Challenges and Prospects of Establishing Accounting Treatment Standards for Digital Currency

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Abstract. Digital Currency have emerged as a disruptive force in the financial world, challenging traditional accounting practices and regulatory frameworks. This study examines the challenges and prospects for establishing accounting standards for Digital Currency. Initially conceived as a secure medium of exchange, Digital Currency have evolved into assets that can be exchanged for goods or services. However, their dual role as currencies and commodities presents a classification dilemma. Current accounting standards primarily classify Digital Currency as intangible assets, but their rapid appreciation renders historical cost measurement ineffective. Adopting fair value measurement emerges as an optimal solution, but practical hurdles remain. Through insights from existing literature and analysis, this study optimizes accounting approaches for Digital Currency, addressing challenges such as asset valuation, regulatory inconsistencies, diverse investor perspectives, and legal uncertainties. Establishing standardized and transparent accounting practices tailored to Digital Currency is critical to ensuring transparency, consistency, and reliability in financial reporting.

Keywords: Digital Currency; Accounting standards; Challenges; Prospects; Establishment.

1. Introduction

The evolution of accounting standards is closely tied to the evolution of economies and serves as a reflection of economic change. As economies change, accounting adapts to capture new transactions, industries, and financial instruments. The history of accounting is one of innovation and adaptation, with guidelines being refined to reflect the complexities of contemporary business.

Moreover, the establishment of accounting standards is intertwined with the global integration of economies. In an interconnected world, synchronized accounting standards facilitate transactions and investments across borders, fostering international trade and capital movements. As economies become increasingly interdependent, the need for consistent and transparent financial reporting grows, driving the global convergence of accounting standards. In China, the momentum in building an accounting framework reflects the country's commitment to economic reform and expansion. As reforms deepen in various sectors, including finance, technology and manufacturing, the need for sound accounting standards becomes paramount. A well-designed accounting framework not only enhances the credibility of financial reporting, but also supports the efficient allocation of resources, thereby contributing to sustainable economic development. The evolution of accounting standards is also influenced by technological advances. The emergence of digital technologies, such as blockchain and artificial intelligence, is reshaping accounting practices, enabling instant reporting, process automation, and also the advanced data analytics. Embracing technological innovation is critical to ensuring that accounting standards remain relevant and responsive to the needs of today's businesses and investors. By adapting to changing circumstances and embracing innovation, accounting standards play a pivotal role in fostering economic stability, transparency, and growth both domestically and globally. In the Figure 1, the components of accounting treatment standards are demonstrated.
Figure 1. The Components of Accounting Treatment Standards

Digital currency, originating from node networks and cryptographic algorithms, embodies a virtual form of monetary exchange. Bitcoin, as a prime example, garners global attention due to its decentralized structure, robust security measures, and cost-effective transaction capabilities facilitated by its utilization of blockchain technology and "distributed ledger" design. Existing accounting standards typically utilize the cost model to assess intangible assets and inventory, acknowledging declines in value but failing to capture fluctuations in profits, thus overlooking businesses' strategic use of Digital Currency to generate investment returns. Financial instruments are defined by contracts that create additional financial assets or liabilities. However, digital currencies, lacking contractual features, do not meet the criteria for existing financial assets. Nonetheless, the unique characteristics of the digital currencies necessitate their evaluation at fair value, with changes reflected in immediate earnings, despite not forming additional financial liabilities or equity instruments. To better study the challenges, this study focuses on the challenges and prospects of establishing the accounting treatment standards for the Digital Currency.

2. Literature Review and Background

Digital Currency have emerged as a significant disruptive force in the financial realm, presenting unique hurdles for accounting practices and regulatory structures. This review of existing literature amalgamates essential insights from a variety of studies delving into how Digital Currency are accounted for, providing a thorough comprehension of the current landscape, obstacles, and potential remedies.

[1] Hubbard (2023): Hubbard delves into plausible financial accounting approaches for Digital Currency, advocating for a model that revalues them as intangible assets. The research contrasts different methodologies, highlighting the necessity for precise asset valuation while averting substantial gains or losses from impacting income statements.

[2] Klopper & Brink (2023): This investigation centers on determining suitable accounting procedures for Digital Currency grounded in accounting theory, aligning with the Conceptual Framework of the International Accounting Standards Board (IASB). The proposal to recognize Digital Currency as assets at fair value is put forth, augmenting the provision of information conducive to decision-making.


[4] Martinčević et al. (2021): This study probes into the ramifications of accounting and tax handling of Digital Currency, accentuating the need for regulatory lucidity to tackle risks such as money laundering and tax evasion.


[10] Ṭegledi & Straoanu (2021): Addressing legislative gaps, this study deliberates on accounting facets and tax stipulations of Digital Currency in Romania. It underscores the need for regulatory clarity to mitigate risks linked with speculative assets.


In summary, the literature highlights the complexity of accounting for Digital Currency, with myriad perspectives on classification, valuation, and regulatory frameworks. Addressing these challenges requires a collaborative effort among standard setters, regulators, and industry stakeholders to ensure transparency, consistency, and reliability in financial reporting. In the Table 1, the challenges summarized from literature are summarized.

<table>
<thead>
<tr>
<th>Challenges</th>
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<tr>
<td><strong>Asset Valuation Challenges</strong></td>
<td>Cryptocurrency is characterized by substantial price fluctuations, rendering their valuation within assets a perplexing and intricate task. Guaranteeing precise asset valuation assumes paramount importance to forestall significant fluctuations in earnings or losses from influencing financial declarations.</td>
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<td><strong>Navigating through Regulatory Maze</strong></td>
<td>Regulatory frameworks governing Digital Currency exhibit marked discrepancies across geographical boundaries, compounding the intricacy of their accounting treatment. The fluid and uncertain nature of cryptocurrency regulations poses formidable challenges in ensuring adherence to regulatory mandates, encompassing areas such as combating money laundering and circumventing tax liabilities.</td>
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<tr>
<td><strong>Varied Investor Perspectives</strong></td>
<td>Investors manifest a kaleidoscope of sentiments towards Digital Currency, characterized by diverse outlooks and evaluations. This eclectic spectrum of investor sentiments exacerbates uncertainties for enterprises concerning cryptocurrency accounting practices, particularly in realms of classification and valuation.</td>
</tr>
<tr>
<td><strong>Navigating Legal and Regulatory Terrain</strong></td>
<td>The lack of clearly defined legal and regulatory frameworks poses legal pitfalls in navigating the landscape of cryptocurrency accounting. Ongoing transformations in the legal status and regulatory contours surrounding Digital Currency amplify legal risks for enterprises,</td>
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3. The Proposed Methodology

3.1 The Analysis on the Properties of Digital Currency [12]-[14]

According to prevalent theories in scholarly circles, digital currency refers to a type of currency existing solely in electronic form, possessing functions similar to those of a medium of exchange. It can be broadly divided into two main categories: state-backed digital currency and privately issued digital currency. State-backed digital currency, having legal tender status within a nation, is issued by central banks and shares similarities with M0 money supply. Conversely, privately issued digital currency encompasses various forms, primarily stablecoins and cryptocurrency, each distinguished by its method of determining value. Stablecoins, a subset of privately issued digital currencies, are engineered to maintain a stable value by being linked to tangible assets, fiat currencies, or other reliable financial instruments. This linkage ensures relative stability in their value, rendering them suitable for facilitating transactions and acting as a store of value. In contrast, cryptocurrency, another subset of privately issued digital currencies, derive their value from network consensus mechanisms, cryptographic algorithms, and the dynamics of market demand and supply. They are not tied to tangible assets or fiat currencies, often demonstrating significant price fluctuations. The recognition and assessment of digital currency involve intricate considerations due to their varied attributes. Factors such as determinants of value, legal status, and intended uses differ among different types of the digital currencies. Consequently, accounting treatment should be customized to suit the specific characteristics of each type. For example, while stablecoins may be regarded as cash equivalents or financial instruments measured at amortized cost, Digital Currency may be recognized at fair value, with changes in value recorded in earnings. Moreover, the evolving regulatory environment and the advancements in technology further complicate the accounting treatment of digital currencies, necessitating continuous assessment and adjustment of accounting standards.

According to current accounting standards, the asset class of cryptocurrency should be determined based on the purpose for holding it, which may include the cash equivalents, financial assets, intangible assets or inventory. In the Table 2, the determination of asset classes is discussed.

<table>
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<tr>
<th>Determination</th>
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<tr>
<td>Cash and Equivalents</td>
<td>Initially, cryptocurrency may be considered cash and cash equivalents, but due to significant price fluctuations, they are not suitable for this category.</td>
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<tr>
<td>Financial Assets</td>
<td>Cryptocurrency do not meet the definition of financial instruments, lack contractual conditions, and do not represent ownership interests in entities, thus not suitable for this category.</td>
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<tr>
<td>Intangible Assets</td>
<td>Cryptocurrency can be classified as intangible assets, as they are identifiable, separable, and can be sold or transferred independently.</td>
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<tr>
<td>Inventory</td>
<td>Depending on the entity’s business model, cryptocurrency may be treated as inventory, applicable when held for sale in normal business operations.</td>
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3.2 The Accounting Disclosure Issues and Regulation in the Cryptocurrency Environment

The unique attributes of cryptocurrency, such as their anonymity, decentralization, and intricate nature, pose challenges to conventional accounting standards and regulatory mechanisms. Issues arise regarding the valuation and measurement of digital currencies, recording transactions and assessing liquidity, as well as disclosing risks and ensuring security. Inadequate transparency and disclosure may result in heightened market uncertainty and increased risks for investors. Therefore, establishing
standardized and transparent accounting practices tailored for the Digital Currency becomes crucial. Accounting disclosure issues in the digital currency environment is presented in the Table 3.

Table 3. The Accounting Disclosure Issues in the Digital Currency Environment

<table>
<thead>
<tr>
<th>Issues</th>
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<tr>
<td>Valuation and Measurement</td>
<td>The volatility of cryptocurrency prices poses a challenge in determining their fair value. Traditional accounting standards limit the choice of measurement methods and assessment models, while the diversity of Digital Currency requires different measurement methods.</td>
</tr>
<tr>
<td>Transaction Recording and</td>
<td>Recording and liquidity of cryptocurrency transactions are critical issues. Special transaction characteristics, smart contract executions, and real-time on-chain transactions require accurate recording and reporting. Liquidity issues involve multi-platform transactions and address verification.</td>
</tr>
<tr>
<td>Liquidity</td>
<td></td>
</tr>
<tr>
<td>Risk Disclosure and Security</td>
<td>The cryptocurrency market entails high risks, including market fluctuations and cyberattacks. Comprehensive disclosure is needed to cover market, technological, and regulatory risks. Accounting disclosure focuses on security measures, risk management, and data protection.</td>
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<tr>
<td>Taxation and Compliance</td>
<td>Taxation and compliance are significant considerations in cryptocurrency accounting disclosure. The cross-border nature and anonymity of cryptocurrency pose challenges in taxation and compliance management. Some regions have introduced tax regulations and compliance requirements, but implementation complexities persist. Accounting disclosure must comply with local laws and regulations.</td>
</tr>
</tbody>
</table>

Navigating accounting regulation within the cryptocurrency realm is a labyrinthine journey, demanding innovative solutions. With the dynamic evolution of the cryptocurrency market, regulatory bodies are compelled to shift their focus towards formulating robust frameworks to oversee accounting practices in this nascent sector. The distinctive attributes of cryptocurrencies pose intricate challenges to conventional accounting norms, urging the formulation of tailored regulatory strategies to uphold market integrity and transparency.

Primarily, the decentralized architecture of cryptocurrencies obstructs the seamless application of traditional financial regulatory paradigms. Conventional regulatory entities typically administer currency issuance and trading via central banks or financial regulatory bodies. However, cryptocurrencies, functioning as decentralized digital assets underpinned by blockchain technology, lack a central authority, thereby complicating regulatory oversight. Furthermore, the inherent volatility and risk intrinsic to cryptocurrencies exacerbate regulatory complexities. The cryptocurrency market's inherent instability renders its valuation susceptible to drastic fluctuations within short time frames, impeding the formulation of consistent accounting methodologies and reporting standards. Regulatory frameworks must be adeptly crafted to accommodate these dynamics, ensuring accurate assessment and disclosure of cryptocurrency valuations and associated risks.

Moreover, the anonymity and privacy afforded by cryptocurrencies present regulatory hurdles. Given the pseudonymous nature of cryptocurrency transactions, regulatory entities encounter impediments in monitoring and supervising these transactions, thereby fostering a fertile ground for illicit activities such as money laundering within the cryptocurrency sphere. Consequently, regulatory bodies must implement robust measures to fortify surveillance mechanisms and thwart potential financial malfeasance.

Addressing the multifaceted challenges of accounting regulation in the cryptocurrency domain necessitates a multifaceted approach by regulatory and governmental bodies. Firstly, bolstering oversight of cryptocurrency exchanges and service providers is imperative to enforce compliance with anti-money laundering and anti-terrorism financing statutes. Secondly, the refinement of
pertinent accounting standards and regulations is indispensable to standardize accounting methodologies and disclosure requirements pertaining to cryptocurrencies. Lastly, augmenting monitoring and surveillance mechanisms within the cryptocurrency market is paramount to expediently identify and mitigate emergent risks and vulnerabilities. In essence, accounting regulation within the cryptocurrency ecosystem is a convoluted endeavor, demanding proactive regulatory interventions to uphold market stability and transparency. By fortifying regulatory mechanisms, refining regulatory frameworks, and harmonizing market conduct, the challenges inherent to accounting regulation in the cryptocurrency realm can be effectively mitigated, fostering the sound evolution of the market landscape.

3.3 The Challenges and Prospects of Establishing Accounting Treatment Standards for Digital Currency

Digital Currency, emerging as groundbreaking tools for transactions supported by cryptographic principles, have sparked significant discussions regarding their accounting handling. Understanding their evolving role is crucial. Initially conceived as secure and controlled means for exchanges, Digital Currency have transcended their original purpose. Presently, participants predominantly view them as assets exchangeable for goods or services, reflecting their dynamic nature and widespread adoption. Consequently, categorizing Digital Currency as assets seems warranted. However, the classification puzzle persists due to the nuanced characteristics of Digital Currency. Adhering to the principle of prioritizing essence over appearance, Digital Currency should be considered as currencies when facilitating transactions and as commodities when subject to speculative activities. This dual role requires a flexible accounting framework capable of accommodating both perspectives.

Current accounting standards mainly align Digital Currency with guidelines for intangible assets. However, this alignment presents challenges. Measurement methods for intangible assets, traditionally based on historical costs and subjected to annual assessments for potential impairments, may inadequately capture the fluid value of Digital Currency. The rapid appreciation often seen in many Digital Currency renders the historical cost measurement ineffective. To address these challenges, adopting an approach that measures fair value emerges as the optimal accounting solution. Fair value, reflecting the current market price, offers a more accurate representation of the genuine value of Digital Currency. Moreover, fair value measurement provides transparency and relevance, crucial for making informed decisions. Incorporating fair value measurement for Digital Currency aligns with the evolving landscape of financial reporting. However, implementing this approach necessitates overcoming practical hurdles. Establishing robust valuation methodologies and addressing regulatory uncertainties are essential steps toward achieving consistent and reliable accounting practices in the cryptocurrency domain.

The existing treatment methods of Digital Currency have been subjected to scrutiny and varying opinions. Through new insights into Digital Currency, we have compiled, analyzed, and eliminated the following list to optimize our approach:

In the area of cryptocurrency accounting, the conditions for confirmation and the termination of confirmation continue to be the subject of debate due to differing opinions and evolving perceptions. Mainstream Digital Currency such as bitcoin, known for their transactional capabilities and active market participation, are considered to be reliably measurable assets under current market conditions. In order to meet the criteria for recognition as an asset, two conditions must be met: A. The likelihood of associated economic benefits flowing to the entity; B. The costs are reliably measurable. The Accounting Standards Board of Japan (ASBJ) has issued guidance on Digital Currency that emphasizes the importance of an active market. If a cryptocurrency has an active market, its valuation should be based on the market price at the balance sheet date, with any difference from the carrying amount recognized in profit or loss. Conversely, if there is no active market for a cryptocurrency, it should be measured at cost, or at its estimated realizable value if lower than cost. However, the recognition of Digital Currency as intangible assets may not be appropriate in the long term. The cessation of confirmation for Digital Currency may occur when ownership is transferred or when one
or more Digital Currency no longer have an active market, requiring impairment. Regarding the choice of confirmation items, Digital Currency can be recognized as assets if they meet the criteria defined in the accounting standards. They can also be classified as current assets, particularly in enterprises with mining as their primary business. Financial assets may also be considered, given the similarities with trading financial assets. However, Digital Currency do not inherently possess "financial" characteristics. The inclusion of digital assets as a new account for the disclosure purposes provides an additional avenue for consideration. Ultimately, navigating the accounting treatment of the Digital Currency requires a nuanced understanding of their characteristics and their evolving role in the financial landscape.

3.4 The Further Discussions

In the cryptocurrency space, regulation faces a variety of challenges, while also exhibiting certain trends and complexities. To address these challenges, insights, recommendations and actions can be proposed to promote more effective regulation.

First, there is a need for greater coordination and integration of international and national regulatory guidelines. Given the global and cross-border nature of the cryptocurrency market, the establishment of a global regulatory framework is critical. International regulators can enhance cooperation to jointly formulate guidelines applicable to the global cryptocurrency market, thereby avoiding regulatory arbitrage and market loopholes. In addition, regulatory frameworks should be made more flexible and adaptable to promptly address emerging risks and challenges in the rapidly changing market environment. Secondly, regulatory agencies need to continuously update and enhance supervisory mechanisms to adapt to the rapid development and changes in the cryptocurrency market. This includes strengthening supervision of exchanges, service providers, and other relevant entities to ensure compliance with anti-money laundering, anti-terrorism financing, and other laws and regulations. Regulatory agencies should also leverage advanced technological tools such as blockchain analysis and artificial intelligence monitoring to enhance monitoring and tracking of cryptocurrency transactions. Moreover, regulatory agencies should encourage industry self-regulation to promote voluntary compliance with rules and standards by industry participants, collectively maintaining market order and stability. Furthermore, regulatory agencies should collaborate with cross-border accounting organizations to jointly address regulatory challenges in the cryptocurrency market. Cross-border accounting organizations can facilitate cooperation and coordination among regulatory agencies in different countries through sharing information and best practices. This will help establish more uniform and consistent regulatory standards, enhancing regulatory efficiency and effectiveness. Additionally, regulatory agencies can strengthen regulation and management of the cryptocurrency market through the formulation and promotion of industry standards.

However, one of the difficulties facing regulation is how to encourage innovation and development while maintaining market stability and transparency. The continuous development and innovation of cryptocurrency technology makes regulatory work more complex and challenging. Regulators need to protect investors' interests and prevent risks, while not stifling innovation. Therefore, regulatory approaches should be flexible and inclusive, with close cooperation with industry participants to jointly explore and formulate regulatory policies that meet market needs. In addition, regulators should enhance monitoring and research on emerging technologies and market dynamics, and adjust regulatory policies and measures in a timely manner to respond to market changes and risks. Accordingly, regulation in the cryptocurrency market faces numerous challenges and complexities, but also presents certain trends and measures. Through international cooperation, updating and improving regulatory frameworks, working with the cross-border accounting organizations, and striking a balance between promoting innovation and development, regulators can better address various regulatory challenges and promote the further health and sustainable development of the cryptocurrency market.
4. Conclusion

Effectively navigating the accounting treatment of Digital Currency necessitates a nuanced comprehension of their characteristics and their evolving role in the financial landscape. The establishment of accounting treatment standards for Digital Currency poses significant challenges owing to their unique attributes and the evolving regulatory environment. Despite these challenges, adopting fair value measurement emerges as an optimal approach to accurately reflect the value of Digital Currency and to provide transparency in financial reporting. However, implementing this approach requires addressing practical hurdles, such as establishing robust valuation methodologies and resolving regulatory uncertainties. In summary, addressing the challenges and prospects of accounting treatment standards for Digital Currency necessitates a collaborative effort among standard setters, regulators, and industry stakeholders to adapt to changing circumstances and to foster economic stability, transparency, and growth in the digital era.

References
