

## FROM INNOVATION TO RISK: STABLECOINS AND FINANCIAL STABILITY IN DIGITAL FINANCIAL INFRASTRUCTURE

Vesna MARTIN<sup>1\*</sup>

<sup>1</sup>Economists Association of Belgrade, Belgrade, Serbia<sup>†</sup>, martinvo0803@hotmail.com  
<https://orcid.org/0000-0002-5612-7452>

**Abstract:** Stable cryptocurrencies represent one of the most significant innovations in the field of digital finance. Their accelerated development and increasing representation in modern financial flows have raised numerous questions regarding their potential benefits, risks, and impact on financial stability. The goal of this work is to analyze the technological characteristics of stablecoins, assess their potential effects on financial stability, and review the regulatory approaches. The research is based on a qualitative approach, using the method of content analysis of relevant scientific and professional literature, regulatory documents, and market data, with the analysis of case studies of four representative models of stablecoins. Research results show that stablecoins can contribute to improving the efficiency of payment transactions, reducing transaction costs, strengthening financial inclusion, and modernizing the digital financial infrastructure. At the same time, their application can generate liquidity, operational, regulatory, and systemic risks that require adequate mechanisms of supervision and management. It is concluded that for the sustainable development of the market of stablecoins, it is necessary to establish a balance between encouraging technological innovations, transparent management of reserves, and the application of a comprehensive regulatory framework that will contribute to the preservation of financial stability.

**Keywords:** Stablecoins, financial stability, systemic risk, digital financial infrastructure, regulatory framework.

Review paper

Received: 01.02.2026

Accepted: 28.05.2026

Available online: 24.06.2026

DOI: 10.5937/jpmnt14-64433

### 1. Introduction

During the last few decades, the modern world has faced significant digital transformations in the global financial system, which resulted in the creation of new forms of money and modern financial instruments. One of these innovations is the emergence of stablecoins, which were developed in response to the significant price volatility of cryptocurrencies. Stablecoins

---

\* Corresponding author

<sup>†</sup> The views expressed in this paper are those of the author and do not necessarily represent the official view of the Economists Association of Belgrade.

were developed to combine the technological advantages of digital tokens while applying stabilization mechanisms offered by traditional financial instruments. In addition, as stablecoins have made a good connection between traditional and modern financial instruments, there has been considerable concern about their impact on financial stability. Their operation, particularly through potential liquidity problems, in addition to the indisputable innovative potential, has the possibility of creating systemic risks that have far-reaching consequences for the stability of the financial system.

Consequently, a significant body of discussion on stablecoins, both in theoretical and practical frameworks, refers to the analysis of potential risks that this form of digital money can generate. Their ability to support faster, cheaper, and more inclusive financial services must be seen alongside the risks they can generate for money markets, monetary transmission, the banking system, and international financial stability. In this sense, stablecoins open up a new field for the action of regulatory and supervisory institutions, which strive to find a balance between encouraging innovation and preserving the safety of the financial system.

From a process management perspective, stablecoins can significantly contribute to the transformation of financial processes by reducing transaction costs, increasing settlement speed, and enabling a greater degree of automation through smart contracts. As part of the new digital financial infrastructure, they contribute to the modernization of payment systems and facilitate more efficient interactions between financial institutions, businesses, and end users. Consequently, understanding the relationship between stablecoins, financial stability, and process efficiency is an important research question within contemporary digital finance.

This paper aims to examine how stablecoins can simultaneously contribute to the efficiency of financial markets and create challenges to the stability of the functioning of the financial system. Both approaches need to be understood in order to implement regulations in which stablecoins will be able to contribute to the stability of the digital financial environment. The introductory presentation is followed by a literature review and an overview of the used methodology. The fourth part of the paper is dedicated to the review of the results and the discussion, in which the analysis of the technological aspects of stablecoins, the potential risks that stablecoins can cause for the stability of the financial system, followed by an analysis of the regulatory framework, and a case study of different types of stablecoins is presented. In conclusion, we will summarize the main findings of this paper.

## **2. Literature review**

This section provides a systematic review of the literature on stablecoins and their impact on financial stability. The presented literature enables different aspects of stablecoins analysis, such as economic, technological, and financial perspectives, but also the role of stablecoins in payment systems, their role as digital money, and their presence in a decentralized financial system. In addition to the above, the literature review will enable the identification of key risks of stablecoins in the financial system.

Cryptocurrency, as part of digital finance, was developed with the aim of reducing paper money in the payment system and increasing financial inclusion (Martin, 2023). In the last few years, the stablecoin market has seen significant growth in terms of market capitalization, which has increased by more than thirty times since 2020. Thus, stablecoins have become one of the key elements of the crypto system, thus directly affecting traditional financial flows (MacDonald and Zhao, 2022). The market capitalization of stablecoins currently exceeds USD 300 billion, and as such, this market attracts a lot of attention from regulators and policymakers (Mahrous et al., 2025). Cryptocurrencies, as a representative of digital financial services, are characterized by a high level of volatility and electricity consumption, which, along with a

lower level of transparency, can have negative implications for sustainability. On the other hand, stablecoins, as cryptocurrencies with a fiscal value relative to a specific reference asset, have lower volatility, which makes them potentially more sustainable compared to traditional cryptocurrencies. Thus, stablecoins can better mitigate the presence of financial risks, such as sudden price changes and market unpredictability, thereby contributing to greater sustainability of digital currencies (Wolfson et al., 2025).

Stablecoins can be defined as digital tokens that are designed to maintain a stable value relative to traditional currencies. Nevertheless, despite their benefits, it is necessary to point out the risks, such as the risk of liquidity, as well as the necessary regulation. Particularly useful in this regard is the analysis by Eichengreen et al. (2025), which indicated that stablecoins, similar to fixed-exchange-rate currencies, may be exposed to devaluation pressures. Also, stablecoins can cause operational risks, such as fraud and cyber attacks, but also market risks that can potentially affect the stability of the financial system. It is also necessary to point out that certain types of stablecoins, such as those whose value is not based on high-quality liquid assets, can become particularly vulnerable to challenges such as the sudden outflow of deposits from banks and the inability to maintain parity (Dark et al., 2022).

Stablecoins are often perceived as relatively safe digital assets, which directly affects the stability of the financial system. In this regard, stablecoins with the largest market capitalization, such as Tether (USDT) and USD Coin (USDC), today represent a channel of connection between digital assets and traditional financial instruments. Such a connection can affect the sudden inflows or outflows of financial resources, which have a direct impact on the movement of the price of a safe asset such as government bonds. The aforementioned fluctuations will not only have a direct impact on the process of implementing the transitional mechanism of monetary policy but can also cause significant instability in the financial system, which is especially present in periods of increased financial stress. In such circumstances, investors invest their funds in safe-haven instruments (Ahmed and Aldasoro, 2025). The presented literature indicates that stablecoins have become a significant factor in the digital system and that they have the potential to increase financial inclusion and payment methods compared to traditional financial instruments. In addition to the indisputable advantages, it is necessary to point out the present risks, which indicate that it is necessary to carefully design stablecoins, which opens up space for further analysis of their technical characteristics.

A review of the existing literature shows that the majority of research focuses on the technical characteristics of stable cryptocurrencies, their collateralization models, regulatory challenges, and implications for financial stability. However, relatively few works look at these aspects in an integrated way, linking the technological mechanisms of functioning of stable cryptocurrencies, regulatory responses, and potential effects on financial stability within a single analytical framework. This is precisely the contribution of this paper, which seeks to unify technological, regulatory, and macro-financial perspectives, with a special focus on potential risk transfer channels between the digital and traditional financial systems. The next part of the paper is devoted to the analysis of the methods used.

### **3. Methods**

The study is based on a qualitative research approach employing content analysis of relevant scientific and professional literature, regulatory framework, and available market data on stable cryptocurrencies. Descriptive, comparative, and analytical methods were used in the paper to examine the technological characteristics of stable cryptocurrencies, their potential benefits and risks for financial stability, as well as regulatory approaches developed in the European Union and the United States of America. Particular attention is devoted to case

studies of different models of stable cryptocurrencies (USDT, DAI, AMPL, and PAXG), in order to identify their specific characteristics, stability maintenance mechanisms, and implications for the financial system. Applying an interdisciplinary approach, which combines technological, regulatory, and macro-financial perspectives, the research seeks to provide a comprehensive understanding of the role of stable cryptocurrencies in the modern digital financial infrastructure and their potential impact on financial stability.

## 4. Results and discussion

### 4.1. Technological aspects of stablecoins

Due to their significant impact on financial markets, cryptocurrencies have attracted considerable attention from researchers, regulators, and market participants (Martin, 2020). Cryptocurrencies emerged after the global financial crisis of 2007/2008. Then Bitcoin was presented as an alternative to traditional financial instruments, which brings with it significant volatility. In response to this, the first stablecoin, Tether (USDT), was launched in 2014. This development laid the foundation for a new type of digital asset capable of combining the advantages of blockchain technology with the stability of fiat currencies. Since their introduction, stablecoins have seen significant development and have become a significant part of the global digital financial flow, with significant growth in market capitalization (Su, 2025).

Based on the database of the website Defillama as of January 13, 2026, the total market capitalization of stablecoins is more than USD 308 billion, where the largest share is Tether (over 60%) - Table 1. The best comparison of the significant increase in the market capitalization of stablecoins is the fact that at the beginning of December 2017, it was only about 110 thousand dollars. In the last few years, a significant growth in the market capitalization of stablecoins has been recorded, which directly indicates an increase in their importance and acceptance in the crypto world. As a result, stablecoins have become a key component of the digital financial system.

**Table 1.** Top ten stablecoins by market capitalization

Name	1d change	7d change	1m change	Market Capitalization
1. Tether (USDT)	-0.01%	-0.26%	0.26%	\$186.738b
2. USD Coin (USDC)	-0.81%	-2.28%	-5.65%	\$73.937b
3. Sky Dollar (USDS)	-0.60%	-0.90%	-0.57%	\$6.406b
4. Ethena USDe (USDe)	0.46%	1.10%	-2.30%	\$6.373b
5. Dai (DAI)	0.15%	0.98%	-2.12%	\$4.54b
6. PayPal USD (PYUSD)	-0.78%	0.57%	-5.67%	\$3.644b
7. World Liberty Financial USD (USD1)	0.29%	2.39%	25.41%	\$3.492b
8. Falcon USD (USDf)	-0.12%	-0.11%	-2.75%	\$2.049b
9. Circle USYC (USYC)	0.0%	0.06%	12.85%	\$1.519b
10. Global Dollar (USDG)	-0.57%	17.74%	18.97%	\$1.433b

Source: <https://defillama.com/stablecoins?utm>

Note: The data shown is as of January 13, 2026.

Depending on the way of preserving the value, there are several types of stablecoins. The first type is represented by fiat-collateralized stablecoins, whose value is based on fiat currencies, such as the US dollar. This means that with this version, the stablecoin issuer must have an appropriate reserve value to cover the stablecoin value. Examples of fiat-collateralized

stablecoins are Tether, USD Coin, and TrueUSD. The second group refers to cryptocollateralized stablecoins, which base their value on cryptocurrencies. A typical example of the type of stablecoin is Dai (or DAI, formerly Sai or SAI). Algorithmic stablecoins represent the third type of stablecoins that base their value on algorithms and smart contracts. An example of this type of stablecoin is Terra LUNA or Ampleforth. The fourth category is commodity-backed stablecoins, which are tied to physical resources such as gold, with each token representing a certain amount of that commodity, such as Pax Gold (PAXG). In order to stabilize the value, each of the listed types of stablecoins uses different economic and technological approaches (Michael, 2023).

According to the analysis of the HKDR Education Team, stablecoins, as a digital currency, maintain their value stability thanks to the combination of the application of smart contracts and blockchain technology, the use of security protocols, and the connection between different networks. Blockchain enables transactions to be carried out in a transparent manner, while smart contracts automate key processes (such as access control and security functions). The stability of stablecoins has a significant impact on the monitoring of transactions. For a stablecoin to be practical for everyday use, scalability is also key - which is why it relies on networks and layer-2 solutions that offer faster and cheaper transactions. Stablecoins use multiple blockchains to establish a connection to traditional financial instruments. These characteristics highlight the complexity of the technological systems on which stablecoins are based. It is important to point out smart contracts that automate key processes, such as security system management and algorithm adaptation, which contribute to reducing human intervention and reducing the risk of error. During the operation of the system, stablecoins are minted when users deposit fiat or crypto, circulate through networks with transaction records on the blockchain, maintain a connection to the target value through appropriate mechanisms, and eventually can be exchanged for the base reserve through the token destruction process, with continuous monitoring provided by smart contracts and backend systems (Desk, 2025).

The essential competitive advantage of stablecoins lies in trust, that is, in the belief of users that they can exchange them for fiat currency at a fixed rate at any time. That trust rests above all on the reliability of anchoring mechanisms and reserves: with stablecoins backed by off-blockchain assets, such as fiat currency or government securities, the reserves need to be authentic, liquid, and transparently audited by independent auditors. In addition, technological verification through the transparency of the blockchain and the open source of smart contracts enables the verifiability of data and rules, thereby reducing the need for blind trust in the issuer, and the regulatory framework and legal norms act as external supplementary trust, as clear rules and supervision increase the security and confidence of users in the stability and compliance of stablecoins (Weili, 2025).

Strengthening the process and organizational perspective in the analysis of stablecoins implies viewing these instruments not only as financial innovations but also as innovations in business processes, especially in the domain of payments, clearing, settlement, and cross-border transactions. Stablecoins make it possible to increase the speed of execution of transactions because these transactions are executed almost immediately and do not depend on the working hours of banks. This technological basis reduces the costs of cross-border transfers and eliminates some of the intermediary costs characteristic of corporate and banking networks, thereby increasing the operational efficiency of payment and settlement systems. Understanding these processes becomes especially important in the context of DeFi, where smart contracts and automated settlements are used to reduce human and operational risk, while KPIs such as transaction execution time, transfer cost, and transparency of reserves and liquidity can be measured directly based on blockchain data and the behavior of market flows. Thus, stablecoins not only affect traditional financial metrics (e.g., returns on securities) but also

indicate a possible transformation of the organizational and process frameworks of payment and settlement, to support faster, cheaper, and more transparent means of exchange, which is crucial for evaluating their role in modern payment ecosystems (Ahmed and Aldasoro, 2025). The October 2025 European Systemic Risk Board (ESRB) report indicates that while the primary use of stablecoins in 2025 is still related to input-output flows in the crypto-ecosystem and as collateral in DeFi, their increasing integration into payment channels and financial services can potentially speed up the settlement of transfers and reduce the frictions characteristic of traditional payment systems (e.g., cross-border corporate payments and remittances). The report thus confirms that it is effective in strengthening the process and organizational perspective, which includes operational KPIs such as cost, speed, transparency, and efficiency, crucial for understanding and managing the impact of stablecoins on modern payment and financial infrastructures, but also for an appropriate regulatory response to improve the reliability and integrity of these digital instruments in the wider financial ecosystems (ESRB, 2025).

It is important to highlight the empirical findings and results of the practical application of stablecoins that indicate the improvement of key aspects of this digital asset. McKinsey & Company's analysis points out that stablecoins overcome limitations related to the limited speed of transactions and reduce transaction costs because they do not rely on bank working hours, nor on interbank transactions. Thus, stablecoins reduce operating costs while eliminating many middlemen. At the same time, the application of blockchain technology improves the transparency of transaction execution through stablecoins. The application of these technologies contributes to faster execution of cross-border transactions, which further contributes to faster settlement and lower costs. Altogether improves the modernization of the payment system at the global level, while increasing its transparency, efficiency, and security (McKinsey & Company, 2025).

The technological aspects of stablecoins are particularly visible in areas such as payment systems, settlement of transactions, and execution of cross-border transactions. These technological elements contribute to transparency and operational efficiency. However, despite the indisputable advantages, stablecoins generate risks, which include liquidity risk, operational risk, and reserve mismatch risk (FSB, 2023; IOSCO, 2023). In this regard, the role of governments and control mechanisms that control smart contracts and technological standards is significant, thus creating a much safer and more resilient framework for the functioning of stablecoins. Since their inception, stablecoins have managed to overcome the volatility associated with cryptocurrencies by offering technological advantages and price stability.

#### **4.2. Risks to financial stability**

Since their introduction, stablecoins have contributed to increasing the efficiency and speed of transactions, but they have raised the question of the impact on the stability of the financial system. Key risks that stablecoins can generate include the risk of maintaining parity, liquidity risk, and technological and operational risks. Stablecoins, as a form of digital asset, can hold value against fiat currencies and thereby provide significant benefits to the financial system. Some of the benefits relate to faster and cheaper execution of transactions, lower transaction costs, while at the same time enabling a higher level of financial inclusion. In addition, stablecoins contribute to greater innovation and competitiveness in the financial system, which opens the possibility to apply more efficient and favorable payment instruments. However, the application of stablecoins can create significant risks to financial stability. Namely, any larger inflow or outflow of stablecoins can affect the price of safe-haven assets and consequently affect the transmission mechanism of monetary policy. Additionally, any technological and/or operational vulnerability in the functioning of stablecoins can contribute to hacker attacks. Also,

an insufficiently clear and precisely defined regulatory framework increases the possibility of abuses and risk transfer to almost all participants of the financial system. All the above factors point to the need to implement an integrated action system that combines regulatory standards, technical solutions, and coordination with traditional financial instruments (Adrian et al., 2025).

The use of stablecoins is associated with several categories of risk that directly affect their reliability and stability. One of the most pronounced risks is the volatility in the value of the underlying cryptocurrency, which can consequently affect the creation of market pressure in the event of a sudden price change. The next risk is liquidity risk, which manifests itself in a situation where the issuer of stablecoins will not be able to provide enough funds for a sudden withdrawal of funds by investors, which is especially pronounced in periods of pronounced market instability. Also, stablecoins are exposed to the effects of extreme, sudden events, which are so-called "black swan" events, and refer to significant interruptions in the operation of blockchain technology and related hacker attacks. The above can affect a significant drop in confidence and destabilization of the stablecoins market and all its participants (Cao et al., 2024).

Today, stablecoins are significantly connected to existing financial flows, which leads to the necessity to adopt policies that will enable the preservation of financial stability while eliminating the risks that stablecoins carry with them (Aldasoro et al., 2025). The necessity of understanding these risks is crucial in the creation of a modern financial system in order to develop and implement an adequate regulatory framework and supervisory measures. In their analysis, Arner et al. (2020) look at different types of risks that the application of stablecoins can cause, as well as their impact on market functioning and financial stability. The most important risks relate to:

1) Value and liquidity risk – Although stablecoins are designed to preserve value relative to a certain benchmark asset value, parity can be breached in the event of a loss of confidence or a sudden withdrawal of funds. In this situation, there is a digital bank-run scenario, which creates pressure on the liquidity reserves of stablecoin issuers.

2) Operational and technological risk – Stablecoin systems rely on technological protocols and blockchain technology, which makes it vulnerable to market manipulation, software malfunctions, and hacker attacks. The aforementioned risk is particularly pronounced when stablecoins rely exclusively on algorithms, and not on reserves that can ensure business stability.

3) Regulatory and legal framework risk – It often happens that stablecoins operate in different regulatory frameworks or legal vacuums, which can cause potential conflicts between the regulations of different countries. As a consequence of the above, a lower level of user protection may occur and create a systemic risk.

4) Interconnectedness and macro-financial risk – Any major interruption in the functioning of the stablecoins protocol can lead to interruptions in payment transactions, which is especially pronounced considering the widespread use of stablecoins. In such circumstances, it is necessary to establish a stronger connection between digital and traditional financial instruments, which would reduce the impact of risks on the stability of functioning.

In their analysis, Azar et al. (2022) explored the implications that digital assets, including stablecoins, have on financial stability. The authors pointed out that the digital asset sector has experienced rapid growth, is characterized by high volatility, and has a significant connection between participants in the financial market, which can potentially generate vulnerability. Adequate management of stablecoins is a way to limit their impact on financial stability. This approach indicates that technical control or the adoption of a regulatory framework is not enough to preserve financial stability, but it is necessary to apply an integrated approach that will reduce the probability of market destabilization and enable the efficient use of stablecoins.

A broader risk management perspective, in the context of stablecoins, requires an integrated risk assessment approach. This implies transparently making decisions, a constant monitoring system, and analysis based on data. The risk assessment, in order to be adequate, needs to determine the early warning signals in market changes, the identification of liquidity risk, and operational problems (BIS, 2024). In order to preserve the stability of the financial system, it is necessary for governments to define a system of responsibility for issuers of stablecoins, as well as obligations for internal controllers and auditors, while establishing clear standards for transparent reporting (ECB, 2025). Data-driven analysis is based on real-time transaction monitoring, risk scenario modeling, and blockchain system analysis to make decisions based on accurate and reliable data. This approach enables the timely identification of interruptions in the operational part and consequently the necessary reallocation of resources in order to mitigate the consequences of the risk (IMF, 2024). On the basis of the above, risk quantification can be carried out using different scenarios, which will improve the decision-making process and the implementation of business continuity plans. This helps regulators, issuers, and financial institutions to provide a balanced approach to the application of digital financial instruments. As a result, it achieves greater reliability of digital payment instruments and thus the trust of end users of stablecoins.

Analysis of the risks that can be caused by stablecoins has shown that there are many channels through which the materialization of risks can destabilize the financial system. In order to prevent this, it is necessary to apply a comprehensive approach to managing stablecoins, which will be based on a combination of regulatory standards, technical solutions, and coordination with traditional financial instruments.

### **4.3. Regulatory framework**

A key element in protecting end users of stablecoins is the establishment and implementation of a comprehensive regulatory framework that will contribute to the reduction of systemic risks that this digital instrument can cause. With the constant growth of the market capitalization of stablecoins, the adoption of an adequate regulatory framework has become essential from both market and technological perspectives in the assessment of the overall impact of stablecoins on the stability of the financial system at the global level. Based on the above, it can be concluded how important the timely adoption of the regulatory framework is. In their analysis, Bele and Bele (2025) pointed out the regulatory challenges and regulatory framework related to the application of stablecoins in the global digital financial system. Stablecoins, especially those that track the value of fiat currencies, operate in a sphere that connects digital and traditional financial instruments. Although the regulatory framework of stablecoins differs from country to country, the key challenges are as follows:

(1) Legal classification – Depending on the jurisdiction, stablecoins can be treated as money, a digital asset, a payment instrument, or even a security. Until a clear classification of stablecoins is made, it becomes difficult to apply standard rules for user protection, supervision, and prevention of money laundering.

(2) Integration with payment systems and the banking sector –There is a growing risk that stablecoins, as they operate in parallel with the traditional banking system, lack adequate oversight. In this regard, the regulatory challenge is how to maintain financial inclusion and support innovation, while at the same time maintaining the stability of the financial system.

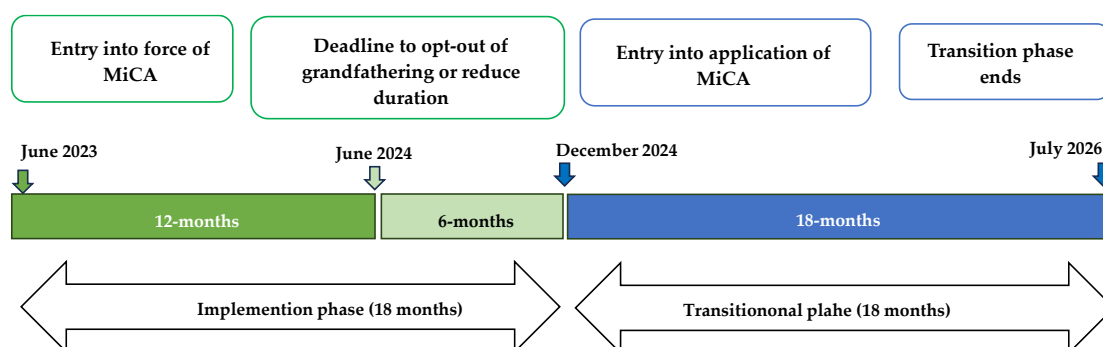
(3) Rules for reserves and liquidity – There must be transparency for stablecoin reserves. In this regard, regulators must require that stablecoin issuers have a sufficient level of reserves in order to maintain the peg, with mandatory reporting on the level of liquidity and collateral structure.

(4) Prevention of financial abuses – Regulators need to cover a wide range of standards, such as anti-money laundering and know your customer. Given the anonymity and speed of transactions, stablecoins are a suitable medium for financing terrorism and money laundering. For this reason, the regulators must create an integral system of control and supervision.

(5) International coordination – Considering the role of stablecoins at the global level, the authors observed that the implementation of national regulation is not enough. In order to achieve an effective regulatory framework, there needs to be international cooperation between regulators, government agencies, and central banks, all with the aim of preserving financial stability at the global level.

Stablecoin regulation is becoming increasingly important in the context of the growing use of digital currencies and their impact on financial markets. The goal of these regulations is to reduce risk, ensure system stability, and protect users, while enabling innovation in digital finance. In this regard, we will present the stablecoin regulation that is in force in the European Union and the United States of America.

Markets in Crypto-Assets Regulation (MiCA) is a legislative framework of the European Union that was adopted to introduce harmonized rules for the crypto-assets market within the European Union. This legislative text was adopted on April 20, 2023, by the European Parliament, after a four-year process of preparation and negotiations that began with the Commission's proposal from September 2020. The law was published in the Official Journal of the European Union and entered into force at the end of June 2023 as the Regulation on markets in crypto-assets. It is MiCA that regulates stablecoins, for the issuance of which issuers must ensure an adequate level of capital coverage and an appropriate level of reserves, then transparently publish data on reserves, and, before releasing tokens in options in the European Union, obtain authorization from the competent regulatory authorities before issuing tokens. MiCA also provides for additional obligations for significant stablecoins (those with a large number of users or market capitalization), including greater risk management standards and oversight. These provisions aim to minimize risks to financial stability and protect user confidence, while enabling the legal and controlled use of stablecoins in payment and investment settings across the European Union. European Union member states can introduce stopgap measures under Article 143 of MiCA, which allow firms already providing crypto-services to continue operating during an 18-month transition period after the full implementation of MiCA in December 2024 - Figure 1.



**Figure 1.** MiCA 36-month timeline

Source: European Securities and Markets Authority

Guiding and Establishing National Innovation for the U.S. The Stablecoins Act (GENIUS Act) is a United States federal law that establishes the first comprehensive federal regulatory framework for stablecoins. The GENIUS Act was passed by the US Senate on June 17, 2025, and then passed by the House of Representatives on July 17, 2025. It was subsequently signed into

law by President Donald Trump on July 18, 2025, making it federal law. According to the website of the US Congress, the GENIUS Act clearly defines payment stablecoins as digital tokens intended for payments, the value of which is stably linked to fiat currency, and prescribes that they may be issued only by authorized issuers, including banks, federally qualified non-bank entities, or state-licensed issuers. Issuers of stablecoins must maintain a level of reserves in a ratio of 1:1 in relation to the level of stablecoins in circulation, by using cash or highly liquid government bonds for reserves. In addition, the GENIUS Act requires a transparent reporting system, which includes monthly reporting on the level of reserves, while for larger issuers of stablecoins, annual reports and an auditor's assessment are necessary. In order to protect the end users of stablecoins, it is necessary that they be issued at a nominal value, while the payment of interest or yield is prohibited, thus indicating that their function is payment and not investment. Issuers of stablecoins are required to comply with anti-money laundering regulations, while the said law gives them the option of having federal or state regulations, depending on the value of stablecoins issued. Stablecoins not issued in accordance with the GENIUS Act cannot be treated as money or its equivalents, thus ensuring the stability of the financial system and legal protection.

Despite the genuine differences between the countries, the regulatory framework of stablecoins in the EU and the USA clearly indicates that the goal of adoption is the protection of users, transparency, and stability of the financial system. The implementation of MiCA and the GENIUS Act, as a modern regulation of digital financial instruments, ensures legal certainty on the stablecoins market. This achieves a balance between the development of digital instruments and the stability of the legal system.

#### **4.4. Case studies**

In this part of the paper, we will present representatives for four types of stablecoins: Tether, Dai, Ampleforth, and Pax Gold.

One of the most significant and long-lasting representatives of fiat-collateralized stablecoins is Tether (USDT), which was first introduced in 2014. This stablecoin was developed as a digital token pegged to the US dollar on a one-to-one basis and was introduced with the aim of providing a medium of exchange that is efficient, universally accepted, and stable. The original objective of Tether was to overcome the limitations of the traditional financial system while providing a simpler settlement system between all participants of the crypto system. Over time, Tether expanded its initial function and became a widely accepted digital instrument used not only for trading crypto assets but also for preserving value and securing international transfers, which is particular importance in countries with pronounced macroeconomic instability. In parallel with the growth in market capitalization, Tether has expanded its business into other technological areas, including Bitcoin mining, development of decentralized P2P (peer-to-peer) communication networks, infrastructure for artificial intelligence, neurotechnology, and educational initiatives. The company's goal is to increase financial inclusion, encourage technological innovation, and strengthen individual economic sovereignty. All this is implemented with the aim of strengthening access on a global level while ensuring security during the execution of transactions.

DAI is a decentralized stablecoin developed within the MakerDAO protocol, designed as a digital currency whose value is stabilized at approximately 1:1 to the US dollar. Unlike centralized stablecoins that rely on reserves held by financial institutions, DAI is issued and maintained through smart contracts and crypto-collateralization systems. The DAI generation process is based on locking the approved crypto-asset in the so-called "vault" mechanism of MakerDAO, whereby the value of invested collateral must significantly exceed the amount of issued DAI in order to ensure system stability and mitigate risks. Management of the entire

protocol takes place through a decentralized autonomous organization (DAO), in which tokenholders participate in decision-making on key parameters, including types of acceptable collateral and stabilization mechanisms. The mentioned model of management ensures a high level of transparency and the absence of a central authority. DAI, due to the application of smart contracts, is profiled as a stable and reliable digital asset for credit operations, trading, and payment. According to CoinMarketCap data, as of January 15, 2026, DAI's total market capitalization is 5.36 billion USD, while the total supply is USD 5.36 billion.

A representative algorithmic stablecoin is Ampleforth (AMPL), which was developed with the idea of providing an elastic cryptocurrency model that will target purchasing power parity against the US dollar adjusted for the CPI. This makes Ampleforth different from traditional stablecoins because instead of maintaining stability with the help of collateral or reserves, Ampleforth automatically adjusts for the total supply of tokens in circulation. This means that in the case when the value of Ampleforth is above the target value, its offer is increased, while in the case when the price is below the target, its offer is reduced. Thus, the token change is directly reflected on all wallet holders, which is a process called rebase. The rebase mechanism underlying Ampleforth, provides a reduction in volatility and a stable unit of measure over time. In terms of practicality, Ampleforth provides the use of units of measure and collateral within a decentralized financial application. Compared to traditional stablecoins, Ampleforth has a fluctuation that is based on the amount of tokens the holder owns, and based on assets. According to CoinMarketCap data, as of January 15, 2026, the total market capitalization of Ampleforth is USD 37.02 million, and the total supply is 11.78 million.

Pax Gold (PAXG) is a blockchain-based commodity-backed stablecoin that represents ownership of physical gold, developed by Paxos Trust Company as a vehicle that combines the characteristics of traditional precious assets with the advantages of crypto-technology. Each PAXG token is backed by one fine troy ounce of gold, which is held by the London Bullion Market Association based in London. Pax Gold is regulated and supervised by the New York State Department of Financial Services, while gold reserves are checked monthly by independent auditors. The system established in this way allows users not to personally trade and own gold, but to have ownership of digital gold. According to CoinMarketCap data as of January 15, 2026, the value of PAXG is USD 4,621.18 with a market capitalization of USD 1.76 billion.

A comparative analysis of the presented case studies indicates that different stabilization mechanisms generate different risk profiles. Stablecoins backed by fiat currencies, such as USDT, primarily rely on reserve transparency and liquidity management. Crypto-collateralized stablecoins, represented by DAI, depend on excessive collateralization and automated liquidation mechanisms. Algorithmic models, such as AMPL, achieve stability through dynamic supply adjustment but may exhibit greater sensitivity to market expectations. Commodity-backed stablecoins, such as PAXG, derive their stability from the value of an underlying physical asset. These differences suggest that regulatory requirements and risk management approaches should be adapted to the specific characteristics of each stablecoin model. All the mentioned representatives of the four types of stablecoins show that they have unique mechanisms for preserving stability and reliability in the digital financial system. The given examples of stablecoins show that stablecoins have different functions and structures, but were introduced with the common goal of providing stable and sustainable value in different markets.

## 5. Conclusion

One of the most significant innovations in the world of digital finance is represented by stablecoins, which combine the advantages of blockchain and value stabilization mechanisms from the traditional financial sector. Widespread application and rapid development of stablecoins have indicated their application potential in terms of financial inclusion, improvement of payment systems, and stability of executed transactions compared to classical cryptocurrencies. However, it is necessary to point out the risks that stablecoins can cause, which can affect liquidity, the operational functioning of the system, and the smoothness of cross-border transactions.

The analysis of four representative stablecoin models (Tether (USDT), DAI, Ampleforth (AMPL), and Pax Gold (PAXG)) showed that each type is characterized by its own value stabilization mechanisms, the goal of which is to ensure the stability of this digital instrument. For stablecoins, there must be a timely and comprehensive regulation, technological mechanisms that have a high level of controls and transparency of reserves. Under appropriate regulatory and technological conditions, stablecoins have the potential to become an important stabilizing element of the digital financial ecosystem.

The research results have significant practical implications for public policy makers, regulators, and financial market participants. For regulators, the findings point to the importance of developing regulatory frameworks that simultaneously encourage innovation while seeking to limit systemic risks. For financial institutions, stable cryptocurrencies represent a potential instrument for improving the efficiency of payment transactions and cross-border transactions, but require adequate management of operational, liquidity, and regulatory risks. At the same time, for investors and users of digital financial services, the key factors remain the transparency of reserves, the reliability of stabilization mechanisms, and compliance with regulatory requirements.

Future research could examine the long-term effects of stablecoin adoption on monetary policy transmission, banking sector competitiveness, and financial market structure. Particular attention should be paid to the interaction between stablecoins and central bank digital currencies (CBDCs), as well as the implications of integrating stablecoins into traditional payment infrastructures. Additional research could also focus on cross-border regulatory coordination, systemic risk transmission mechanisms, and the role of stablecoins during periods of financial stress and market volatility.

## References

- Adrian, T., Bains, O., Bechara, M., Cerutti, E., Forte, S., Grinberg, F., Gullo, A., Hengge, M., Jekabsone, A., Kao, K., Mancini Griffoli, T., Martinez Peria, S., Miccoli, M., Reuter, M. & Sugimoto, N. (2025). *Understanding Stablecoins*, International Monetary Fund. Monetary and Capital Markets Department, 1-56.
- Ahmed, R. & Aldasoro, I. (2025). *Stablecoins and safe asset prices*. Bank for International Settlements, BIS Working Papers No 1270, 1-29.
- Aldasoro, I., Aquilina, M., Lewrick, U. & Hyuk Lim, S. (2025). *Stablecoin growth – policy challenges and approaches*, Bank for International Settlements, BIS Bulletin No 108, 1-8.
- Arner, D., Auer, R. & Frost, J. (2020). *Stablecoins: risks, potential and regulation*. Bank for International Settlements, BIS Working Papers No 905, 1-31.
- Azar, P., Baughman, G., Carapella, G., Gerszten, J., Lubis, A., Perez-Sangimino, J.P., Rappoport, D., Scotti, C., Swem, N., Vardoulakis, A. & Werman, A. (2022). *The Financial Stability Implications of Digital Assets*. Federal Reserve Bank of New York, Staff Reports, No. 1034, 1-32.

- Bele, J. & Bele, T. (2025). The impact of stablecoins on global finance, *Agora International Journal of Economical Sciences*, 19(1), 176-188. <https://doi.org/10.15837/ajies.v19i1.7151>
- BIS - Bank for International Settlements (2024). Cryptoasset exposures. Available at: [https://www.bis.org/basel\\_framework/chapter/SCO/60.htm](https://www.bis.org/basel_framework/chapter/SCO/60.htm) (28.01.2026.)
- Cao, Y., Dai, M., Kou, S., Li, L. & Yang, C. (2024). Designing Stablecoins. Available at: <https://ssrn.com/abstract=3856569> or <http://dx.doi.org/10.2139/ssrn.3856569> (13.01.2026.)
- Dark, C., Rogerson, E., Rowbotham, N. & Wallis, P. (2022). Stablecoins: Market Developments, Risks and Regulation. Reserve Bank of Australia, *Bulletin* December 2022, 43-51.
- Desk, N. (2025). How Stablecoins Work: A Comprehensive Exploration of Mechanisms and Operations. Available at: <https://www.outlookindia.com/xhub/blockchain-insights/how-stablecoins-work-a-comprehensive-exploration-of-mechanisms-and-operations> (14.01.2026.)
- ECB – European Central Bank (2025). FAQs on the digital euro. Available at: [https://www.ecb.europa.eu/euro/digital\\_euro/faqs/html/ecb.faq\\_digital\\_euro.en.html](https://www.ecb.europa.eu/euro/digital_euro/faqs/html/ecb.faq_digital_euro.en.html) (28.01.2026.)
- Eichengreen, B., Nguyen, M. & Viswanath-Natraj, G. (2025). Stablecoin devaluation risk. *The European Journal of Finance*, 31(11), 1469-1496. <https://doi.org/10.1080/1351847X.2025.2505757>
- ESRB - European Systemic Risk Board (2025). Crypto-assets and decentralised finance, Report on stablecoins, crypto-investment products and multi-function groups, Available at: [https://www.esrb.europa.eu/pub/pdf/reports/esrb.report202510\\_cryptoassets.en.pdf](https://www.esrb.europa.eu/pub/pdf/reports/esrb.report202510_cryptoassets.en.pdf) (29.01.2026.)
- European Securities and Markets Authority, *Markets in Crypto-Assets Regulation (MiCA)*. Available at: <https://www.esma.europa.eu/esmas-activities/digital-finance-and-innovation/markets-crypto-assets-regulation-mica> (14.01.2026.)
- FSB - Financial Stability Board (2023). High-level Recommendations for the Regulation, Supervision and Oversight of Global Stablecoin Arrangements: Final report. Available at: <https://www.fsb.org/2023/07/high-level-recommendations-for-the-regulation-supervision-and-oversight-of-global-stablecoin-arrangements-final-report/> (29.01.2026.)
- <https://coinmarketcap.com/> (15.01.2026.)
- <https://defillama.com/stablecoins?utm> (13.01.2026.)
- <https://hkdr-stablecoin.org/stablecoin-101/stablecoin-technology?> (14.01.2026.)
- <https://makerdao.com/en/> (15.01.2026.)
- <https://tether.io/> (15.01.2026.)
- <https://www.ampleforth.org/?> (15.01.2026.)
- <https://www.congress.gov/crs-product/IN12553?> (14.01.2026.)
- <https://www.paxos.com/pax-gold> (15.01.2026.)
- IMF – International Monetary Fund (2024). Central Bank Digital Currencies and Financial Stability: Balance Sheet Analysis and Policy Choices. Available at: <https://www.imf.org/-/media/files/publications/wp/2024/english/wpiea2024226-print-pdf.pdf> (29.01.2026.)
- IOSCO - International Organization of Securities Commissions (2023). Thematic Analysis: Emerging Risks in Private Finance. Available at: <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD745.pdf> (30.01.2026.)
- MacDonald, C. & Zhao, L. (2022). Stablecoins and Their Risks to Financial Stability. Bank of Canada, *Staff Discussion Paper 2022-20*, 1-31. <https://doi.org/10.34989/sdp-2022-20>
- Mahrous, A., Caprolu, M. & Di Pietro, R. (2025). Stablecoins: Fundamentals, Emerging Issues, and Open Challenges. *General Economics*, 1-35. <https://doi.org/10.48550/arXiv.2507.13883>

- Martin, V. (2020). Cryptocurrencies - Reshaping the Financial Industry. 2nd Virtual International Conference Path to a Knowledge Society-Managing Risks and Innovation PaKSoM 2020, pp. 187- 193.
- Martin, V. (2023). Financial stability implications from the crypto-asset market. *Bankarstvo*, 52(2-3), 65-96. <https://doi.org/10.5937/bankarstvo2302065M>
- McKinsey & Company (2025). The stable door opens: How tokenized cash enables next-gen payments. Available at: <https://www.mckinsey.com/industries/financial-services/our-insights/the-stable-door-opens-how-tokenized-cash-enables-next-gen-payments?> (30.01.2025.)
- Michael, J. (2023). Understanding the Technology Behind Stablecoins. Available at: <https://medium.com/%40john.michael/understanding-the-technology-behind-stablecoins-e63d9a97157d> (14.01.2026.)
- Regulation (EU) 2023/1114 of the European Parliament and of the Council of 31 May 2023 on markets in crypto-assets, and amending Regulations (EU) No 1093/2010 and (EU) No 1095/2010 and Directives 2013/36/EU and (EU) 2019/1937. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023R1114> (14.01.2026.)
- Su, Z. (2025). Evolution and Financial Implications of Stablecoins – A Literature Review, 2nd International Conference on Development of Digital Economy, 1-10. <https://doi.org/10.1051/shsconf/202521804016>
- Weili, H. (2025). The technical principles and trust logic of stablecoins, Fudan University. Available at: <https://www.gate.com/news/detail/13795331?> (15.01.2026.)
- Wolfson, A., Khaladjan, G., Lurie, Y. & Mark, S. (2025). The Greater Sustainability of Stablecoins Relative to Other Cryptocurrencies, *Journal of Risk and Financial Management*, 18(3), 1-14. <https://doi.org/10.3390/jrfm18030161>

© 2026 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).

