Evolution and Financial Implications of Stablecoins – A Literature Review

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Abstract. The market size of stablecoins, as an important tool to connect traditional finance and digital assets, is also expanding and has reached a considerable scale. However, the widespread adoption of stablecoins is accompanied by multiple issues such as technical risks, regulatory challenges, and market volatility. This study systematically analyzes the current situation of stablecoins, sorts out the definition and classification of stablecoins, discusses the far-reaching impact and potential risks of stablecoins on the financial market, and aims to reveal their role and challenges in the global financial system. The research significance of this paper is to provide policymakers, market participants, and academia with a comprehensive analysis of the risks and opportunities of stablecoins, and to suggest key directions for future development, including regulatory coordination, technological innovation, and further integration with the traditional financial system. The study concluded that the sustainable development of stablecoins depends on improved technical security, the improvement of the global regulatory framework, and the enhancement of market transparency. Future studies can further explore the competitive relationship between central bank digital currencies and stablecoins, as well as the application potential of artificial intelligence in stablecoin risk management.

1 Introduction

Under the influence of the 2008 financial crisis, the bankruptcy of Lehman Brothers, the government bailout and other events exposed the vulnerability of the centralized financial system and the continuous maturity of blockchain technology, cryptocurrency came into being, as a decentralized electronic cash system, eliminating intermediaries and giving individuals full control over assets. In 2008, the Bitcoin white paper "A Peer-to-Peer Electronic Cash System" was released, marking the development of virtual currencies [1]. However, cryptocurrency has a lot of limitations, more technical risks, sharp price fluctuations and limited application scenarios, low payment efficiency, and difficult supervision, full of obstacles. Driven by trading and investment needs, the birth of stablecoins anchored with fiat currencies provides more possibilities for cryptocurrencies. Since the launch of Tether (USDT) in 2014, stablecoins have evolved from a trading tool in the cryptocurrency market to an essential infrastructure for the global financial system. By 2024,

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the total market value of stablecoins is close to $200 billion, of which more than 95% are dollar anchors, and the head stablecoins USDT and USDC together account for 80% of the market share [2]. In developing countries, the penetration of stablecoins is particularly significant: in order to avoid the risk of local currency depreciation, users in Argentina, Nigeria and other countries pay a premium of as high as 30% for USD stablecoins, and stablecoins account for more than 60% of cross-border payments. This phenomenon not only reflects the central role of stablecoins in risk hedging, but also reveals its potential as a "digital dollar alternative" in emerging markets.

Although the size of the stablecoin market continues to expand, its development still faces multiple contradictions. First, at the technical level, smart contract vulnerabilities and algorithm failures are frequent; Secondly, at the regulatory level, the policy differentiation among countries increases market uncertainty; Finally, at the macro level, stablecoins may threaten the sovereign monetary system through monetary substitution. Studying the status quo, financial impact and challenges of stablecoins not only helps to understand their technical logic and market dynamics, but also provides decision-making basis for global financial regulatory coordination and technological innovation paths. This paper takes the current situation, financial impact and risk challenges of stablecoins as the main line of analysis, combined with empirical data and cases, systematically discusses and summarizes its core issues.

Based on the above research background and questions, we determined the following research review content. This paper will analyze the classification and mechanism of stablecoins; Assess its liquidity reshaping and innovation drive to financial markets, reveal risk challenges and propose countermeasures; Finally, it looks at the future role of stablecoins in the global monetary system.

2. Current status of stablecoins

2.1 Definition and classification of stablecoins

Stablecoins are a type of cryptocurrency designed to maintain a stable price relative to a specific asset or pool of assets [3]. However, traditional cryptocurrency prices are too volatile, so the core goal of stablecoins is to make them more suitable as a medium of exchange, a store of value, and a means of cross-border payments. Stablecoins can provide similar price stability to traditional financial assets by anchoring stable assets while maintaining the decentralization and efficiency of cryptocurrencies. This feature makes stablecoins widely used in cryptocurrency markets, decentralized finance, and traditional finance. As of 2024, stablecoins have a total market capitalization of nearly $200 billion, making them the third largest asset class in the cryptocurrency market after Bitcoin and Ethereum [2].

Stablecoins can be divided into various types according to the collateral mechanism and design pattern, which can be divided into the following four categories (see Table 1).

Table 1. Comparison of risk characteristics

Type	Advantages	Core risk
Legal currency mortgage type	High stability, strong liquidity	Regulatory pressure, reserve transparency risk
Crypto asset mortgage type	Decentralized, censorship resistance	Collateral volatility and liquidation risk
Algorithmic type	Unsecured property	Market manipulation, trust risk
Hybrid models	Yield-driven, innovative mechanism	Derivatives liquidity restrictions, custody risks

2.1.1 Legal currency mortgage type

Fiat backed stablecoins (such as USDT, USDC) are issued with a 1:1 backing of fiat currencies (such as US dollars) or cash equivalents (such as Treasury bonds), and issuers are required to disclose reserve audit reports to enhance trust. In this mechanism, users deposit fiat currency into an issuer's account, and the issuer issues an equivalent amount of cryptocurrency on the public chain for users to utilize. Stablecoins can be used for trading or other financial activities, and at the end of the circulation, users can exchange them back to fiat currency with the issuer, who will subsequently destroy the stablecoins [4]. Its market share accounts for more than 90% of the total stablecoin supply, of which USDT ($146 billion) and USDC ($56 billion) together account for more than 80%. Among them, USDT was born in 2014. It is a 1:1 stable asset pegged to the US dollar issued by Tether, a company headquartered in Hong Kong, based on the Ethereum ERC-20 protocol, TRON TRC-20 protocol and the Bitcoin network Omni protocol. It aims to address the market fluctuations of cryptocurrencies and provide a stable price similar to that of the digital US dollar [5].

2.1.2 Crypto asset mortgage type

Crypto-asset-backed stablecoins (such as DAI, sDAI) are issued through over-collateralized crypto assets (such as ETH) and rely on smart contracts to dynamically adjust the collateralization rate in response to price fluctuations. However, it has obvious risk characteristics, such as the collapse of collateral prices may trigger liquidation, and in 2022, the market value of DAI was reduced by 30% due to the fall of ETH [6].

2.1.3 Algorithmic stablecoins

Algorithmic stablecoins (such as the failed UST) have no physical collateral and use algorithms to regulate supply to maintain price stability. In the historical case, UST was decoupled due to a collapse in market confidence, and its market value went from $18 billion to zero [7].

2.1.4 Hybrid and Emerging models

New stablecoins (such as USDe), which combine spot assets with derivative hedges (such as ETH spot + futures shorts) and achieve stability through a Delta neutral strategy, currently have a market capitalization of $6.2 billion. At present, it also has a good development trend.

2.2 Technical and mechanism analysis of stablecoins

The current development status of stablecoins cannot be separated from the technical support, and there are mainly the following coin issuance support mechanisms on the market at present. The first is the fiat currency reserve mode. In this mode, for each stablecoin issued, the issuer needs to deposit equivalent fiat currency or highly liquid assets (such as short-term Treasury bonds) in the bank or custody institution. The operation process includes that the user first deposits fiat currency to the issuer and triggers the smart contract to generate the corresponding stablecoin. Upon redemption, the user destroys the stablecoin and the issuer returns the fiat currency (minus the fee). At the same time, the reserves are regularly verified by third party auditors (e.g. USDC is audited monthly by Grant Thornton). For example, USDC adopted 100% cash and short-term Treasury bond reserves with high transparency, but the Silicon Valley Bank incident in 2023 led to its short decoupling and a 35% drop in

market value. However, USDT has been repeatedly questioned by regulators due to its opaque reserve structure (only partial cash, including commercial paper) [8].

The second is the crypto asset mortgage model, users need to mortgage the value of crypto assets higher than the loan (such as ETH, WBTC), lock the collateral through smart contracts and generate stable coins, such as MakerDAO's DAI requires 150% excess mortgage, after the introduction of real-world assets (RWA) in 2024, 40% of the collateral is Treasury bonds and credit assets. Enhanced stability [8].

The third is the algorithm moderation and derivatives hedging model, which typically includes: the first pair of token models (such as UST), where the user can exchange the LUNA equivalent of $1 for UST at any time and vice versa. When UST is below $1, the system encourages UST destruction in exchange for discounted LUNA, reducing UST supply to push up prices. Second basis protocol (such as Ampleforth) In this mode, the number of tokens in all users' wallets is proportionally adjusted according to the degree of price deviation (if the price rises by 10%, 10% more tokens are issued per address).

Among the more famous cases of algorithm-based stablecoins, USDe achieves "current arbitrage" by pledging ETH spot and shorting perpetual contracts, with an annualized return of about 8.5%, but relying on exchange liquidity, the market capacity is capped at $12.8 billion [8].

2.3 Stablecoin market and development trend

The global stablecoin market is experiencing rapid growth. Over the past four years, the global quarterly transfer volume of stablecoins has increased by 17 times, reaching 4 trillion US dollars in the second quarter of this year. On July 17, 2024, the total trading volume of the stablecoin market reached 87 billion US dollars [9]. Among them, the head competition is fierce, such as USDT (146 billion) still ranks first, while USDC (56 billion) accounts for an increased proportion of DeFi due to compliance advantages, and the emerging USDe (6.2 billion) has the fastest growth rate [8].

As the market grows in size, its application scenarios are also expanding:

The first is cross-border payments. The settlement cost of stablecoins is relatively low, and the conversion is only 0.00025 USD/transaction of traditional remittances, so 61.8% of retail transactions in emerging markets such as Nigeria are completed through stablecoins [10]. Second stablecoins are also becoming DeFi and revenue tools, such as USDC becoming the main collateral asset for Aave, Compound and other protocols, driving DeFi's total lock-up volume (TVL) from 54.4 billion to $94.1 billion (2024). Finally, it includes institutional integration, as Japan's three major banks launched the "Project Pax" stablecoin cross-border settlement system; PayPal's PYUSD reaches $1 billion supply through Solana.

Affected by the above factors, stablecoins may have the following trends in the future:

The first is multi-chain issuance, such as Ethereum (55% share) is still the main battlefield, but Solana and Base can seize the payment scene with low fees. The second is regulatory driven compliance, including the EU MiCA regulations to promote the development of euro stablecoins (such as EURC), and the United States or through the stablecoin Act to accelerate institutional entry.

2.4 Regulatory and legal challenges of stablecoins

In the current situation, stablecoins face global regulatory divergence: the EU requires stablecoin issuers to have a banking license through the MiCA framework, and reserves need to be fully held, restricting the circulation of non-euro stablecoins. Regulatory uncertainty in the United States has led Circle (USDC issuer) to delay its IPO, but the Trump administration intends to push a bill to encourage compliance with stablecoins [10]. In emerging markets,

Nigeria banned stablecoins to promote the central bank digital currency eNaira, but after the failure, private stablecoin transactions increased by 9% [10].

At the same time, stablecoins also have some core challenges that may have an impact on future development: the first is the issue of anti-money laundering and transparency, coin mixing technology makes stablecoins into money laundering tools, and Tether is investigated by many countries due to the lack of KYC [10]. At the same time, systemic risks can not be ignored, such as USDT if the thunder may trigger a chain crash in the cryptocurrency market, the Federal Reserve listed it as a "potential financial threat." Finally, stablecoins may lead to the substitution of sovereign currencies. In Argentina and other inflationary countries, stablecoins have become a de facto substitute for the US dollar, threatening the local monetary sovereignty [10]. In response to the above challenges, different regions and organizations have taken some measures, such as China to promote the upgrade of digital RMB to M1/M2 to expand cross-border scenarios, and explore platform RMB stablecoins. The IMF advocated e-SDR (digital Special Drawing Rights) to balance the hegemony of USD stablecoins.

2.5 Summary of the status of stablecoins

As a bridge between the crypto market and traditional finance, stablecoins have evolved from speculative instruments to core infrastructure for cross-border payments, DeFi, and institutional finance. However, its development remains constrained by regulatory fragmentation, technological risks and sovereign currency competition. In the future, compliance, multi-chain integration and emerging market penetration will be key growth points, while global regulatory coordination and technological innovation will determine whether they can truly integrate into the mainstream financial system.

3. Financial impact analysis of stablecoins

3.1 Impact of stablecoins on financial markets

3.1.1 Improvement of market liquidity

Stablecoins significantly enhance the efficiency of money flow in financial markets by providing a highly liquid and low-friction medium of exchange. As of March 2025, the total supply of stablecoins has exceeded $214 billion, with annual transactions reaching $35 trillion, surpassing the size of traditional payment networks such as Visa. Its instant settlement features allow funds to flow seamlessly around the world, such as stablecoin transactions on the Solana chain costing only $0.00025 / transaction, providing an efficient solution for retail payments in emerging markets such as Nigeria, where 61.8% of cross-border transactions are completed via stablecoins. In addition, the liquidity pool of stablecoins in exchanges accounts for more than 60%, becoming a "safe haven" for the cryptocurrency market to resist volatility, such as during the market turmoil in 2024, the daily trading volume of stablecoins peaked at $34.8 billion (mainly USDT), which effectively alleviated the panic selling in the market.

3.1.2 Revolutionary breakthrough of cross-border payment

Stablecoins dramatically reduce the cost and time of cross-border payments by bypassing the traditional banking system. The distributed cross-border payment network that stablecoins

rely on presents a more flattened structure. Under this model, cross-border payments no longer require the chain of correspondent banks to carry out information transmission and fund settlement [11]. In 2024, the global settlement of stablecoins reached $5.28 trillion, an increase of more than 10 times from 2020, with emerging markets contributing the main increase. For example, Brazilian users use stablecoins to settle cross-border trade at 1/10 of the cost of traditional banks, and the arrival time is reduced from days to minutes [12]. In countries with high inflation, such as Argentina and Turkey, stablecoins have even become de facto "digital dollars," with users paying premiums as high as 30% (Argentina) and 22% (Nigeria) to acquire stablecoins to protect against the risk of local currency depreciation.

3.1.3 Diversification of risk hedging instruments

Stablecoins provide investors with a new type of risk hedge. In the DeFi space, users participate in lending and liquidity mining through stablecoins, with annualized returns of 8%-15% (such as MakerDAO's sDAI), while avoiding the risk of cryptocurrency volatility [13]. Since its explosion in 2020, DeFi has undergone several rounds of market validation and iteration. Nowadays, DeFi is gradually shaking off its early chaos and instability and developing towards institutionalization and compliance [14]. Traditional financial institutions have also begun to use stablecoins to hedge exchange rate risks, such as SpaceX using stablecoins to recover Starlink sales revenue in Nigeria to avoid losses from local currency depreciation. In addition, hybrid stablecoins (such as USDe) achieve a delta-neutral strategy through derivatives hedging (such as the ETH spot and futures short combination) with an annualized return of 8.5%, becoming the new favorite of institutional investors.

3.2 Promotion of stablecoins to DeFi

Stablecoins are the cornerstone of the DeFi ecosystem, with their low volatility and high compatibility providing core liquidity for decentralized protocols. As of 2025, DeFi's total locked volume (TVL) is $94.1 billion, of which stablecoins account for more than 70% (such as USDC dominates Aave and Compound) [15]. The first is liquidity supply: Stablecoins provide deep liquidity to DEX (such as Uniswap) through an automated market maker (AMM) mechanism, with stablecoins accounting for 60% of DEX trading volume in 2024, reducing slippage and improving user experience. The second is the development of the lending market: MakerDAO and other protocols, with stablecoin DAI as the core, support over-collateralized crypto asset lending, and after the introduction of real world assets (RWA) in 2024, 40% of the collateral will be converted to Treasury bonds, enhancing stability and attracting institutional funds. The third is the innovation of income instruments: DeFi protocols provide structured benefits through stablecoin derivatives (such as interest rate swaps and leveraged tokens), such as Ethena's "cash arbitrage" strategy with an annualized return of 27%, driving the size of the on-chain derivatives market to exceed $100 billion [14].

3.3 Financial innovation and market competition of stablecoins

The development of stablecoins has driven the development of innovative models and derivatives. The stablecoin market is evolving from a single anchoring model to a complex financial instrument. For example, protocols such as the revenue-sharing stablecoin M^0 and Agora distribute interest on reserves to users and cooperative platforms, subverting the traditional issuer's monopoly income model and incentivizing ecological integration. At the same time, it also innovated hybrid mortgage mechanisms such as USDe, which combined crypto assets and derivatives hedging, and its market value grew to $6.2 billion in one year, verifying the feasibility of combining algorithms with physical mortgages. There are even

cross-chain derivatives such as LayerZero protocols that support multi-chain stablecoin flows, driving a 300% increase in cross-chain trading volume and an annual settlement volume of more than $1.2 trillion.

With the gradual development of stablecoins, the competitive landscape of the market is also evolving. Traditional financial institutions and crypto-native projects are competing fiercely in the stablecoin market. The first is the entry of traditional giants, such as PayPal launched PYUSD and integrated into the Solana chain, and the supply exceeded $1 billion in 2025; Visa implemented a cross-border settlement pilot through USDC, covering 50 countries. The public chain ecosystem is also more competitive, Ethereum still dominates the market with 55% of the stablecoin share, but the Base chain has risen rapidly with the low cost advantage of USDC, attracting institutions such as Coinbase. At the same time, stablecoin regulation is also driven by compliance, such as the EU MiCA Act requires stablecoin issuers to hold banking licenses, promoting the growth of compliance projects (such as EURC), and the US stablecoin Act may accelerate the IPO process of institutions such as Circle.

Despite significant innovation, stablecoins still face market saturation and technical risks. The collapse of UST, an algorithmic stablecoin, resulted in a $18 billion market cap zero, exposing the pitfalls of over-reliance on market confidence. In addition, multi-chain expansion exacerbates liquidity fragmentation, with stablecoins on the Solana chain stagnating due to exchange capacity constraints, while Ethereum maintains its dominance with mature infrastructure.

4. Risks and challenges of stablecoins

4.1 Technical Risks

The technical risks of stablecoins are mainly reflected in the security of smart contracts and the stability of algorithmic mechanisms. The first is the vulnerability of smart contracts, on which the core of blockchain technology relies, but code vulnerabilities can lead to significant financial losses. In 2024, 43.8 percent of DeFi's funds were stolen due to private key breaches, some of which were directly related to smart contract design flaws. The collapse of UST, an algorithmic stablecoin, is a typical case. The dual token model it relied on triggered a "death spiral" due to the collapse of market confidence, resulting in the zero market value of $18 billion, exposing the vulnerability of the algorithmic mechanism under extreme market conditions.

Hybrid stablecoins (such as USDe) maintain price stability through derivatives hedging, but rely on exchange liquidity and the reliability of technical systems. If exchange liquidity dries up or comes under attack, hedging strategies can fail, leading to price decoupling. For example, the market capacity of USDe is capped at $12.8 billion, a breach of which may trigger systemic risks [15].

4.2 Regulatory Risks

The divergence and uncertainty of global regulatory policies are the main obstacles to the development of stablecoins. Regulatory risks include policy differences. The EU requires stablecoin issuers to hold banking licenses through the MiCA Act, which restricts the circulation of non-euro stablecoins; On the other hand, the draft stablecoin Bill in the United States tends to encourage compliance institutions to participate, resulting in restrictions on cross-border flows. For instance, although the regulatory approach for stablecoins introduced by the Hong Kong Monetary Authority promotes innovation testing, small and medium-sized

issuers have to bear high compliance costs. By 2024, a large number of projects had already withdrawn from the market due to their inability to adapt to the regulations [16].

There are also legal conflicts, with stablecoins potentially being considered securities or payment instruments and facing multiple jurisdictional conflicts. For example, the US SEC has repeatedly questioned the transparency of Tether's (USDT) reserves, and a review of its commercial paper share in 2023 led to short-term fluctuations of USDT's market value exceeding 10% [15].

The second is the risk of possible over-occurrence. For instance, the issuance process of the Libra stablecoin is quite clear. The association only needs to issue the corresponding amount of Libra stablecoin based on the amount of reserve assets deposited. However, if there is a regulatory gap or the reserve assets are not transparent, there is a risk of issuing Libra in excess of the collateral assets [17].

4.3 Market Risk

The market risk focuses on the transmission effect of liquidity shortage and price fluctuation. Among the liquidity risks, although the quarterly transfer volume of stablecoins will reach $4 trillion in 2024, there is still the possibility of liquidity drying up when the market moves violently. For example, in the Silicon Valley Bank event in 2023, USDC's market value fell 35% due to the temporary freezing of reserve cash, triggering a massive wave of redemption [18].

Severe hedging failures may also occur, and stablecoins that rely on derivatives hedging (such as USDe) may face the risk of base widening in extreme markets. When ETH prices plunged 20% in a single day in 2024, USDe's Delta neutral strategy failed due to illiquidity in the futures market, resulting in a brief decoupling.

4.4 Trust Risk

Trust risks arise from lack of transparency and centralized dependence. The issue of reserve transparency is critical, and Tether (USDT) has long been questioned for its opaque reserve structure, with only 15% of its reserves disclosed in 2023 being cash and the rest being risky assets such as commercial paper, which has triggered multiple regulatory investigations. In contrast, the USDC enhances trust through daily disclosure of the composition of its reserves (90% Treasury bills +10% cash) and monthly audits, increasing the amount in circulation by 78% year over year in 2024 [15].

Centralized risk is also a big problem, fiat currency collateral stablecoins rely on the credit of the issuer, once there is reserve embezzlement or bankruptcy, user assets will face losses. For example, in 2025, a local stablecoin issuer in Argentina lost its market value to zero due to misappropriation of funds, affecting 100,000 users [18].

4.5 Macroscopic Risks

Changes in the macroeconomic environment may weaken the stability of stablecoins. The first is inflation transmission, in hyperinflation countries (such as Argentina, Turkey), stablecoins are used as a "digital dollar" hedge against local currency depreciation, but if global inflation increases, the real value of the reserve assets (such as government bonds) of fiat currency collated stablecoins may shrink. In 2024, Argentine users pay a premium of up to 30% to obtain stablecoins, reflecting the duality of their hedging needs and macro risks.

Macro risks also have the problem of monetary policy impact. In the Fed's interest rate hike cycle, although the rise in short-term Treasury bond yields improves USDC reserve

returns, it may also lead to redemption pressure. In 2024, USDC will increase the cost of reserve management by 15% due to fluctuations in Treasury interest rates [15].

5. Conclusion

As the core tool connecting traditional finance and digital assets in the cryptocurrency ecosystem, the market size of stablecoins exceeded $200 billion in 2024, accounting for nearly 40% of the total market value of cryptocurrencies. However, behind its rapid expansion lurks multiple challenges such as technological vulnerabilities, regulatory fragmentation, market volatility and a crisis of trust. This study focuses on the status quo, financial impact and risk characteristics of stablecoins, understands their technical logic and market dynamics, and provides decision-making basis for global financial regulatory coordination and technological innovation paths. This paper systematically analyzes the current situation of stablecoins, stablecoins are dominated by fiat currency collateral, but the emerging hybrid type achieves high returns through derivatives hedging. In terms of technical mechanism, crypto collateral relies on excess collateral, while algorithmic stablecoins expose fatal flaws due to UST crash. This article also includes financial implications, with stablecoins improving the efficiency of cross-border payments, driving DeFi lock-ups to more than $94 billion, and spawning revenue-sharing derivatives. In terms of risk challenges, technical risks, regulatory differentiation, trust crisis and macro risks will pose possible systemic threats. Stablecoins have become the key infrastructure for global payments and asset flows through technological innovation and financial engineering, but their development is subject to multiple contradictions, such as the vulnerability of decentralized systems exposed by smart contract vulnerabilities and algorithm-based instability (such as the UST crash) at the technical level, or the social level of stablecoins becoming "digital dollars" in hyperinflation countries. It threatens the sovereign monetary system, but central bank digital currencies (such as the digital yuan) may gradually replace its function.

The future of stablecoins will depend on three major directions, the first is regulatory coordination and technological innovation, the global need to establish a unified regulatory framework, and promote zero-knowledge proof audit technology to enhance transparency; The second is technology integration and mechanism optimization, driven by dynamic mortgage rate adjustment and cross-chain interoperability can improve capital efficiency, and hybrid stablecoins may become the mainstream; Finally, sovereign digital currency replacement, central bank digital currencies may learn from stablecoin technology, gradually replace private stablecoins, but need to balance efficiency and financial sovereignty. Stablecoins are both a catalyst for financial innovation and a potential tipping point for systemic risk. Only through technology iteration, regulatory collaboration, and market education can its sustainable value in the global financial system be realized. Future research can further explore the competitive and cooperative relationship between central bank digital currency and stablecoins, as well as the application of AI-driven risk warning model in stablecoin ecology.

The study concluded that the sustainable development of stablecoins depends on the improvement of technical security, the improvement of the global regulatory framework, and the enhancement of market transparency. Future studies can further explore the competitive relationship between central bank digital currencies and stablecoins, as well as the application potential of artificial intelligence in stablecoin risk management. The research significance of this paper is to provide policymakers, market participants, and academia with a comprehensive analysis of the risks and opportunities of stablecoins, and to suggest key directions for future development, including regulatory coordination, technological innovation, and further integration with the traditional financial system.

References

1. Lu Song, Kun Liang, Aijing Wu. Concept of virtual currency evolution, risk characteristics and regulation mode study [J]. Journal of financial theory to explore, 2024, (4) : 43. 35 - DOI: 10.16620 / j.carol carroll nki jrjy. 2024.04.004.

2. SOHU.COM, Ten-year review of stablecoins: In-depth analysis of development trends and future prospects. Retrieved from: www.sohu.com/a/843148370_122066678 Accessed 1 March 31, 2025.

3. Kolomiets Andrey. Institutional uncertainty in transitional and developing economies. National Accounting Review, **2(1)**, 66-82 (2020)

4. Fan, Meng; Dai, Jinping: Monetary attribute of stablecoins: A theoretical and empirical test. National Accounting Review, 2023, EBSCO Open Research with Full Text

5. Deng Jianpeng, Zhang Xiaming. The Risks of Stablecoin USDT and its Regulatory Countermeasures [J]. Comparative Economic and Social Systems,2021,(06):52-62.

6. Jianguang Shen; Taihui Zhu. Development of stablecoins in ten years: Trends, Applications and Prospects. International Finance, 2024, No.522(12).

7. Bei Zhang, Xiaoyan Zhang, Wenting Zhang. The Current Development Status of Stablecoins and Potential macro Policy Challenges [J]. International Economic Review,2023,(02):66-84+5-6.

8. Sina Finance,2024, Stablecoin market trends Insight. Retrieved from: https://finance.sina.com.cn/blockchain/2024-11-01/doc-incuqmyw3013289.shtml. Accessed 1 March 31, 2025.

9. Hualin Li. The global stablecoin market is characterized by both risks and challenges. Economic Daily. August 1, 2024.

10. M. Zhang, The impact of digital currencies on the international monetary system. Retrieved from: https://news.qq.com/rain/a/20250304A0719E00. Accessed 1 March 31, 2025.

11. Liu Xu, Shang Xinxin. Research on the Development of Cross-border Transactions of Stablecoins and International Regulatory Experience [J]. Southern Finance,2022,(02):79-87.

12. SINA, What does ten years of stablecoins mean for the traditional world? Retrieved from: https://finance.sina.com.cn/blockchain/roll/2024-08-02/doc-inchfrrf3862012.shtml. Accessed 1 March 31, 2025.

13. Tencent. Delphi Digital Ten changes that will occur in the DeFi space in 2025. Retrieved from: https://news.qq.com/rain/a/20250319A0940O00. Accessed 1 March 31, 2025.

14. Chen Haiyan. Global Crypto Finance Enters a High Moment [J]. Zhongguancun,2024,(12):73.

15. NES.QQ, Stablecoin Report: 2025 USDC Ecological Outlook. Retrieved from: https://news.qq.com/rain/a/20250121A03IBA00. Accessed 1 March 31, 2025.

16. Taihui Zhu. Research on the Framework, Theory and Trends of Global Stablecoin Regulation. Financial Regulation Research. 2025 (03)

17. Yutong Liu. Research on the Risks and Regulations of Stablecoins: A Case Study of Libra [J]. Qin Zhi,2022,(11):131-133.

18. SOHU.COM, Fed Waller warns: Potential risks of stablecoins and the future of the global Dollar. Retrieved from: https://www.sohu.com/a/858519636_122066678. Accessed 1 March 31, 2025.