doctrinal debates and the practical challenges faced by financial institutions in adapting to technological innovation. By combining academic and professional perspectives, the study ensures a comprehensive understanding of the intersection between law, finance, and digital technology.

3. Results

3.1 Overview of Digital Assets and Their Potential Use as Collateral

3.1.1 Concept of Digital Assets

Digital assets are a relatively new concept, formed and developed in parallel with advances in digital technologies, particularly blockchain, cloud computing, artificial intelligence, and distributed data storage systems.[3]

From a technological perspective, a digital asset can be understood as any content, data, or information that exists in electronic form, which can be created, stored, and transmitted through digital devices or technological platforms. Digital assets may take various forms, such as files, software, digital images, encrypted data, or sequences of digital codes stored on electronic platforms.[4]

From an economic perspective, digital assets are resources capable of generating real economic value for individuals, organizations, or investors through sale, transfer, or use in commercial and financial activities.[5] For example, electronic tokens may function as payment instruments, investment vehicles, or value storage tools.[6] Certain digital assets, such as cryptocurrencies (e.g., Bitcoin, Ethereum), derive their value from market demand and are widely used in financial transactions. Other forms of digital assets, such as non-fungible tokens (NFTs), virtual assets in online games, and personal data with high economic value (e.g., user data), are also regarded as potentially profitable digital assets.[7]

From a legal perspective, digital assets are still in the process of being identified and regulated in many jurisdictions. Vietnamese law has recently provided a specific definition of "digital assets" as assets under the Civil Code, expressed in digital form, created, issued, stored, transferred, and authenticated through digital technologies in an electronic environment.[8] According to this legal framework, digital assets include:[9]

1. Virtual assets in the electronic environment – a type of digital asset that can be used for exchange or investment purposes (excluding securities, digital forms of legal tender, and other financial assets as prescribed by civil and financial law);

2. Encrypted assets – a type of digital asset that uses encryption technology or similar digital technology to authenticate the asset during its creation, issuance, storage, or transfer. Encrypted assets also exclude securities, digital forms of legal tender, and other financial assets under civil and financial law;

3. Other digital assets.

It can be observed that if a digital asset can be identified, has economic value, and ownership or control rights over it can be recognized, then in principle, it may be considered property in the form of property rights or intangible assets. Accordingly, having only recently been acknowledged in legislation, digital assets are gradually being applied in practice and considered as a type of collateral in banking credit relations.

3.1.2 The Potential of Digital Assets as Collateral in Banking Credit Activities

To determine whether digital assets can be used as collateral in banking credit activities, it is necessary to analyze whether digital assets meet the legal criteria of "property" under Vietnamese law. According to Article 105 of the 2015 Civil Code, property includes objects, money, valuable papers, and property rights. Thus, an item is considered property under Vietnamese law if it meets the conditions of being measurable in value, clearly identifiable, and transferable in terms of ownership or lawful possession.

Applying these criteria, most digital assets today are intangible in nature, lacking a physical form, but ownership, usage, and transfer rights can nevertheless be established through electronic methods. For instance, an NFT may

[3] Minh Anh (2025), *Một số điểm mới trong quản lý tài sản số của Nga và bài học kinh nghiệm cho Việt Nam*, https://antoanthongtin.vn/tin/mot-so-diem-moi-trong-quan-ly-tai-san-so-cua-nga-va-bai-hoc-kinh-nghiem-cho-viet-nam, truy cập ngày 08/8/2025

[4] Teddy (2025), *Tìm hiểu tài sản số là gì: Toàn cảnh về khái niệm, phân loại và tương lai phát triển đến năm 2045*, https://fptshop.com.vn/tin-tuc/danh-gia/tim-hieu-tai-san-so-la-gi-177757

[5] Đại Kim (2025), *Tiến tới vị thế trung tâm tài sản số*, https://nhandan.vn/tien-toi-vi-the-trung-tam-tai-san-so-post898521.html

[6] Finhay (2023), Token là gì? Kiến thức về Token nhà đầu tư cần biết, https://www.vnsc.vn/token/

[7] Lê Tỉnh, Sơn Nhung (2025), *Sàn giao dịch tài sản số đã rất gần*, https://nld.com.vn/san-giao-dich-tai-san-so-da-rat-gan-19625080621135197.htm

[8] Article 46 Law on Digital technology industry 2025.

[9] Clause 2 Điều 46 Law on Digital technology industry 2025.

represent ownership of a digital artwork and can be uniquely identified through a non-fungible code on the blockchain. Cryptocurrencies like Bitcoin can be valued by the market, stored in digital wallets, and transferred via distributed networks.

However, current laws still lack specific provisions on the registration, valuation, or establishment of security interests over digital assets. For tangible assets, the creation of a security interest is typically associated with registration at a competent authority (such as the National Registration Agency for Secured Transactions). Digital assets, by contrast, lack an equivalent mechanism. This results in significant legal risks for secured creditors in credit transactions involving digital assets, as there is no public mechanism to determine priority or verify the existence of a security interest.

Nevertheless, some types of digital assets—particularly economically valuable data or access rights to information systems—may be considered property rights, a legally recognized form of asset under Article 115 of the Civil Code. Property rights are rights that can be valued in monetary terms[10] and transferred in civil transactions, thus potentially forming a legal basis for their use as collateral, provided that ownership can be clearly established and proven.

From the above analysis, it can be seen that recognizing and regulating digital assets as "property" under Vietnamese law is theoretically feasible. However, practical implementation requires detailed legal provisions, particularly regarding the registration of secured transactions, asset valuation mechanisms, and procedures for enforcement or dispute resolution involving digital assets.

3.2 The Current Legal Framework on Secured Transactions and Gaps in Relation to Digital Assets

3.2.1 Current Legal Provisions on Collateral for Digital Assets in Vietnam

Vietnam's legal system has established a relatively comprehensive framework for collateral in civil relations and banking credit transactions, grounded in the 2015 Civil Code (Civil Code), the Law on Credit Institutions 2024 (as amended in 2025), and Decree No. 21/2021/ND-CP guiding the implementation of certain provisions of the Civil Code on securing the performance of obligations.

According to Clause 1, Article 295 of the 2015 Civil Code, collateral may include existing property or property to be formed in the future. The establishment of security interests must be made through a written security contract (Articles 119 and 319 of the Civil Code), and in some cases, registration of the secured transaction is required to establish effectiveness against third parties (Article 298 of the Civil Code). The Civil Code 2015 also provides the principal forms of security, including pledge, mortgage, guarantee, deposit, escrow, collateral deposit, and retention of property.[11]

In the banking sector, the Law on Credit Institutions 2024 (as amended in 2025) provides that credit institutions have the right to require borrowers to provide collateral to secure repayment obligations.[12] At the same time, credit institutions bear the responsibility to independently assess the risks, value, and legality of the collateral in credit-granting activities.

Decree No. 21/2021/ND-CP is currently the most detailed regulation on the registration, establishment, and enforcement of collateral. It allows the use of tangible property, intangible property, property to be formed in the future, and property rights as collateral, while also stipulating the registration mechanism at the National Registration Agency for Secured Transactions under the Ministry of Justice or at specialized registration authorities.

However, while the legal framework already recognizes intangible property and property rights as objects of secured transactions, its application to digital assets—characterized by their intangibility, decentralized storage, and volatile valuation—has yet to be addressed specifically. This leaves a significant legal gap when digital assets are used as collateral.

3.2.2 Limitations and Legal Gaps

Although the 2015 Civil Code and Decree No. 21/2021/ND-CP allow intangible property and property rights to be used as collateral, Vietnamese law currently lacks explicit provisions recognizing digital assets as a type of property eligible for secured transactions. This creates major challenges in determining the legal status of digital assets, as well as the mechanisms for establishing, enforcing, and protecting the legitimate interests of secured creditors.

First, there is no specific provision expressly recognizing digital assets as collateral. The concept of "digital assets" has not yet appeared in any official legal document, making the application of existing provisions uncertain and legally risky. Defining an item as "lawful property" is a prerequisite for its inclusion in civil transactions, including secured transactions.

Second, there is no registration mechanism for secured transactions involving digital assets in a public system. While the existing registration framework only supports certain categories of property—such as land use rights, property attached to land, means of transport, and a limited range of property rights—digital assets, with their intangible and decentralized nature, do not fit traditional registration mechanisms. This makes it difficult to establish effectiveness against third parties and to determine priority among secured creditors.

Third, there are no specific guidelines for the enforcement of digital assets when the debtor defaults. The enforcement of collateral is a crucial step in protecting the rights of secured creditors, especially in cases of credit contract breaches. However, digital assets, being stored on technological platforms and transferable in an anonymous manner, make tracing, freezing, and transferring assets highly complex, requiring both technical solutions and specialized legal regulations.

These limitations and gaps highlight the urgent need to improve the legal system to promptly regulate emerging legal relations in the context of digital transformation and the rapid development of digital assets in the modern economy.

4. Recommendations

Given the rapid development of digital technologies and the practical demand for using digital assets as collateral in credit activities, improving the legal framework is an inevitable requirement to ensure transparency, legal certainty, and to foster innovation in the financial–banking

[10] Article 115 Civil Code 2015.
[11] Article 292 Civil Code 2015.
[12] Clause 2 Article 103 Law on Credit Institutions 2024.

sector. Based on the analysis of current limitations, the author proposes several recommendations to Vietnam's legal system as follows:

First, develop specific guidelines on the establishment and registration of secured transactions involving digital assets. In particular, detailed legal instruments should be issued to regulate the creation, registration, and disclosure of secured transactions with digital assets. These should clarify:

- How to identify the party holding ownership or disposal rights over digital assets (e.g., through digital wallets or private keys).
- Mechanisms for valuing digital assets when included in a security agreement.
- The form of the security agreement for digital assets (which may be a traditional contract or a smart contract).

At the same time, consideration should be given to establishing a dedicated registration system for secured transactions involving digital assets, potentially leveraging blockchain technology to ensure transparency, security, and fraud prevention. Such a system should allow for the public disclosure of information on security interests, priority ranking, registration time, and the status of assets, similar to the registration mechanism for traditional secured transactions involving tangible property.

Second, develop mechanisms for enforcing digital assets when the debtor defaults. One of the most critical legal issues is how to deal with digital assets when the secured party fails to perform its obligations. The law should explicitly define the rights of secured creditors to seize, sell, or transfer digital assets. In particular, technical guidance is needed on how to access digital assets (e.g., control of digital wallets, private keys, or blockchain accounts) during enforcement, to prevent disputes and safeguard the interests of secured creditors. Furthermore, the roles of institutions supporting enforcement—such as registration authorities, digital asset valuation agencies, digital asset storage platforms, and electronic wallet service providers—should be clearly defined.

Third, promote the use of regulatory sandboxes for secured transactions with digital assets. In the current context, the State may consider establishing a regulatory sandbox mechanism for the use of digital assets as collateral. This would provide a controlled testing environment in which banks, credit institutions, fintech companies, and clients can implement models of secured transactions with digital assets under the supervision of regulatory authorities. The results of these pilot programs would serve as an important foundation for developing a more comprehensive and feasible legal framework in the future.

Fourth, learn from international experience and move toward enacting specialized legislation governing digital assets.

Vietnam should proactively study and adopt international best practices, especially from jurisdictions with advanced legal systems such as the United States, Singapore, and Japan—countries that have taken concrete steps to recognize and regulate digital assets. In the long term, consideration may be given to enacting a specialized law on digital assets, providing comprehensive regulation of legal issues arising from the ownership, use, and transfer of digital assets, including their role as collateral for financial obligations.

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