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STABLECOINS AND THE FUTURE OF MONEY: ECONOMIC PRINCIPLES AND POLICY IMPLICATIONS

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ABSTRACT

The paper discusses the functions and the potential of stablecoins as an innovative payment system: Stablecoins constitute a new payment object which can be used for a direct exchange on the infrastructures provided by blockchains and crypto exchanges. For the discussion of stablecoins It is important to distinguish between bond-based and bank-based stablecoins: While the former use bank deposits as collateral, the latter use short-term treasuries. Bond-based stablecoins have an attractive business model. They enable direct international payments, i.e. without an intermediary, based on a safe transaction asset. Market dynamics reveal significant network effects: the system is characterized by the US dollar as the dominant currency denomination, a duopoly of two issuers, and a small number of blockchains. In the last few years, the dominant issuers have demonstrated resilience even during periods of economic shocks. The macroeconomic effects of bank-based stablecoins are limited, since they cannot create loans. Bond-based stablecoins can create money by purchasing government bonds. While bank-based stablecoins create financial stability risks by interconnecting banks and stablecoin issuers, bond-based stablecoins do not present this risk. The Digital Euro is not an alternative to stablecoins: Its use is limited to the euro area, it is designed for retail payments and it only allows asset holdings for private households.

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Stablecoins and the Future of Money:
Economic Principles and Policy Implications

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Abstract: The paper discusses the functions and potential of stablecoins as an innovative payment system. It is important to distinguish between bond-based and bank-based stablecoins. Bond-based stablecoins have an attractive business model, offering international direct payments based on a secure transaction asset. Market dynamics reveal significant network effects, with a single currency denomination, a duopoly of two issuers, and a limited number of blockchains. The dominant issuers have demonstrated resilience during periods of economic shock. The macroeconomic effects of bank-based stablecoins are limited, since they cannot create loans. However, bond-based stablecoins can create money by purchasing government bonds. While bank-based stablecoins create financial stability risks by interconnecting banks and stablecoin issuers, bond-based stablecoins do not present this risk. The Digital Euro is not an alternative to stablecoins. Its use is limited to the euro area, it is designed for retail payments and it only allows asset holdings for private households.

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Executive Summary

1. 'Stablecoins', or more accurately 'stablecoin-based payment systems', constitute an **important financial innovation**, creating a decentralised payment system based on blockchain technology and a stable payment object. This accomplishes the original vision of Bitcoin, which failed in this regard due to the high volatility and slow speed of its payment object and blockchain.

2. In order to understand how stablecoins function, it is necessary to differentiate between bank-based and bond-based stablecoins. **Bank-based stablecoins** are unsafe by design, as they use bank deposits as collateral, which are not suitable for large deposits. By contrast, **bond-based stablecoins** are safe by design, as they use short-term treasuries as collateral.

3. The innovation of **bond-based stablecoin systems** includes three main elements:
   - **Stability in terms of purchasing power** due to their link to fiat currencies, unlike cryptocurrencies which are the most volatile financial assets.
   - **Safety**, in the form of a convertibility obligation for stablecoins into fiat currencies: For large investors, this is the main advantage over traditional bank deposits, which carry a risk of bail-in in the event of a bank failure. So far, the two leading stablecoins (USDT and USDC) have proven highly resilient to shocks.
   - **Direct payment** via tokenisation differs from indirect payment via bank deposits, which requires intermediaries. The payment infrastructures of the stablecoin system are provided either by **crypto exchanges** (centralised or 'off-chain') or by **blockchains** (decentralised or 'on-chain').

4. As with all digital platforms, and especially payment platforms, the stablecoin system is characterised by **strong economies of scale and network effects**. Currently, only the USD plays a role as a denomination currency. Tether is by far the largest issuer of stablecoins, followed at a distance by USCoin as an issuer of payment objects. Crypto currency exchanges and blockchains can be considered oligopolies.

5. The most obvious **use case for stablecoins** is their role as a 'vehicle currency' in crypto exchanges, where they also serve as a safe haven for speculators. In international payments, the stablecoin system has the advantage of **offering direct, instant payments**. This differs from indirect payments offered by Swift. It

is based on traditional bank deposits, which require several intermediaries, as there is no global central bank facilitating this exchange. The potential of stablecoins for **retail payments** within a national sphere is limited due to the efficiency of indirect payment systems in this area. Under normal conditions, stablecoins are not considered a store of value due to the prohibition of paying interest rates. Finally, the stablecoin system offers the potential for anonymous and illegal transactions. While custodial wallets (e.g. Coinbase Wallet or Binance Wallet) require identification, this is not the case for non-custodial wallets.

6. The **business case** for issuers is, at first sight, quite attractive. They issue non-interest-bearing coins in exchange for dollar deposits, which they then invest in highly liquid and safe assets at the money-market interest rate. Thus, they profit from a **'seigniorage' gain**, similar to that of a central bank, depending on the level of money market rates. Additionally, they incur no costs for maintaining a payment system, as this function is provided by crypto exchanges and blockchains. However, the business model carries the risk of a prolonged period of low, zero or even negative short-term interest rates. This would erode the issuers' capital. It could even create a vicious circle, as negative interest rates make stablecoins attractive as a store of value.

7. The risks to monetary policy are limited as long as stablecoins remain **a niche product**. So far, the growth of stablecoin capitalisation has shown no strong upward trend in recent years. However, this could change following the adoption of the GENIUS Act in the United States, which provides a comprehensive regulatory framework for stablecoins. Assuming the issuance of stablecoins grows substantially, the implications differ for bond-based and bank-based stablecoins.

- As **bank-based stablecoins cannot create 'money'** (defined as bank deposits plus stablecoins in circulation) or loans, traditional banks would still be required to create purchasing power. Thus, central banks would still be able to control the financial system as they do today. In addition, central banks can establish a minimum reserve requirement for the bank deposits held by stablecoin issuers in their jurisdiction.
- **Bond-based stablecoins can create 'money'** by purchasing government bonds, i.e. indirectly lending to the government. This mechanism explains the **Trump government's motivation** to promote stablecoins. Global adoption of US-denominated stablecoins would increase **demand for US treasuries**. In theory, central banks could control this process by setting minimum reserve requirements for stablecoin holdings. However, in practice, this could be difficult to implement with stablecoins held by international investors and stablecoin issuers residing in other jurisdictions. Nevertheless, even in a bond-based system, there would still

be a need for bank loans to the private sector. Thus, central banks would still be able to control the economy via this channel.

8. **Bank-based stablecoins** pose a **high risk to financial stability**. They create a vicious circle ('doom-loop') between stablecoins and banks. Runs on stablecoins create risks for banks, especially if deposits are not sufficiently diversified. As the failure of Silicon Valley Bank shows, runs on banks create risks for stablecoins. Runs **on bond-based stablecoins** can cause liquidity problems in bond markets. However, in this case, central banks can intervene without creating moral hazard risks. If they purchase treasuries at a price beyond par, they can make risk-free profits. A general risk for the stability of the stablecoin universe is prolonged periods of low, zero or negative policy rates, which erode the capital of stablecoin issuers.

9. The **digital euro** is **an inadequate response to stablecoins**. It is limited to retail payments within the euro area, and only private households are permitted to hold digital euro (D€) deposits, which will be capped at a relatively low amount. In this context, the ECB emphasizes the risk of **dollarization** within the euro area, which could be caused by USD-denominated stablecoins. However, as long as the ECB is able to maintain the stability of the euro, this risk is very low.

10. For **policymakers in Europe**, the rise of stablecoins poses another threat to digital sovereignty. Europe is already dominated by US platforms in general, and especially by retail payment platforms such as VISA, Mastercard and PayPal. The dominance of a small number of providers in the stablecoin sector makes it difficult for newcomers in Europe to gain a stronger position as issuers of stablecoins or providers of blockchains and crypto exchanges. There are very few examples of platform disruption (e.g. Skype/Zoom vs. TikTok, Instagram/Snapchat/YouTube).

11. Additionally, the need for innovation in cross-border payments in Europe is limited, as **SEPA** (the Single Euro Payments Area) offers fast, cheap, instant payments. Infrastructure throughout the EU and associated areas. This might explain why the interest in euro-denominated stablecoins, such as those offered by Tether, has been extremely low. However, with 40% of EU trade going to the rest of the world, there should be a potential for stablecoins to be used as a payment solution.
    A key step in boosting stablecoin issuance in Europe would be to reform the Markets in Crypto Assets (MICA) Regulation, which currently requires "significant" stablecoin issuers to have 60% coverage of outstanding stablecoins by bank deposits. As previously mentioned, this regulation is a recipe for disaster.

12. Finally, to prevent the **emergence of stablecoin solutions in the retail sphere**, Europe should establish an independent retail payment infrastructure. The ECB is trying to achieve this by developing a new payment system based on the digital euro. But this system will not only have to compete with foreign but also with established national payment schemes. Additionally, D€ accounts are only available in the euro area. Ultimately, this could increase the fragmentation of the pan-European payment landscape. Therefore, a more promising approach would be to integrate the national payment systems of all EU member states. While this is not an easy task, it is nevertheless the best way to strengthen Europe's financial sovereignty.

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1. Introduction

Stablecoins have emerged as a new category within the digital asset ecosystem. They promise the benefits of cryptocurrencies while minimizing their inherent volatility. Backed by fiat currencies, they have gained traction in various sectors of the financial world.

Interest in stablecoins was further fueled when U.S. President Donald Trump signed a decree on 23 January 2025 titled "Strengthening American Leadership in Digital Financial Leadership:

> "[I]t is therefore the policy of my administration to support the responsible growth and use of digital assets, blockchain technology and related technologies across all sectors of the economy, including by: [...] promoting and protecting the sovereignty of the United States dollar, including through actions to promote the development and growth of lawful and legitimate dollar-backed stablecoins worldwide" (The White House, 2025, Section 1 (a)(ii)).

A few months later, U.S. Secretary of the Treasury Scott Bessent stated in an interview with Bloomberg that he had seen "estimates that stablecoins could generate a demand of two trillion dollars for US government bonds and T-bills in no time at all" (Bergmann, 2025).

These initiatives have raised significant concerns in Europe. According to Piero Cipollone, a member of the ECB's Directorate, "[t]he measures taken by the new US administration to promote crypto-assets and US dollar-backed stablecoins raise concerns for Europe's financial stability and strategic autonomy" (Cipollone, 2025).

Similarly, the ECB's Chief Economist, Philip Lane, warned:

> "This means the domestic currency would risk losing its status as the dominant currency for expressing prices and settling most trades. Although 'dominant' lacks a precise defining threshold, as the share of transactions settled in the domestic currency decreases, the capacity of the central bank to implement effective monetary policy and maintain price stability is significantly impaired" (Lane, 2025, p. 12).

In contrast, the Bank for International Settlements (BIS) played down the potential of stablecoins, stating that "[w]hile stablecoins' future role remains uncertain, their poor performance on the three tests suggests they may, at best, serve a subsidiary role" (BIS, 2025, p. 80).

So far, only a few systematic and comprehensive analyses of stablecoins exist. While stablecoins can be discussed under different aspects (Digital Euro Association, 2025), this paper focuses on the **economic features and implications** of stablecoins.

Section 2 of this paper begins with a **systematic classification** showing that the term ‘stablecoin’ encompasses two distinct concepts. On the one hand, discussions on this topic concern 'stablecoins' **as payment objects** put into circulation by private issuers. On the other hand, it concerns **decentralized payment systems** ('blockchains') in which stablecoins are used as payment objects. Using a taxonomy of payment objects, we demonstrate the importance of distinguishing between stablecoins that are primarily backed by government bonds (**bond-based stablecoins**) and those that are primarily backed by bank deposits (**bank-based stablecoins**). As payment systems, 'stablecoins' are based on blockchains or cryptocurrency exchanges, which facilitate **direct exchange** of the payment object. This differs from bank-account-based payment systems, which involve **indirect exchange** and require banks and the central bank as intermediaries.

In **Section 3**, we present the **performance of stablecoins**, which have become a significant player since the beginning of this decade. After a period of strong growth in 2020/21, shocks in the crypto universe led to stagnation in the market capitalization. A renewed growth phase began at the end of 2024. As with most digital platform markets, the stablecoin market is characterized by **strong network effects** and a dominant issuer: Tether, followed at a distance by USD Coin (USDC). These tendencies also shape the market structure of blockchains and cryptocurrency exchanges. The USDC is by far the dominant currency of denomination.

For many years, the two main players have kept the USD **exchange rate of their coins very close to parity**. Even during the crises of May 2022 and March 2023, the issuers were able to prevent a significant sell-off, resulting in brief and minor instances of 'depegging'. This performance has created a positive reputation, making it difficult for new entrants to gain market share.

Section 4 discusses the **use cases** and **business models** of stablecoins. The most obvious **use case** for stablecoins is as a **vehicle currency for crypto exchanges**. In this regard, they can be compared to the chips that must be purchased to play in a casino. Another use case is **international payments**, which currently mainly rely on indirect exchange involving several intermediaries. Such transactions are relatively expensive and often slow. In this respect, the stablecoin system, with its **direct exchange based on blockchain technology**, offers an attractive alternative. Furthermore, for large companies with high transaction balances, stablecoins backed by Treasuries are **a safer option** than unsecured bank deposits based on bank loans. Finally, stablecoins have been used for **illegal transactions**, primarily to circumvent capital controls. Currently, stablecoins do not play a role in retail payments.

In terms of the **business model**, issuers benefit from a **'seigniorage' gain** as they issue non-interest-bearing coins and are able to invest the proceeds in interest-bearing, short-term, liquid and safe assets. Issuers have the advantage that they do not have to establish and maintain a payment system, as this task is outsourced to blockchains or crypto

exchanges. In the current environment of rather high short-term money market rates, this is a highly profitable business. However, a renewed period of central bank **policy rates near or even below zero percent** could destroy the business model of blockchains.

Section 5 discusses the potential of stablecoin-based blockchains to **displace existing retail payment systems**. Unlike international payments, existing national and international retail payment systems offer fast, cheap solutions that go beyond the mere transfer of funds. Therefore, it will generally be difficult for stablecoins to enter this market. A specific disadvantage of stablecoin-based retail systems is the **lack of credit facilities**, which play an important role in retail payments. Additionally, while existing payment systems (e.g. Visa, PayPal) do not require the holding of system-specific payment objects, stablecoin systems impose a **cash-in-advance constraint**: In order to use the stablecoin system, a household must hold a parallel account in addition to its bank account, resulting in additional transaction and information accounts. A major problem with blockchains in the retail sphere is their **lack of interoperability** with each other and with the bank deposit-based payment system.

Section 6 analyzes the implications of stablecoins for monetary policy. Representatives of the ECB in particular seem to fear that a growing role for stablecoins could weaken the central bank's control over the monetary and financial system. This highlights the relevance of the distinction between bank-based and bond-based stablecoins. **Bank-based stablecoins** can be compared to the theoretical concept of 'narrow banks', which fully back their deposits with central bank reserves. Due to this 100% backing, such institutions are unable to create loans, thus these do not expand the money supply. Historically, the demand for credit grew faster than the nominal GDP. Therefore, in a world with bank-based stablecoins, traditional commercial banks would still be needed to supply credit and thus money. play an important role in supplying additional credit and money. In this case, the central bank would still be able to control the process of money creation via its **traditional policy rates** and **minimum reserve requirements** on deposits held by stablecoin issuers. The situation is different in a world with **bond-based stablecoins**, as these are capable of creating money (i.e. the sum of bank deposits and stablecoins) by purchasing government bonds. Central banks could try to impose minimum reserve requirements on stablecoin holdings, but this could be difficult if the issuers are located outside their jurisdiction. As a last resort, central banks could act as stablecoin issuers themselves, which would have the advantage of ensuring that such stablecoins are 100% stable.

Section 7 discusses the implications of stablecoins for the **stability of the financial system**. **Bank-based stablecoins** pose a **high risk to financial stability**. They create a vicious circle (‘doom-loop’) between stablecoins and banks. Runs on stablecoins create risks for banks, especially if deposits are not sufficiently diversified. As the failure of Silicon Valley Bank shows, runs on banks create risks for stablecoins. Runs **on bond-based stablecoins** can cause liquidity problems in bond markets. However, in this case,

central banks can intervene without creating moral hazard risks. If they purchase treasuries at a price beyond par, they can make risk-free profits. A general risk for the stability of the stablecoin universe is prolonged periods of low, zero or negative policy rates, which erode the capital of stablecoin issuers.

Section 8 discusses whether the digital euro could safeguard Europe's autonomy in monetary and payment sovereignty. We demonstrate that the concerns of ECB representatives regarding the **'dollarization' of the eurozone** due to the availability of stablecoins are greatly exaggerated. Provided the ECB maintains the stability of the euro, it is highly unlikely that euro area residents would switch to the USD for their accounts and payments. In a realistic scenario in which stablecoins are primarily used for cryptocurrency exchanges and international transactions, the **potential benefits of a digital euro in these areas are unclear**. Currently, the Digital Euro is designed for retail payments by private households within the euro area. Therefore, it could not be used as a store of value in countries with unstable currencies and/or banking systems.

Section 9 discusses the implications of stablecoins for **European policy makers.** A growing role of foreign stablecoin issuers is an additional threat to its digital sovereignty. The dominance of a small number of providers in the stablecoin sector makes it difficult for newcomers in Europe to gain a stronger position as issuers of stablecoins or providers of blockchains and crypto exchanges. In general, the potential for stablecoin systems in Europe seems limited as **SEPA** already offers a fast (instant) and cheap payment infrastructure throughout the EU and associated areas. A key step in boosting stablecoin issuance in Europe would be to r**eform the MICA Regulation** in a way that it no longer requires stablecoins to be designed as bank-based coins. Finally, to prevent the **emergence of stablecoin solutions in the retail sphere**, Europe should establish an independent retail payment infrastructure. While the Digital Euro which is limited to the euro area, could cause a further fragmentation of the EU payments landscape, a more promising approach would be to integrate the national payment systems of all EU member states. While this is not an easy task, it is nevertheless the best way to strengthen Europe's financial sovereignty. As a last resort, the ECB could decide to become an issuer of stablecoins itself. This would require the issuance of tokenized central bank deposits.

2. A Taxonomy of Payment Systems: 'Stablecoins' as a Payment Object and as a Payment System

To understand new digital forms of money, such as Bitcoin, stablecoins and central bank digital currencies (CBDCs), a systemic approach is required. Above all, it is important to distinguish between **payment objects** and **payment infrastructures**. While payment objects can be compared to cars driving on a motorway, payment infrastructures can be

compared to the motorway itself. As we shall see, there are payment systems that can be used by all payment objects, but there are also systems that can only be used by specific payment objects. Unfortunately, in discussions of the Digital Euro and stablecoins in particular, no such differentiation takes place, which necessarily causes a great deal of confusion.

To conduct a comprehensive analysis of payment systems, it is useful to include the concept of **payment instruments**, which are required to initiate payments, in addition to payment objects and infrastructures. In our motorway analogy, payment instruments could be compared to toll-collecting systems.

It is also useful to differentiate between **payment systems** that allow **direct exchange**, where the same payment object is exchanged between the payer and payee, and **indirect exchange**, where the payee receives a different object to the one, they give up, so an **intermediary** is required to arrange the transaction.

2.1 Payment Systems: A Comparison of the Stablecoin Payment System with Existing Payment Systems

This classification makes it possible to compare the structure of the stablecoin payment system with existing payment systems (see **Table 1**).

The most basic form of payment system is the **cash-based system**, in which the three concepts coincide. Banknotes are simultaneously the payment object and the payment instrument. This system is based on peer-to-peer exchange and does not require specific infrastructure for transferring the payment object. This system is characterized by direct payments, meaning the same payment object is exchanged between the payer and payee. There is no central or distributed ledger in which transactions are recorded.

In a **bank-based payment system**, **bank deposits** serve as the payment object. This system can be operated using a variety of payment instruments, ranging from traditional cheques to online banking, credit card payments, and digital wallets (Apple Pay/Google Pay). Accordingly, different payment infrastructures arrange communication between the payer and payee. These infrastructures typically do not require the holding of system-specific payment objects. In this system, all payments are indirect, meaning a payer with an account at Bank A cannot transfer their deposit to a payee at Bank B; instead, direct exchange takes place at a higher level, involving an exchange of central bank reserves between Banks A and B.

Bank-based systems operate with central ledgers organized by individual banks or the central bank.

In the **central bank digital currency** (CBDC) system that the ECB wants to establish with the **digital euro (D€)**, D€ accounts will serve as the payment object. The design of the payment infrastructure is still unclear. While the ECB will be responsible for settling

payments, it has not yet presented a solution for the communication system between payers and payees. In principle, however, the D€ payment system will be a direct payment system, as it will allow direct transfers of D€ between payers and payees with D€ accounts. However, as the ECB intends to prevent firms from holding positive balances on a D€ account, the 'waterfall' functionality means that a payee that is not a private household effectively receives a payment to their bank account. Therefore, the D€ scheme is a hybrid scheme combining elements of indirect and direct exchange.

A **stablecoin-based payment system** uses stablecoins as the payment object. Stablecoins are obligations of the stablecoin issuer. These are held in wallets which include deposits with a crypto exchange (e.g. Binance or Coinbase), or digital tokens. In the former, payments can be made directly, i.e. **'off-chain'**, via transfers between deposits held by the payer and payee within the exchange. This "custodial" scheme is characterized by a central ledger operated by the exchange and the stablecoin issuer. In the second case ('non-custodial'), transfers are made **'on-chain'** using a blockchain network to make a direct payment between the payer and payee. This scheme is characterized by a distributed ledger, i.e. an accounting book that is openly accessible and operated by decentralized validators who are paid by users for their services ('gas fee')[1]. Therefore, when discussing 'stablecoins', it is important to recognize that this encompasses a payment system involving a stablecoin issuer providing the payment instrument and payment infrastructures offered by crypto exchanges and blockchains. [2]

[1] To be a validator, one must stake ETH on the Ethereum network, i.e. lock it in a smart contract. An algorithm (Ethereum, Protocol) determines who validates transactions and creates new blocks. Validators are selected at random, with the probability of a validator creating a block depending on the amount of ETH staked. The selected validators then create block proposals and sign them with their validator keys. Other validators confirm the validity of the proposed block by using their validator keys to sign their support. Validators receive rewards for their work in the form of staking rewards. However, if they propose faulty blocks or do not participate in consensus, they can also be penalised. Each epoch has its own set of validators that rotates regularly. This ensures that no single validator gains too much power, as Ledger explains. By rotating the validator sets and distributing staking across many participants, the Ethereum network is decentralised and more secure.

[2] It is, therefore, also misleading if the ECB speaks of the "Digital Euro", as its concepts includes the D€ as a new payment object held in a wallet or a D€ bank-account and a new payment infrastructure organized by the European Central Bank (Bofinger, 2024).

Payment system	Payment object	Payment instrument	Payment infrastructure	Ledger
Cash-based system	Physical central bank money (cash)	Banknote	Direct payment (peer-to-peer)	No Ledger
Bank-based system	Commercial bank deposits	Cheques, online-banking, credit/debit cards, digital wallets	Indirect payment organized by payment infrastructures without their own payment objects (SEPA, Visa, Mastercard, Paypal, SWIFT)	central
D€-based system	Digital central bank money (D€ deposits)	Digital wallets, credit cards, online banking	Direct payment, but integrated in commercial bank deposit scheme ("Waterfall functionalities")	central
Stablecoin-based system	Stablecoin tokens	Digital wallets	Direct payment via crypto exchanges (e.g. Binance Coinbase) and/ or Blockchains (e.g. Etherum)	Central (Coinbase) Distributed: Blockchain

Table 12: A comparison of the elements of payment systems (Source: Author's own compilation)

2.2. Stablecoins as Payment Objects

A useful classification for discussing different forms of payment objects, or 'money', is the so-called **'money flower'**, developed by Bech & Garratt, 2017 and modified by Mayer & Bofinger, 2024 This allows for the classification of various forms of 'money' by combining four constituent elements (see Figure 1).

- Privately issued money versus money issued by the government,
- Peer-to-peer exchange/distributed ledgers versus a centralized accounting mechanism,
- Physical money versus digital money,
- Convertible money versus inconvertible money.

The specific fields in the 'money flower' can be attributed to existing and hypothetical forms of 'money' as follows:

Cash: public, peer-to-peer, physical and inconvertible.

Traditional bank deposits: private, centralized accounting, digital and convertible.

Central bank reserves and central bank digital currency (CBDC): public, centralized accounting, digital and inconvertible.

Classical cryptocurrencies (unpegged cryptocurrencies): private, peer-to-peer (distributed ledger), digital and inconvertible. Unpegged cryptocurrencies, such as Bitcoin, offer no legal rights to their owners. We therefore also speak of 'unpegged cryptocurrencies'.

Stablecoins (pegged cryptocurrencies): private, peer-to-peer, digital and convertible. Their fixed convertibility into fiat currency differentiates them from unpegged cryptocurrencies. However, as stablecoins can be used for direct payments on blockchains with distributed ledgers, they differ from traditional bank accounts, which require indirect payments and are recorded on centralized ledgers.

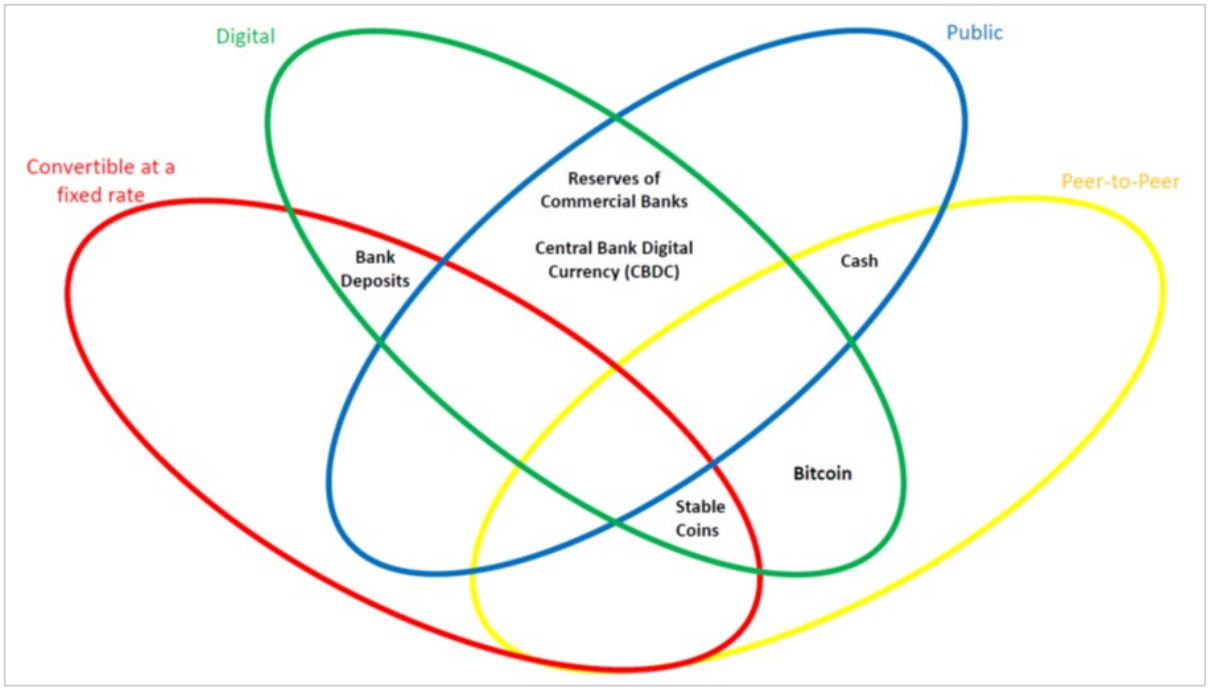


Figure 1: The Money Flower taxonomy of actual and hypothetical 'monies' (Author's own illustration)

This classification shows that, as payment objects with a convertibility promise, stablecoins are most similar to traditional bank deposits. There are different forms of stablecoin convertibility. The Financial Stability Board (2020) distinguishes between two types of stablecoin, depending on their stabilization mechanisms:

Asset-linked stablecoins purport to maintain a stable value by referencing real or financial assets, or other crypto-assets.

- **Algorithm-based stablecoins** attempt to maintain a stable value via protocols that increase or decrease the supply of stablecoins in response to changes in demand (Financial Stability Board, 2020).

After the **collapse of the algorithm-based stablecoin Terra** (UST) in Mary 2022, which was linked to the cryptocurrency Luna, such stablecoins no longer play a significant role in the crypto world. We will therefore not discuss them here. Among asset-linked stablecoins, the USD is by far the most dominant peg.

Since fixed convertibility is an essential feature of stablecoins, their ability to fulfill this commitment is crucial for demand. There are two main options for collateralizing stablecoins: They can either rely on short-term government bonds (**bond-based stablecoins**), or on bank deposits (**bank-based stablecoins**).

The two dominant stablecoin issuers (Tether and USD Coin) are **bond-based stablecoins**, as they primarily use short-term US government bonds as collateral. As the Tether balance sheet illustrates, around two-thirds of its assets are invested in this manner. The remaining third is also primarily invested in highly liquid and stable assets. Only a small proportion of the collateral is invested in speculative assets, such as Bitcoin (5.1%) or precious metals (4.5%). Additionally, Tether and USDC provide overcollateralization by holding around 3 per cent in equity (Tether, 2025b).

An alternative approach is to use bank deposits as collateral (**bank-based stablecoins**). EU regulation for cryptocurrencies (MICA) prescribes this type of collateral for stablecoin issuers that want to conduct business with EU customers. 'Significant' stablecoin issuers[3] are required to hold at least 60 per cent of their assets in the form of bank deposits. Consequently, Coinbase has delisted Tether for EU customers (European Union, 2023).

Treasury backed (Tether)

Assets	Liabilities
US Treasuries (66%)	Stablecoins issued 144 USD billion
Other assets, e.g. overnight repurchase agreements, secured loans, Bitcoin (33%)	Equity 5 USD billlion
Total 149 USD billion	Total 149 USD billion

Bank deposit backed (MICA)

Assets	Liabilities
Bank deposits (>60%)	Stablecoins issued
Other assets, e.g.treasuries, bonds overnight repurchase agreements, secured loans, Bitcoin (<40%)	Equity 5 USD billlion
Total	Total

60% backing applies to „significant“ stablecoins

Figure 2: Treasury and bank deposit-backed stablecoins (Author's own illustration)

The economic rationale of bank deposit-backed stablecoins is unclear. Paolo Ardoino, CEO of Tether, describes the implications of this regulation as follows:

> "If you have €10 billion under management, you have to put €6 billion in cash deposits. That is 60% of 10 billion euros. We know that banks can lend 90% of their balance sheet. So, of the €6 billion, they lend €5.4 billion to people [...] €600 million will remain on the bank's balance sheet." (Vardai, 2024).

The main risk of bank-backed stablecoins is that they create an **interconnection between stablecoin shocks and shocks to the commercial banking system**. Thus, a run on a major stablecoin is directly transmitted to the banks where the issuer has placed most of its deposits. Similarly, a shock to commercial banks can destabilize the

[3] (defined as) The number of holders of the token exceeds 10 million. The market capitalization surpasses €5 billion. The average daily number of transactions exceeds 2.5 million. The average daily transaction volume exceeds €500 million (European Union, 2023).

stablecoin universe. This occurred when Silicon Valley Bank collapsed on 10 March 2023, causing USDC to de-peg from its USD parity. Its price fell to almost USD 0.88 before recovering to its 1:1 peg. This de-peg occurred because Circle, the company that issues USDC, had $3.3 billion in reserves tied up at SVB.

The situation is different with bond-based stablecoins, where a run would lead to sales in the short-term treasury market. However, as this market is highly liquid, it is unlikely that sales by a stablecoin issuer would have a destabilizing effect.

Box: UK approach

The British Financial Conduct Authority provides an interesting approach to the collateral of stablecoins. It proposes that, by default, an issuer will only be able to hold 'core backing assets', comprising short-term deposits and short-term government debt instruments. However, it is considering expanding the range of permissible backing assets for qualifying stablecoins to include:

• longer-term government debt instruments maturing in over one year;

• units in a Public Debt CNAV Money Market Fund (PDCNAV MMF);

• assets, rights or money held as collateral for repurchase or reverse repurchase agreements (subject to the conditions set out in our CASS 16 rules).

The Authority also has a specific approach to the on-demand deposit requirement. All issuers should hold a minimum proportion of on-demand bank deposits as part of their backing pool. It therefore proposes applying a minimum 'floor' to the on-demand deposit requirement (ODDR) (Financial Conduct Authority, 2025).

From a financial stability perspective, MICA collateral is flawed. It is reasonable to assume that the concept of deposit-backed stablecoins was promoted by EU banking lobbies, who were concerned about disintermediation due to stablecoins replacing bank deposits. By forcing stablecoin issuers to reinvest in bank deposits, the effect of disintermediation can be mitigated. However, if stablecoin issuers invest in bank deposits, they will demand interest rates close to money market rates, and stablecoin wholesale deposits negatively impact a bank's Liquidity Coverage Ratio (LCR).

2.3 Stablecoins as a Payment System

Although stablecoins have many similarities with bank deposits as a payment object, the stablecoin payment system is completely different to the system based on bank deposits. Like the cash payment system, it operates as a direct payment system, whereas the bank-based system is based on indirect exchange.

- In a **direct exchange system**, the payer and payee exchange an identical payment object. For example, the payer gives a banknote to the payee.
- In a system of **indirect exchange**, the payee receives a different payment object to the one surrendered by the payer. For example, if the payer has an account with Bank A, the payee receives a payment on their account with Bank B. Indirect exchange requires **intermediaries** to arrange a direct exchange using a different payment object at a higher level. Central banks typically perform this function by exchanging central bank reserves between the payer's bank and the payee's bank.

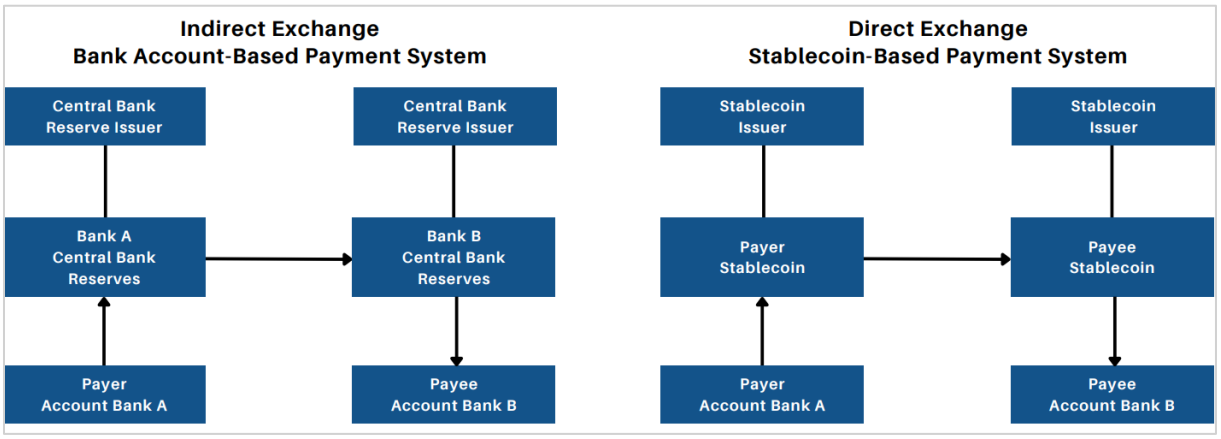


Figure 3: Payment flows in indirect vs. direct exchange systems (Author's own illustration)

The BIS asserts that

> "today's two-tier monetary system, with the central bank at its core, stands above other models in ensuring that money is fit for purpose. Central banks provide the highest form of money, support settlement finality, and ensure stability and trust in the unit of account. [...] the merits of the core architecture of the system with the central bank at its center should be recognized and preserved" (BIS, 2025, p. 78).

According to the BIS the absence of intermediaries is a disadvantage of the direct exchange system offered by stablecoins.

"Stablecoins also fare poorly on singleness and elasticity. As digital bearer instruments, they lack the settlement function provided by the central bank" (BIS, 2025, p. 79).

The central bank's dominant role in the system of indirect exchange shows that this approach is practicable only within a currency area, but not for transactions between currency areas. In fact, the BIS emphasized the advantages of direct exchange **for international transactions**:

> "In cross-border payments, tokenization could replace the complex chain of intermediaries and the sequential updating of accounts in today's correspondent banking transactions with a single, integrated process. Together with state-of-the-art compliance tools made available on the

platform, tokenization would thereby reduce the operational risks, delays, and costs of today's two-tier monetary system." (BIS, 2025, p. 77).

Therefore, it is unclear why the BIS concludes that the indirect model "with the central bank at its core, stands above other models" (BIS, 2025, p. 78).

3. Stablecoin Market Performance So Far

3.1 Market Capitalization and Market Structure

To understand stablecoins, it is useful to examine their market performance. The stablecoin market is still in its infancy. Its growth began in 2019 and accelerated in 2020/21 (see Figure 4). The collapse of the algorithmic stablecoin Terra (UST) in May 2022 was a major setback for the stablecoin market. It took two years for it to regain its pre-crash market capitalization. The market regained some momentum in 2024/25. However, as the logarithmic scale shows, growth rates were much lower than during the market's initial growth phase. So far, there are no signs of accelerated growth in the stablecoin market. It remains to be seen whether the new U.S. regulations, the so-called Genius Act, could change this (GENIUS Act, 2025)

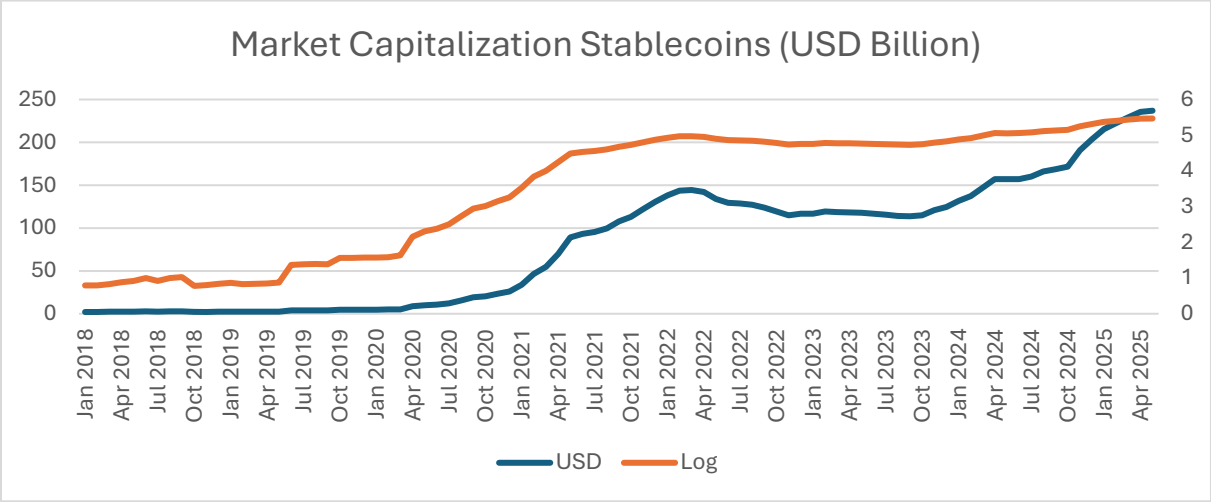


Figure 4: Market capitalization stablecoins (based Statista (2025))

In May 2025, stablecoin hat a market capitalization of USD 246 billion, which equals just over 1 percent of the U.S. money stock M2 and around 1.5 percent of the EUR money stock M3. Stablecoin capitalization is also much lower than that of the cryptocurrency market (excluding stablecoins). In other words, the stablecoin market is still niche today. Therefore, when considering the implications of stablecoins for monetary policy and financial stability, it is necessary to assume that the stablecoin market will experience significant growth in the coming years.

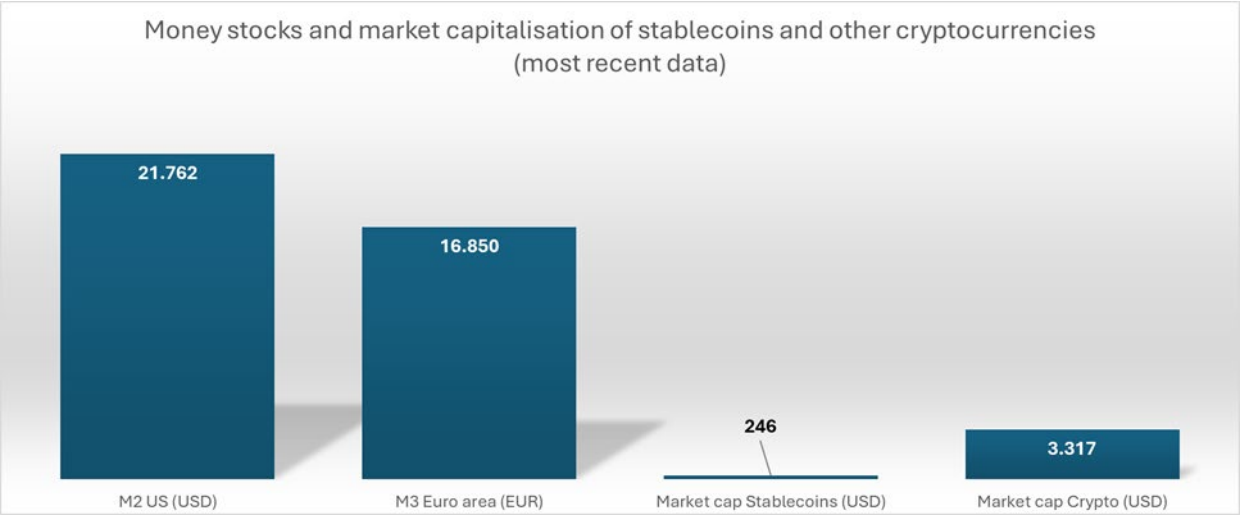


Figure 5: Stablecoin volume in context (based on FRED)

On the **issuer side**, the structure of the stablecoin market is dominated by two issuers: Tether, followed at a considerable distance by USDC. While Tether clearly dominates, its market share has fluctuated between 52% and 74%. As illustrated in Figure 4, the market shares of all other issues are much smaller in comparison.

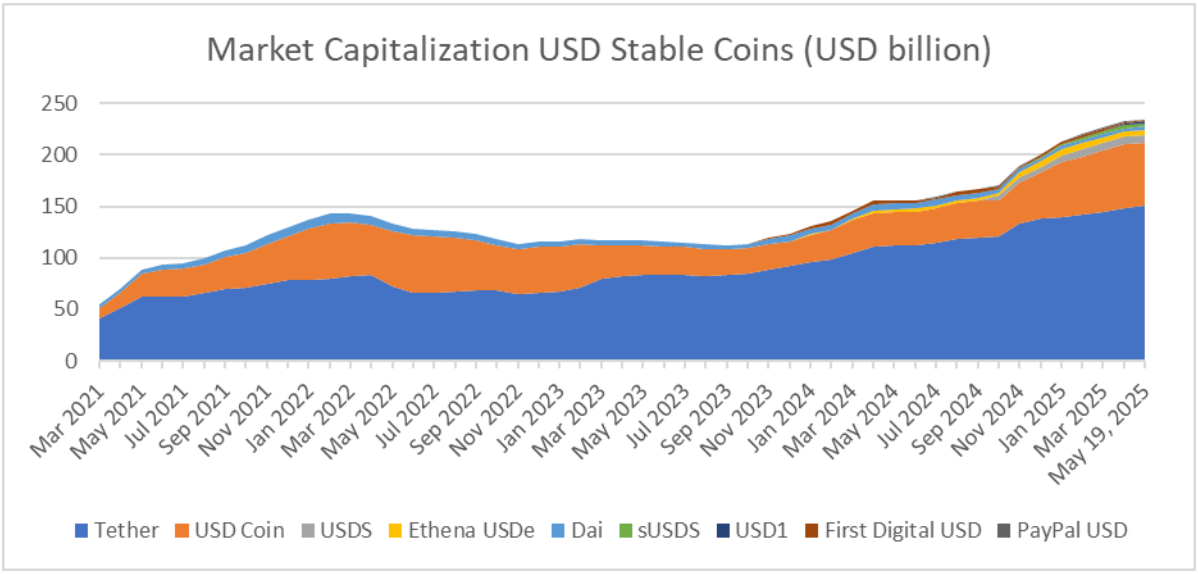


Figure 6: Market capitalization and issuer structure of the stablecoin market (based on CoinGecko (2025))

The stablecoin market is almost entirely dominated by the **USD as the denomination currency.** Although stablecoin issuers offer stablecoins denominated in other fiat currencies, cryptocurrencies, and commodities, market interest in these has so far remained insignificant, amounting to only one thousandth of the USD market (see Figure 5). Furthermore, it does not demonstrate positive growth.

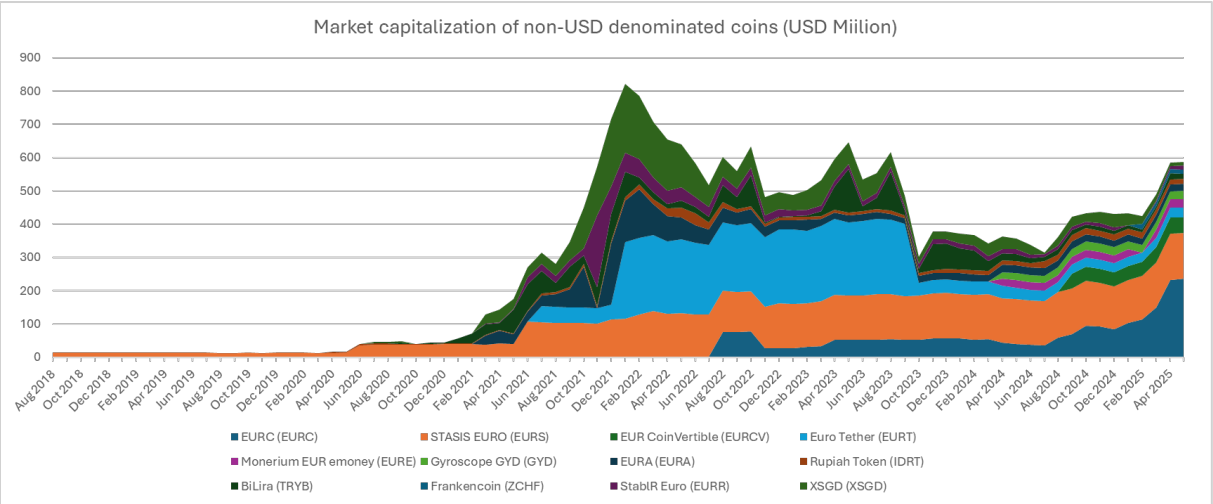


Figure 7: Market capitalization of non-USD denominated stablecoins (Statista, 2025)

Box: The concept of common knowledge

The dominance of the US dollar as a stablecoin denomination currency can be explained by network effects and, particularly, the emergence of common knowledge. As Berg et al. (2024, p. 5) observe, "The concept is that I know what a dollar is worth, and I know that you know what a dollar is worth, and you know that I know that you know what a dollar is worth."

Due to this common knowledge, the dollar is better suited to international transactions than other currencies.

> "The price of a dollar is not only common knowledge among US consumers, but also among a much larger global population.' It is plausible that it is the most well-known price in the world. Our claim is that this common knowledge is the property that any USD stablecoin effectively free-rides on" (Berg et al., 2024, p. 5).

Therefore, it seems unlikely that the euro could play a significant role as a denomination currency for stablecoins.

3.2 Determinants of Market Growth

A regression analysis of the growth rate of the Tether market capitalization (ΔTether) shows a significant positive correlation with changes in the Bitcoin USD price (ΔCBBTUSD) and a negative correlation with changes in the Federal Funds rate (ΔDFF). Other possible variables, e.g. changes in the S&P 500 index (ΔSP500), the yield on 10-year Treasuries (ΔDGS10), or the effective exchange rate of the dollar (ΔDTWEXBGS, are not significant.

These results are in line with the fact that stablecoins are non-interest bearing so that the Federal Funds rate determines the opportunity costs of not holding interest-bearing short-term funds, i.e. money market funds. The positive correlation with the Bitcoin price reflects the role of stablecoins as a vehicle currency for crypto exchanges. A higher Bitcoin prices implies higher transactions volumes which require a higher amount of stablecoins as a means of payment.

OLS Regression Results

Dep. Variable:	ΔTether	R-squared:	0.214
Model:	OLS	Adj. R-squared:	0.157
Method:	Least Squares	F-statistic:	3.756
Date:	Wed, 02 Jul 2025	Prob (F-statistic):	0.00457
Time:	11:31:29	Log-Likelihood:	56.012
No. Observations:	75	AIC:	-100.0
Df Residuals:	69	BIC:	-86.12
Df Model:	5		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
const	0.0667	0.016	4.300	0.000	0.036	0.098
ΔDFF	-0.1404	0.050	-2.805	0.007	-0.240	-0.041
ΔDGS10	-0.0720	0.139	-0.520	0.605	-0.348	0.204
ΔSP500	0.2635	0.441	0.598	0.552	-0.616	1.143
ΔCBBTCUSD	0.1629	0.093	1.754	0.084	-0.022	0.348
ΔDTWEXBGS	-0.0242	1.299	-0.019	0.985	-2.615	2.567

Omnibus:	52.226	Durbin-Watson:	1.528
Prob(Omnibus):	0.000	Jarque-Bera (JB):	183.158
Skew:	2.258	Prob(JB):	1.69e-40
Kurtosis:	9.182	Cond. No.	95.7

Table 2: Regression of the Tether growth rate

3.3 Transaction Volumes and Blockchains

Market capitalization dynamics are widely reflected in stablecoin transaction volumes. Following dynamic growth in 2020 and 2021, transaction volumes did not exhibit a clear trend. Since autumn 2024, transaction activity has increased but then declined again in May 2025. The strong dominance of Tether is also evident in these data.

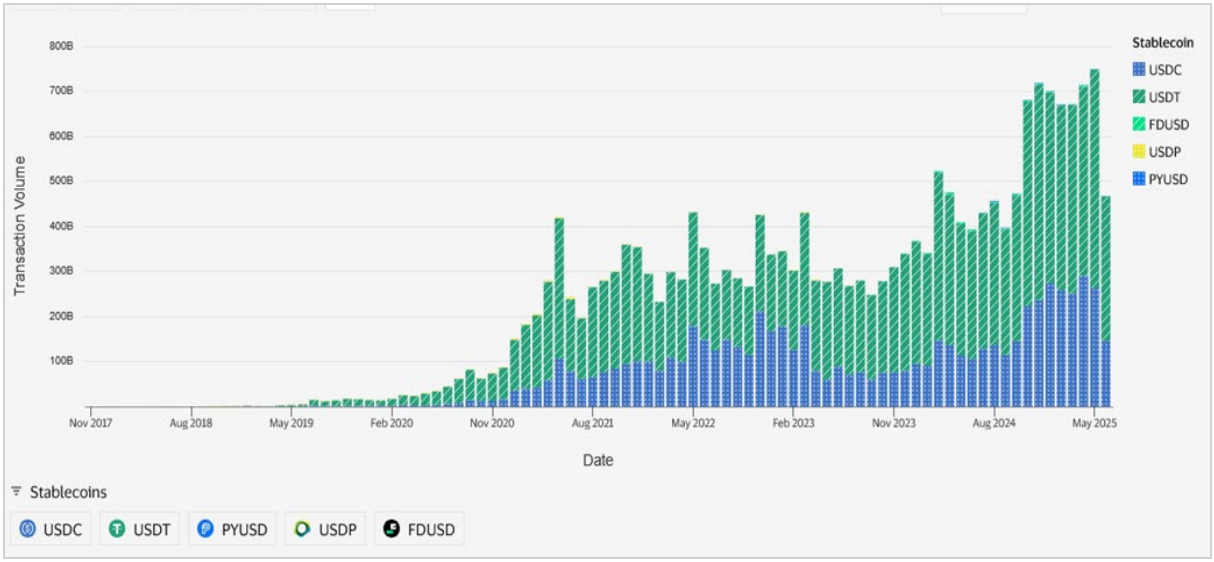


Figure 8: Stablecoin transaction volume by stablecoin (VISA, 2025)

Strong network effects in payment schemes also influence the structure of the **blockchain market** for stablecoin transactions. While Bitcoin can process around six transactions per second (TPS) and Ethereum around 18 TPS, Tron can offer up to 2,000 TPS (Chainspect, 2025). In addition, its fees are considered relatively low (Cryptomus, 2024). Ethereum is in second place, followed by Binance Smart Chain (BSC). The dominant player in this field is Tron, which operates its cryptocurrency (Tronix) and blockchain.

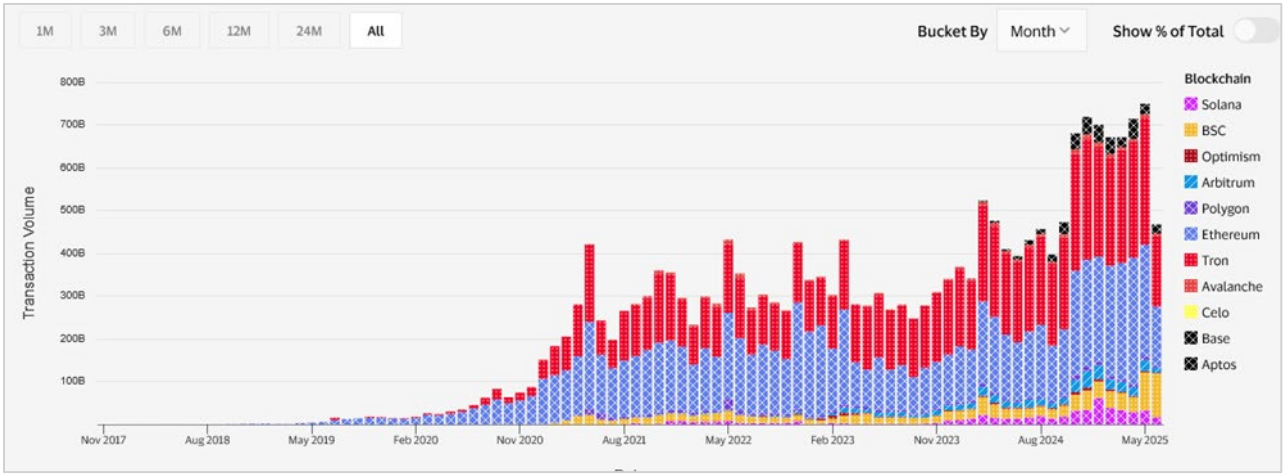


Figure 9: Stablecoin transaction volume by blockchain (VISA, 2025)

Box: The BIS blockchain critique

In their Annual Economic Report, the BIS questions the stability of blockchains as follows:

“Granting rewards to validators introduces a fundamental trade-off between setting rigorous consensus standards and having a "scalable" system where consensus is easily reached. This is because validating each block is costly, so playing an honest role in validation involves self-interested calculations. The most rigorous standard of consensus

(i.e. unanimity) is incompatible with self-interested validators. Practical, usable decentralised money is insecure." (BIS, 2025, p. 83).

While the BIS uses a theoretical model to justify this statement, it does not provide empirical evidence for such a trade-off in existing dominant blockchains. In reality, the dominant blockchains that have emerged, managed to provide efficient solutions that have also proven to be secure.

The **cryptocurrency exchange market** is more evenly distributed. Binance holds the largest market share (38%). As the market is global, technologically accessible and economically attractive, there are many cryptocurrency exchanges, and even small teams can launch profitable platforms. Additionally, different regulatory environments, regional user preferences, and specialized business models enable a variety of exchanges to coexist.

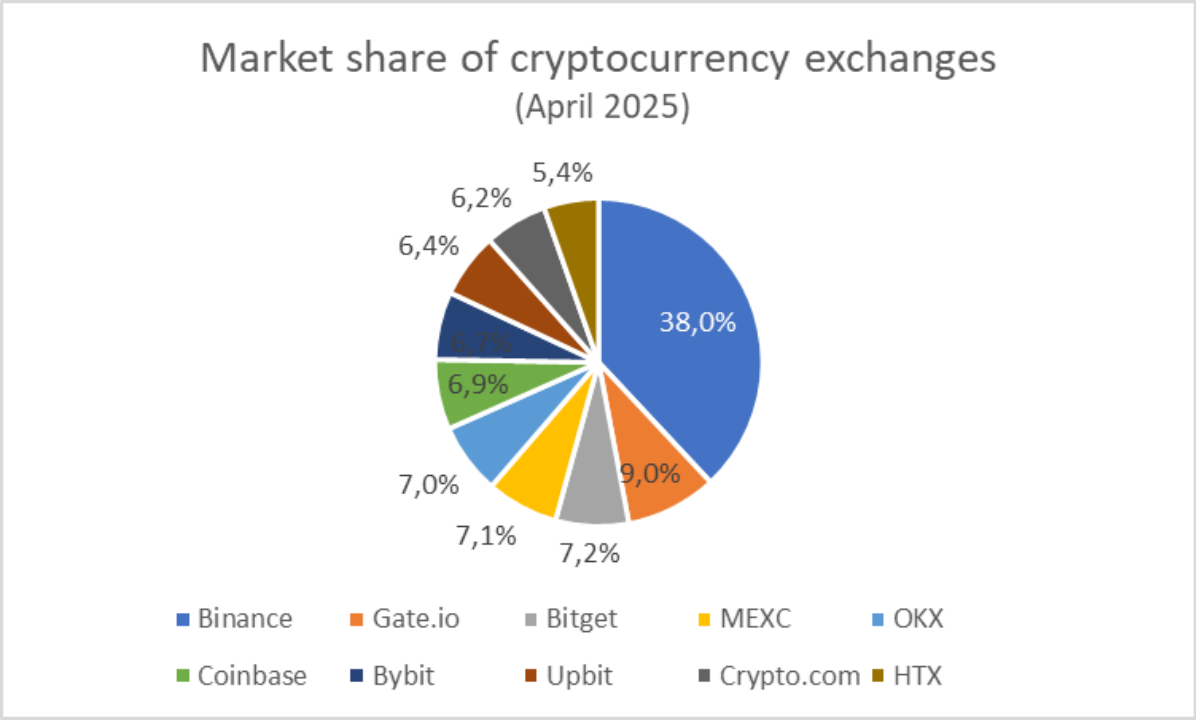


Figure 10: Market share of cryptocurrency exchanges (based on Lee (2025))

3.4 Stability of the Peg

As outlined above, stablecoins are vulnerable to a **'stablecoin run'**, in which all holders attempt to convert their coins into fiat currency. This could result in de-pegging, whereby the market price of a stablecoin falls below its peg. A run could also manifest as a liquidity crisis, preventing consumers from being able to cash out their holdings immediately. Unlike commercial banks, stablecoin issuers cannot rely on the central bank as a lender of last resort in a crisis, and their holders are not protected by deposit insurance.

Despite these limitations, and the significant volatility of the Bitcoin price and the prices of other unpegged crypto currencies, the two dominant stablecoins have performed impressively in maintaining the convertibility of their coins in recent years. After some initial fluctuations, the coins successfully maintained the USD peg (see Figure below), even during periods of declining market capitalization and in situations involving major shocks. Therefore, it is unclear why the BIS (2025, p. 85) states:

“More generally, in contrast to predictable deviations arising from frictions such as fees, stablecoins of various types have seen substantial deviations from par (…), highlighting the fragility of their peg.”

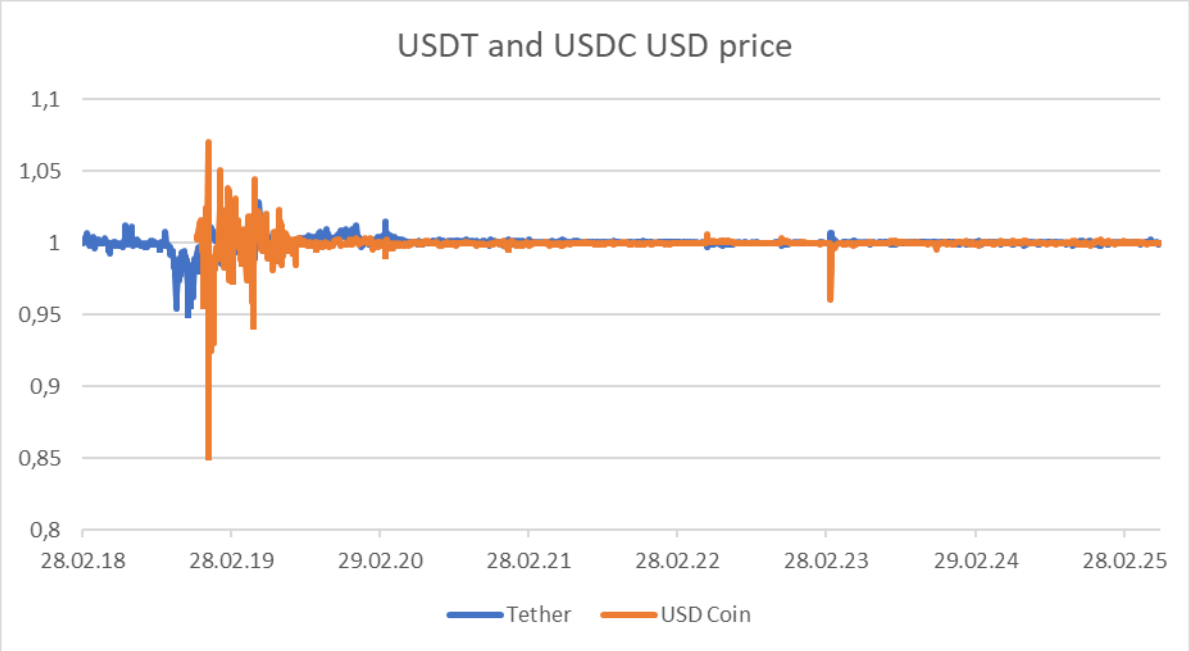


Figure 11: USDT and USDC price in USD (based on Coinbase (2025))

The first shock occurred on 12 May 2022, when the algorithmic Terra stablecoin collapsed. This led to Tether being de-pegged very briefly as can be seen in Figure 11. The shock was contained within a few hours, demonstrating the resilience of Tether.

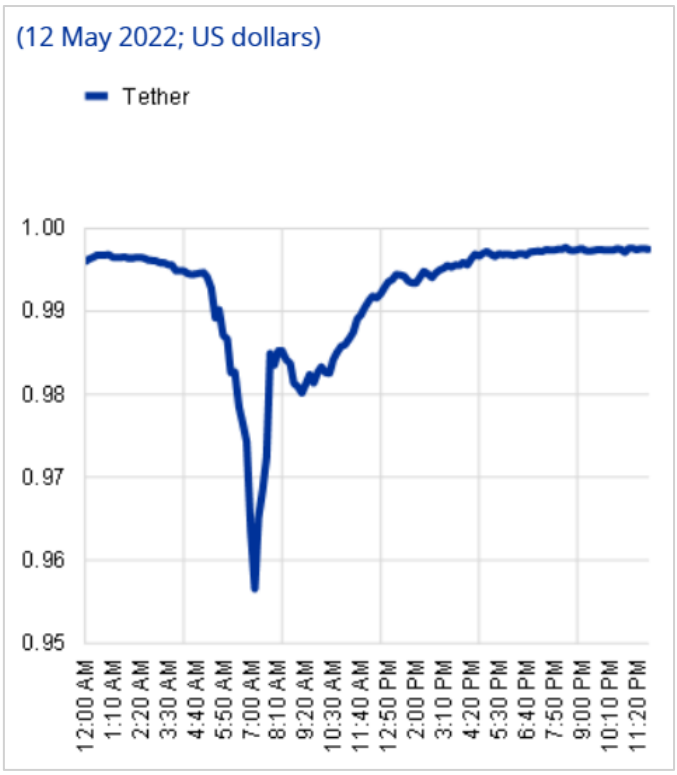


Figure 12: Intraday price development of Tether on 12 May 2022 (ECB, 2022)

A second major shock occurred in March 2023, when USDC came under pressure, as previously mentioned. In this situation, investors shifted their funds to USDT, which surpassed the parity threshold. This event highlights the risks associated with bank-based stablecoins. However, Coinbase was able to stop the de-pegging process relatively quickly.

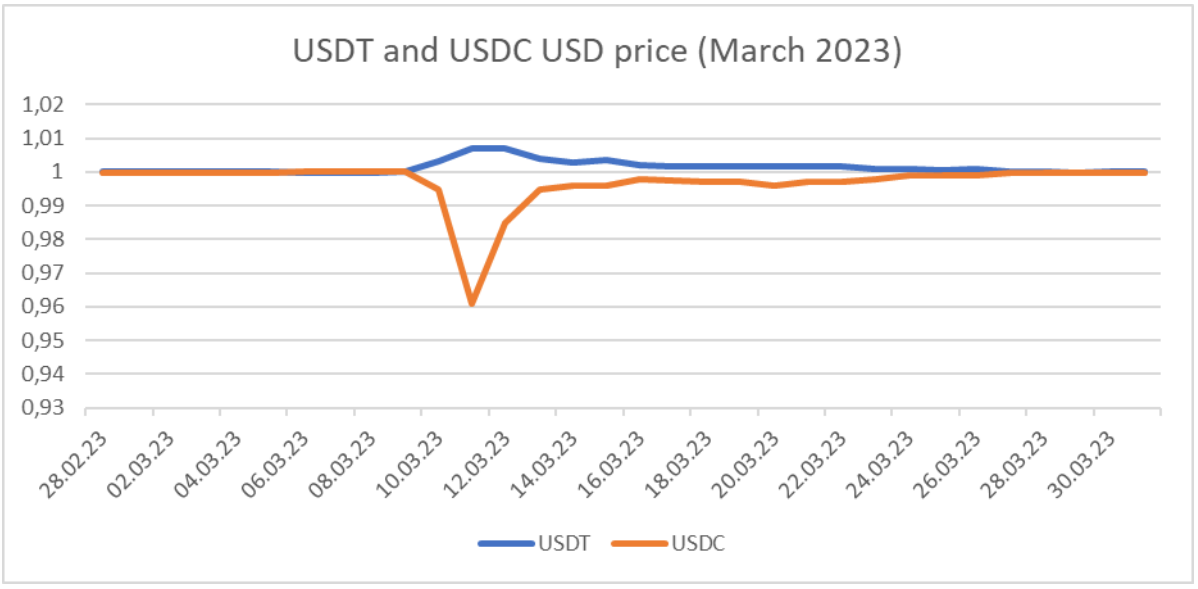


Figure 13: Temporary de-pegging of USDC in March 2023 (based on Coinbase (2025))

4. Use Cases and Business Models

In the current rather euphoric debate on stablecoins, one can sense a kind of gold rush mentality. However, as Waller argues, stablecoins must demonstrate "1) a clear *use case* and 2) a clear *commercial case* to be economically viable". (Waller, 2025, p. 1)

4.1 Use Cases

The main use case for a payment system is to provide cheap, fast payments. However, most payment service providers offer additional services, such as fraud detection and risk management, data analytics and reporting, customer support services, and loyalty and value-added marketing tools. To some extent, a payment system can offer store-of-value functionality, but, as the payment instruments used in such a system are typically non-interest-bearing, this can only be the second-best solution.

4.1.1 Stablecoins as a Means of Payment

Vehicle currency in cryptocurrency exchanges

The most obvious use case for stablecoins is their function as 'vehicle currencies' on crypto exchanges. Investors trading cryptocurrencies such as Bitcoin must have a means of payment to purchase such assets, as well as a 'safe haven' to reduce their speculative exposure. In this respect, stablecoins can be compared to the chips purchased for gambling in a casino.

Many transactions on crypto exchanges are not conducted via a blockchain, but **'off-chain'**, i.e. on a centralized ledger operated by the crypto exchange and separate from the blockchain. The advantages of off-chain transactions are higher transaction speeds and lower costs. Additionally, while all blockchain transactions are publicly observable, this is not the case for off-chain transactions (Mount, 2020).[4] Unfortunately, there is no information available on the relative sizes of off-chain and on-chain transactions.

The role of Tether on crypto exchanges can be compared to that of the **USD in foreign exchange markets**, where it traditionally plays a dominant role. According to BIS (2022), the USD accounts for 88.5% of all FX trading. This can be attributed to its **'vehicle currency'** function: If a company in Brazil needs Danish kroner (DKK), it could try to find a Danish counterpart to purchase Brazilian reais (BRR) in exchange for kroner. However, in reality it first exchanges the Brazilian reais into US dollars and then exchange the US

[4] Mount makes the important point that the dominant role of crypto exchanges transforms Bitcoin designed as a decentralized arrangement de facto into a centralized scheme. In addition, Bitcoin is hardly used for payments: "Today's bitcoin market departs from Nakamoto's visionary concept in two ways. One, bitcoin is now more popularly used as a speculative investment product, not as an online payment vehicle. And two, most bitcoin transactions are facilitated by financial intermediaries. The result is a bitcoin market where most transactions are not reported to the blockchain." (Mount, 2020, p. 687)

dollars into Danish kroner, a process that is usually facilitated by a broker. Both markets are much more liquid than a hypothetical BRR/DKK market.

The same applies to crypto exchanges. Using USDT or USDC as payment objects in an off-chain payment system increases the liquidity of the exchange and facilitates crypto currency trading. Such network effects are a typical feature of means of payment.

This implies that it will be very difficult for other stablecoin issuers and currencies to enter this market. **Figure 6** and **Figure 7** show that new entrants have not been able to gain a significant market share of the stablecoin market in recent years.

The use case of Stablecoins in international payments.

Outside of the crypto exchange world, stablecoins are mainly used for international payments via blockchain payment systems. Compared to traditional global payment systems, particularly SWIFT, stablecoin payments offer advantages in terms of speed and cost. This is mainly because they facilitate direct payments between payers and payees (Ho et al., 2022), whereas SWIFT is an indirect payment system based on a network of bank intermediaries (Swift, 2024).[5] According to an analysis by the Financial Stability Board (2020), on average less than 50% of traditional global payments are settled within one hour, which highlights the potential for the use of stablecoins.

KPI	2024	2023	Change
KPI 1: Percentage of cross-border wholesale payments (other than forward-dated) credited within one hour of payment initiation	50.6%	53.8%	-3.2 pp
KPI 2: Percentage of cross-border wholesale payments (other than forward-dated) credited within one business day of payment initiation	92%	92.7%	-0.7 pp

Table 33: Performance of cross-border payment settlement times (Financial Stability Report, 2024)

For large payments and institutions holding substantial transaction balances, stablecoins are of interest not only as a payment system, but also as a **secure payment** object. While smaller deposits are secured by national deposit insurance schemes, large deposits are exposed to the risk of bank failure. In the European Union, articles 43 and 44 of the European Bank Recovery and Resolution Directive (BRRD) explicitly require a bail-

[5] According (Swift, 2024) "90% of cross-border payments sent over the Swift network reach the destination bank within an hour, well ahead of the G20's target of 75% reaching the end customer's account by 2027. The speed of processing is above the G20 target for all but two of the 40 countries receiving the top volume of transactions on the Swift network. However, variations remain in processing speeds between funds arriving at the beneficiary bank and being credited to the end customer, due to factors in receiving countries such as regulatory controls or domestic processing factors."

in of large depositors in the event of a bank failure. Therefore, the argument of the BIS is not generally true:

> "Meanwhile, commercial banks issue money to the private sector in the form of deposits. Prudential regulation and supervision ensure their safety and soundness, with deposit guarantee schemes protecting depositors in the event of bank failures" (BIS, 2025, p. 80).

In summary, in purely economic terms a stablecoin backed by Treasuries is inherently safer than any bank deposit. This provides an important use case for stablecoins. Alongside the advantages of direct payments in international transactions, stablecoin systems offer companies operating internationally an interesting alternative to indirect exchange based on unsecured large bank deposits. Thus, the stablecoin system already provides the functions that the (BIS, 2025, p. 94) expects from a **'next-generation correspondent banking system'**:

"A next-generation correspondent banking system would leverage tokenisation and the unified ledger to streamline the sequential nature of cross-border payments."

Data on international transactions with stablecoins is difficult to find. However, a recent study by Auer et al. (2025) , which uses novel bilateral cross-country data covering both native cryptoassets amd asset-backed stablecoins across up to 184 countries from Q1 2017 to Q2 2024, sheds some light on bilateral cryptocurrency flows.

Table 4, reproduced from Table 2 in Auer et al. (2025), shows that, after the United States, Turkey and Russia are the largest senders and recipients of stablecoin payments (USDT and USDC). Russia's high usage of stablecoins for international transactions can be attributed to its ban from SWIFT following the war with Ukraine in February 2022. In the case of Turkey, high inflation could have played a role. Auer et al. (2025) estimate that high inflation in both the sending and receiving countries is associated with greater use of cryptoassets in cross-border transactions.

Another factor driving the demand for crypto payments is the high costs of traditional remittances. Auer et al. (2025) show that these costs are associated with larger cross-border flows in stable coins. They also analyze the impact of capital controls on crypto payments. Such measures significantly affect BTC transactions and modestly affect USDC transactions. For ETH and USDT, however, the effects are statistically insignificant.

BTC (Bitcoin)					**USDC (US Coin)**				
	Flows sent	Share	Flows received	Share		Flows sent	Share	Flows received	Share
US	102.3	17.3	110.9	18.7	US	30.4	13.5	27.4	12.2
GB	29.6	5.0	30.2	5.1	GB	10.8	4.4	10.5	4.6
RU	23.1	3.9	20.8	3.5	TR	9.9	4.4	10.2	4.5
TR	21.3	3.6	20.1	3.4	RU	9.7	4.3	10.1	4.5
KR	19.2	3.2	21.7	3.7	ID	8.1	3.6	8.7	3.9

ETH (Etherum)					USDT (Tether)				
	Flows sent	Share	Flows received	Share		Flows sent	Share	Flows received	Share
US	82.3	24.3	81.8	24.2	US	98.1	8.5	92.5	12.2
GB	18.5	5.5	18.3	5.4	TR	67.9	5.9	69.5	6.0
IN	13.2	3.9	12.9	3.8	RU	66.1	5.7	66.8	5.8
ID	11.8	3.5	11.6	3.4	VN	44.1	3.8	45.1	3.9
CA	9.9	2.9	9.6	2.8	GB	42.9	3.7	41.2	3.6

Table 45: Major participants (flows in US$ billions, shares in %) (Auer et al., 2025)
Note: The panel depicts the top-5 countries in terms of cross-border flows sent in BTC, ETH, USDC and USDT, respectively, from Q3 2023 to Q2 2024. It reports the amount of flows sent and received for these countries in US$ billions and as a percentage share of the total amount of flows, respectively. Country abbreviations are based on the official (ISO 3166-1) alpha-2 codes

Stablecoins in illegal transactions

In the past, dollar banknotes were widely used for illegal transactions. An indication of this is the growth of the currency in circulation relative to nominal GDP since the 1990s, despite significant progress in digital payment technologies during this period. As illustrated in Figure 14 This trend reversed in the 2020s, when stablecoins began to evolve as a payment. As cryptocurrencies are close substitutes for cash, the rise of synthetic, digital in the form of stablecoins may have replaced cash in at least some illicit transactions (Hendrickson & Luther, 2022).

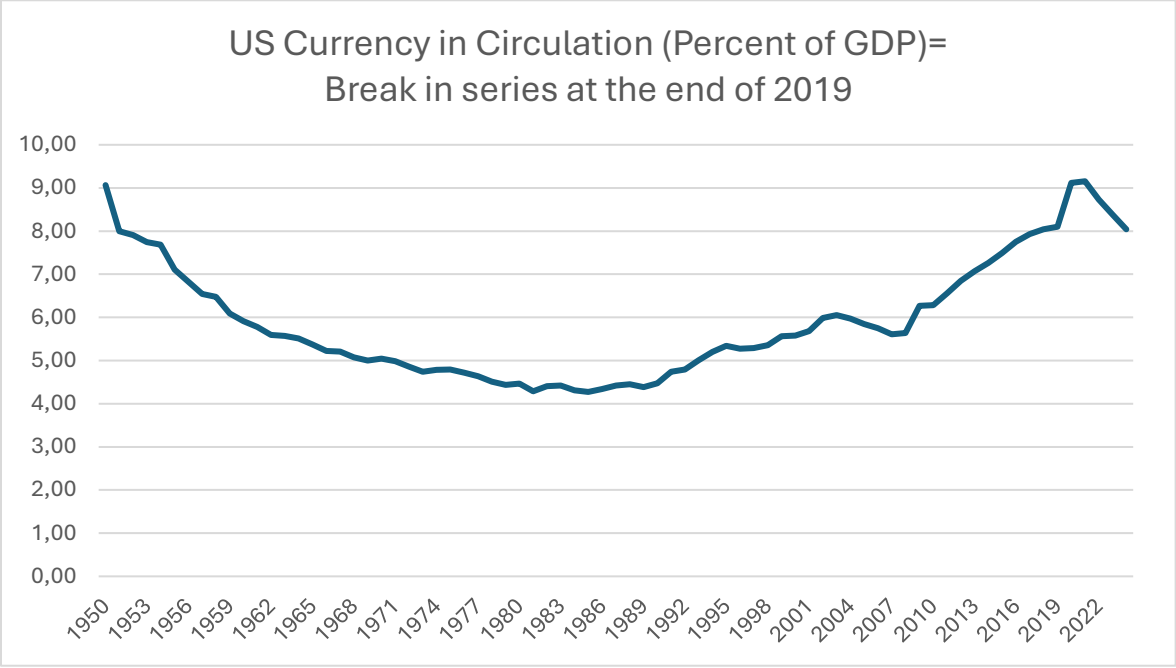


Figure 14: USD currency in circulation relative to nominal GDP (based on FRED)

While transactions made via blockchains can always be observed from outside, they are not anonymous. However, techniques such as peer-to-peer exchange (e.g. via LocalCryptos, AgoraDesk or Bisq) can help disguise the identity of users. As anecdotal reports of criminal activity show, stablecoins play a role in criminal activity (see box below).

For example, the Financial Times (2024) reported:

"The eye-popping constellation of gangsters and sanctions evaders using Tether includes cocaine cartels, North Korean hackers, Iranian and Russian spies, and fentanyl smugglers."

Box: Stablecoins in Criminal Transactions (A Report by the United Nations Office on Drugs and Crime).

USDT, also known as Tether, is a popular stablecoin - a type of cryptocurrency that is pegged to and backed by fiat currencies such as the US dollar - and is reported to have the most liquid markets, with an estimated daily trading volume of US $20 billion at the time of writing. USDT on the TRON blockchain has become a preferred choice for regional cyberfraud operations and money launderers due to its stability, as well as the anonymity and low fees associated with its transactions. Between September 2022 and September 2023, an audit of USDT-based transactions by an independent blockchain data analysis company found that 17.07 billion USDT had been transacted through underground currency exchanges, illegal commodity trades, unlawful collection and payment processes, and various criminal activities. Law enforcement and financial intelligence authorities in East and Southeast Asia have also reported that USDT is one of the most popular cryptocurrencies used by organized crime groups, as demonstrated by the increasing number of cyberfraud, money laundering and underground banking-related cases (UNODC, 2024).

4.1.2 Stablecoins as a Store of Value

As stablecoins are not allowed to pay interest, they are obviously not a good store of value. The MICA regulation explicitly prohibits issuers of asset-referenced tokens (Article 40) and e-money tokens from paying interest. A similar regulation can be found in Section 4(b)(4) of the Genius Act:

"A permitted payment stablecoin issuer may not offer, directly or indirectly, interest or other similar returns to the holders of its issued payment stablecoin."

Thus, the role of stablecoins as a store of value will remain very limited. Additionally, compared with bank deposits, stablecoins suffer from the lack of deposit insurance for small depositors. While central banks typically act as lenders of last resort in the event of a bank run, so far stablecoin holders cannot expect a similar support for a failing stablecoin issuer.

As previously mentioned, large depositors could benefit from stablecoins backed by short-term treasuries, as these offer an advantage over large bank deposits, which are not covered by deposit insurance. However, large investors who prefer safe, liquid assets as a store of value can invest directly in short-term treasuries or money market funds.

Therefore, stablecoins' only use as a store of value is in countries with unstable currencies and financial systems, which typically have capital controls. In this capacity, stablecoins could also serve as a digital substitute for dollar banknotes.

4.2 The Business Case of Stablecoins

The business case for stablecoins is straightforward: the issuer creates a non-interest-bearing stablecoin in exchange for a bank deposit in the same currency. The only promise is to redeem the stablecoin at a rate of 1:1 with a bank deposit. The issuer can then invest the bank deposit in short-term, highly liquid assets (primarily treasuries). As long as these assets have a positive interest rate, the issuer can earn a **'seigniorage' gain**,[6] similar to that earned by a central bank when issuing non-interest-bearing banknotes, or by commercial banks when making interest-bearing loans and generating deposits, which are often remunerated with very low interest rates or are non-interest-bearing.

Balance sheet of a stablecoin issuer	
Assets	Liabilities
Interest-bearing highly liquid and stable assets	Non-interest-bearing stablecoins

Table 5 6: Balance sheet of a stablecoin issuer (Author's own compilation)

An additional advantage of this business model is that the issuer is not required to provide payment functions. These are provided either by a crypto exchange or by a blockchain provider.

However, the BIS questions the business model of stablecoin issuers (BIS, 2025, p. 79):

"Firstly, there is an inherent tension between their promise to always deliver par convertibility (i.e. to be truly stable) and the need for a profitable business model involving liquidity or credit risk."

So far, this tension has not affected the dominant issuers, as it has been possible to generate substantial interest income with highly liquid and secure assets. In 2024, Tether could make profits of USD 13 billion (Tether, 2025a).

However, the business model is not without risk, as it requires positive interest rates on short-term safe assets. As the **Figure 15** shows, following the Great Financial Crisis, there was a prolonged period during which the Federal Reserve's policy rate was zero and the ECB's deposit rate was even negative.

[6] The (European Central Bank, 2017) explains the origin of the word "seignorage" as follows: "In bygone days it was the "seigneur" or lord who had the right to mint coins – hence the name. Today in the euro area the national governments mint coins and the central banks issue banknotes."

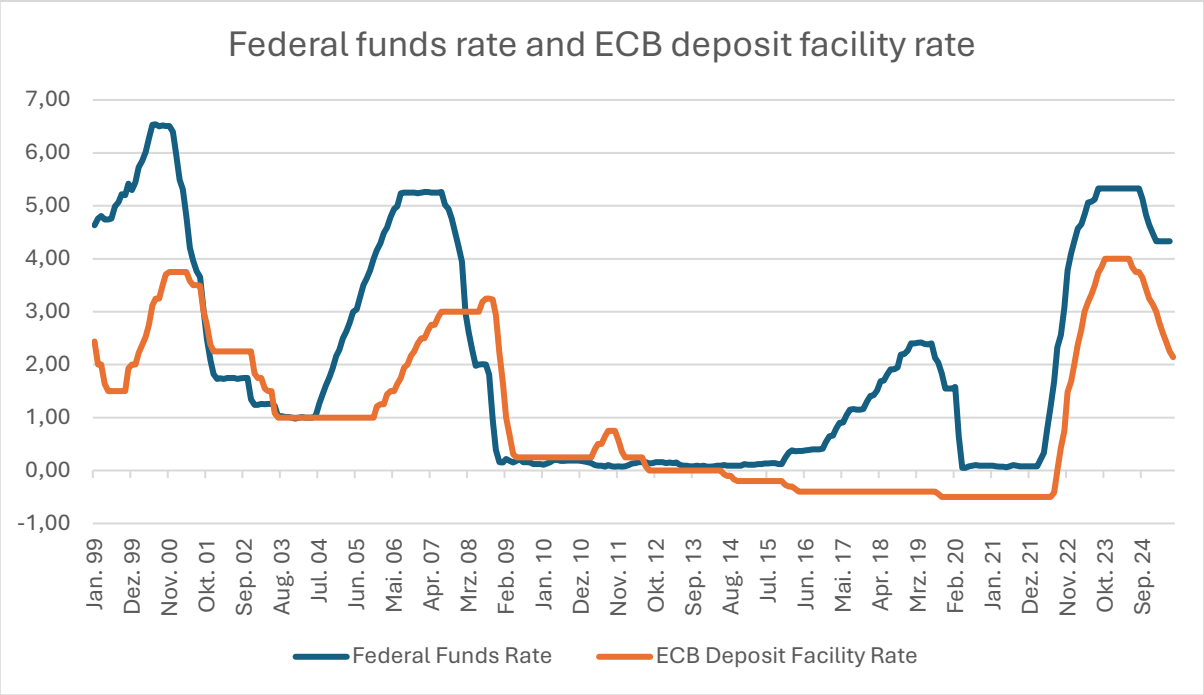


Figure 15: Federal funds rate and ECB deposit facility rate (based on FRED)

Companies planning to enter the stablecoin business must therefore be aware that central bank interest rates could fall to the effective zero lower bound at any time in the event of severe macroeconomic shocks. In periods of negative money market rates, the demand for stablecoins would increase, additionally eroding the issuer's profitability. Longer periods with zero or even negative central bank interest rates would cause the stablecoin business model to collapse.

5. The Potential for Stablecoins in Retail Transactions

Despite their impressive growth, stablecoins remain a niche product with little impact on financial markets or monetary policy. Nevertheless, some politicians are concerned that stablecoins could undermine the sovereignty of national states or the euro area (DEA, 2025). For instance, Philip Lane, the ECB's Chief Economist, stated (Lane, 2025):

> "Bearer-based stablecoins, for example — digital representations of private electronic banknotes designed to be backed by safe assets such as government bonds or bank deposits — could bypass settlement via central bank reserves altogether. This would create a monetary ecosystem that flies under the radar of central bank oversight.' Central bank money would play a much diminished role in the payments system if households and firms were to maintain their primary transaction accounts in stablecoins and only use commercial bank accounts to upload and download funds from these accounts."

While it is difficult to forecast innovations in the payment landscape, there is no obvious case for stablecoins in the **retail space**.

Difficulty dislodging incumbent players.

So far, bank-based (indirect) retail payment systems are functioning very well, particularly within national spheres. Compared to blockchain solutions, such systems have the advantage of a centralized ledger, which is easier to operate than a distributed blockchain. Although blockchain transactions have improved significantly in terms of speed, it is unclear whether they could compete with the efficiency of existing international and national payment systems, such as VISA, Mastercard, SEPA, BISUM (Spain) and UPI (India) (Ho et al., 2022).

In general, it is difficult to dislodge large incumbent digital players. As (European Commission et al., 2019) show, the digital economy is characterized by strong returns to scale and network externalities. This means that a new entrant must convince users of the incumbent to migrate to their own services and access the incumbent's data. These factors lead to strong **'economies of scope'**.

The challenge of interoperability

A major challenge for stablecoins in the retail sphere is that the **lack of interoperability** between different blockchains and between blockchains and bank-based systems would remain. The Axelar Foundation and the Stellar Development Foundation describe interoperability in the following way:

> "Interoperability in this ecosystem is achieved through standardised protocols and interconnection points.' For example, a consumer with a Visa credit card issued by a US bank can pay a merchant in Europe via a Mastercard-compatible point-of-sale terminal. Behind the scenes, payment networks and processors reconcile currency conversions, comply with regulations, and settle funds across discrete banking systems." Initiatives like ISO 20022, a global standard for payment messaging, further enhance interoperability by ensuring consistent data formats across networks. This seamless integration allows consumers to focus on their purchases, oblivious to the complex choreography of systems working together" (Axelar, 2025).

For a **payments system based on stablecoins**, however, interoperability is a key challenge. So far, there are no viable solutions for connecting different blockchains, nor for connecting blockchains with the bank-based payment system. The Axelar Foundation and the Stellar Development Foundation sate:

> "Today, the cryptocurrency landscape has evolved dramatically, with dozens of blockchains like Ethereum, Solana and Stellar powering diverse

> applications. However, this proliferation has led to a fragmented ecosystem. Many blockchain networks operate in silos, with limited communication or compatibility, hindering the seamless retail payment experience that is the standard for digital payments online and in physical stores" (Stablecoin Standard, 2025).

Consequently, consumers using Bitcoin wallets cannot easily pay merchants on Ethereum networks, nor can they interact effortlessly with Visa-compatible point-of-sale systems without complex solutions. In other words, stablecoin payment systems based on different blockchains are akin to cash payment systems based on different national currencies.

Lack of elasticity

Even a fully interoperable blockchain system would have the fundamental disadvantage of being unable to lend to its users. As stablecoin issuers operate as **narrow banks**, they cannot offer consumer loans or overdraft facilities. As the BIS (2025, p. 86) argues, stablecoin systems operate under a **'cash-in-advance**' constraint. This complicates the use of stablecoins in the retail space. The BIS (2025, p. 78) emphasizes the advantage of the bank-based system:

> "Another concrete manifestation of elasticity is the banking system's role in creating money through lending activities, including overdrafts and lines of credit.' Through overdrafts, payments exceeding deposit balances can be made at the payer's discretion, while lines of credit provide on-demand liquidity. This allows complex, interlocking obligations in the economy to be discharged in a timely manner".

Parallel holdings of transaction balances

This is related to another disadvantage of stablecoin payments. As **Figure 3** shows, users must hold specific payment objects in order to use the blockchain infrastructure of a stablecoin system. This differs from payment infrastructures based on bank accounts. Such infrastructures can be used with different payment objects, not only with respect to the banks where deposits are held, but also with respect to the currency denomination of deposits. Therefore, if stablecoins are not the dominant payment method, households must hold parallel balances to make payments with stablecoins. This incurs transaction and information costs, particularly since stablecoin schemes cannot offer overdraft facilities.

To put it metaphorically: The current retail bank-based payment system is like a highway that can be used with any kind of car. In contrast, specific cars are required for use with a stablecoin-based payment system, and these cannot be used on other highways.

Anonymity

The only advantage of a direct payment system is anonymity, since there is no intermediary to record transactions. In this regard, the stablecoin system can be compared to the cash-based payment system. However, as demonstrated by the Know Your Customer (KYC) and Anti-Money Laundering (AML) regulations in the United States (Genius Act) and Europe (MICA), the potential for anonymous transactions in blockchain networks is reduced.

Overall, it is very unlikely that a stablecoin-based payment system could replace existing retail payment systems. Unlike international payments, transaction costs for retail payments are very low. Currently, there is no indication that blockchain solutions can compete with centralized systems in terms of speed.

Box: A Walmart stablecoin?

According to a report in the The Wall Street Journal (2025), Walmart and Amazon are considering issuing their own stablecoins. From these companies' perspective, this would be a great idea, as it would be equivalent to receiving an interest-free loan from their customers. However, from the customers' perspective, using a Walmart stablecoin would be like a voluntary cash-in-advance constraint. Holding such a stablecoin reduces the liquidity of a customer's portfolio, as it can only be used to make purchases at Walmart. In other words, a Walmart stablecoin is merely a payment method lacking the infrastructure for direct exchange with other users. For this reason, it is unlikely that a Walmart or Amazon stablecoin will be in high demand among their customers.

6. The Macroeconomic Implications of Stablecoins

To understand their role in relation to traditional banks, it is helpful to consider the concept of **'narrow' banks**. This concept has been discussed in literature for a long time (Bossone, 2001). A narrow bank accepts deposits and invests them in central bank reserves. Narrow banks do not engage in lending activities.

Supporters of this idea, such as Fisher (1935) and Friedmann (1959), claim that with a **100% reserve plan** would no longer be possible, and that it would be easier for the central bank to control the money supply. This would then be identical to the monetary base. In Switzerland, the so-called "**Vollgeld-Initiative**" initiated a referendum aiming at a 100% reserve for Banks. On 10 June 2018, the initiative failed to reach a majority.[7]

However, the concept has the fundamental disadvantage of preventing banks from supplying a growing economy with additional credit and an increasing money supply.

[7] For a theoretical analysis see (Bofinger & Haas, 2018).

Historically, the global credit supply has grown in line with nominal GDP (**Figure 16**). In emerging market economies, particularly China, credit growth has exceeded nominal GDP growth. Therefore, the decisive question is whether a stablecoin-based system could provide the funds required to finance a growing economy.

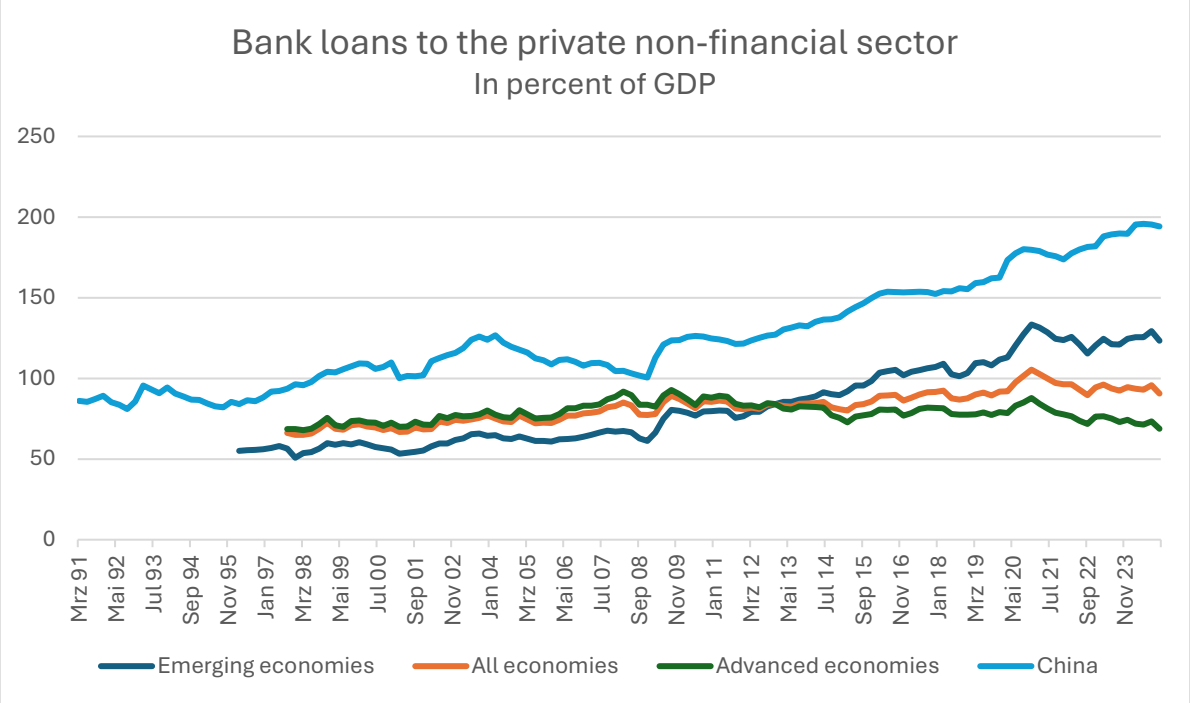


Figure 16: Bank loans to the private sector (based on BIS Credit)

6.1 The Money Supply in a Stablecoin System

The capacity of stablecoins to create money and credit depends on the type of stablecoin. In a bank-based system, stablecoins are equivalent to narrow banks. In a bond-based system, stablecoins can increase the money supply by purchasing government bonds.

Bank-based stablecoins

The business model of bank-based stablecoin issuers is limited to exchanging bank deposits for stablecoins and vice versa, making them similar to narrow banks. If the money supply is defined as the sum of traditional bank deposits and stablecoins, exchanging bank deposits for stablecoins keeps the money supply constant (see **Figure 17**). Thus, in principle, bank-based stablecoins are identical to narrow banks. However, it is important to note that their assets are bank deposits rather than central bank reserves, unlike narrow banks.

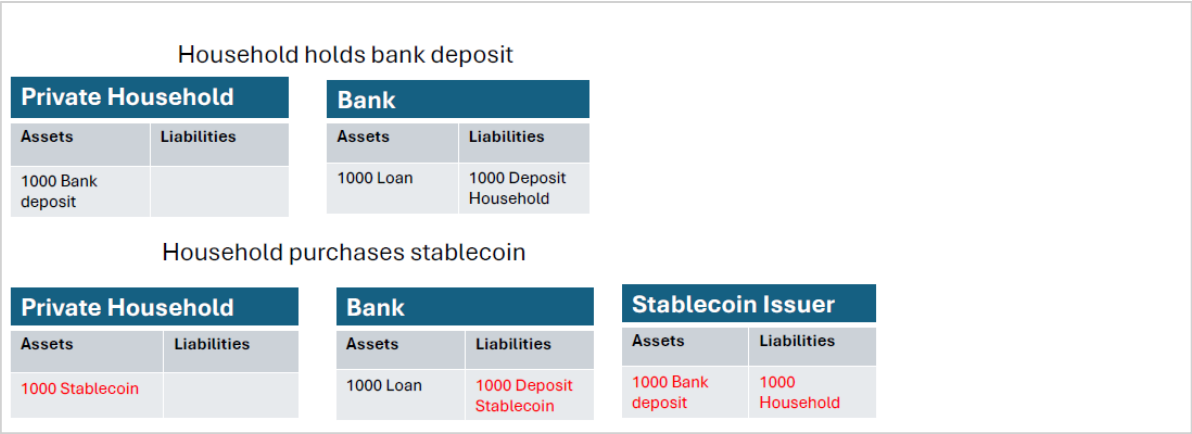


Figure 17: Stablecoin issuance: Bank-based coin (Author's own illustration)

Bond-based stablecoins

The issuing process differs for bond-based coins (**Figure 18**). This can be demonstrated using T-accounts:

1) In the starting position, a household holds a bank deposit. An investor holds bonds.
2) The household exchanges its deposit for a stablecoin. The stablecoin issuer uses the deposit to purchase a bond from the investor. So far, the total amount of money in the form of stablecoins and bank deposits remains unchanged.
3) The investor can use their bank deposit to purchase a newly issued government bond. This increases the government's bank deposits.
4) The government uses the deposit to make a payment to a household. The household's bank deposits increase. Consequently, the money supply in the economy (bank deposits plus stablecoins) increases.

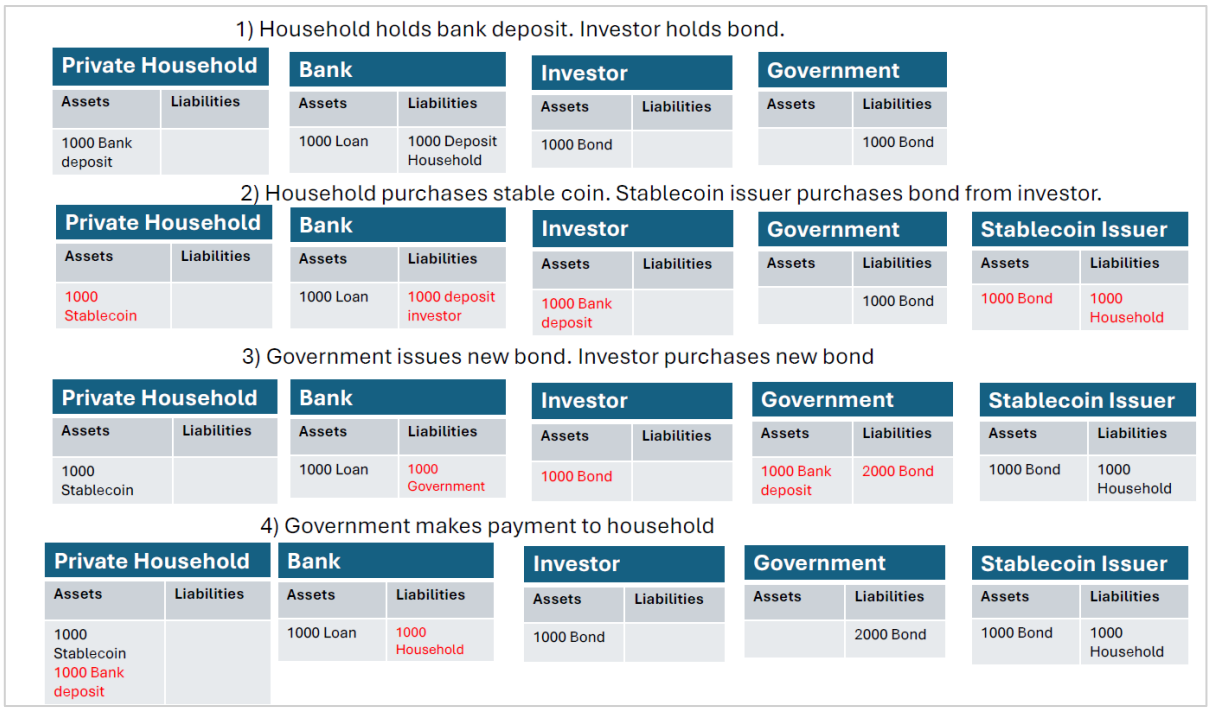


Figure 18: Stablecoin issuance: bond-based coin (Author's own illustration)

This illustrates the similarity between a 100 percent reserve system and a bond-based stablecoin system. In both cases, the money supply can be increased by lending to the government.

The Trump government's motivation for boosting the role of such assets as a means of payment in crypto payment schemes may have been the **potential of stablecoins to finance government debt**. Widespread international use of dollar-denominated stablecoins would indirectly finance the US government on a global scale. This could help safeguard the **'exorbitant privilege'** of the US dollar, which is under threat from growing currency diversification among global reserve holders. For decades, this privilege has enabled the US economy to run persistent current account deficits, i.e. to 'live beyond its means' without triggering a currency crisis (Bofinger, 2025).

6.2 The Role of Monetary Policy in a Stablecoin System

The growth of stablecoins and their strong support by the US government has raised the question of whether this payment system might undermine the ability of central banks to control the money supply. Such fears were expressed in a speech by (Lane, 2025) the Chief Economist of the ECB:

- "Bearer-based stablecoins – digital representations of private electronic banknotes designed to be backed by safe assets such as government bonds or bank deposits – could bypass settlement via central bank reserves altogether. This would create a monetary ecosystem that flies under the radar of central bank oversight."

- “Central bank money would play a much diminished role in the payments system if households and firms were to maintain their primary transaction accounts in stablecoins and only use commercial bank accounts to upload and download funds from these transaction accounts.”
- “A material decline in the volume of deposits held in commercial banks would disrupt their role in credit provision, which is especially prominent in the bank-based European financial system.”

6.2.1 Bank-Based Stablecoins

To understand the role of the central bank in a bank-based stablecoin system, it is helpful to consider how money and credit are supplied in the current system. Whenever a commercial bank lends money to a customer, it creates a new deposit on its balance sheet. In principle, therefore, it can create **'money out of nothing'**. However, the borrower usually uses the deposit to make a payment to a payee who has an account with a different bank. This payment is made indirectly via the central bank accounts of the two banks. Consequently, the lending bank's central bank reserves decline. Therefore, lending always results in a **loss of central bank liquidity** for a commercial bank. To compensate for this, the bank must either increase its refinancing with the central bank or borrow from other banks on the money market. In both cases, financing takes place at the central bank's policy rate, which is a key factor in determining the interest rate on the money market.

Therefore, if a bank lends to a customer, it must consider the refinancing costs, which are a main determinant of the bank’s lending rate. In other words, the central bank can indirectly control lending rates for households and firms through its **policy rate.**[8]

In a bank-based stablecoin system, we have seen that traditional banks are still required as suppliers of loans and bank deposits. If a bank customer uses **a deposit to exchange for stablecoins**, and if the stablecoin issuer invests these with another bank, the process is the same. The bank experiences a loss of central bank reserves, which it must compensate for by borrowing from either the central bank or a commercial bank on the money market. Therefore, even in such a system, the central bank's indirect control through its policy rate remains effective.

Therefore, the fear of 'a monetary ecosystem that flies under the radar of central bank oversight' is unfounded as long as the financial system keeps growing, i.e. as long as commercial banks are required to produce new loans and money.

The same applies to the argument that 'central bank money would play a much-diminished role in the payments system'. Under current minimum reserve requirements, minimum reserves must be held for non-bank deposits, but not for interbank loans. Therefore, a stablecoin issuer's holdings would not require minimum reserve holdings.

[8] For a detailed explanation see (Bofinger et al., 2023).

However, if stablecoins were to be used more widely, the central bank could maintain demand for reserves by extending the **reserve requirement to bank deposits held by stablecoin issuers**.

Finally, there is also no reason why bank-based stablecoins should "disrupt the role of commercial banks in credit provision". As previously mentioned, bank-based stablecoin issuers cannot provide for a growing demand for loans and money.[9] The only consequence would be that stablecoin issuers would demand higher deposit rates than current deposit holders, who often receive no interest at all. Consequently, an increased demand for stablecoins would raise banks' refinancing costs and consequently increase interest rates on loans to private households and firms.

6.2.2 Bond-Based Stablecoins

Bond-based stablecoins cannot cater for an additional loan demand by the private sector. But as previously mentioned, they have the potential to create new money by lending to the government in the form of holding treasuries as collateral. In this case, a growing demand for stablecoins would keep household and firm bank deposits constant while increasing the money supply through the growing circulation of stablecoins issued by purchasing government bonds. It is questionable whether the capital would be able to intermediate the newly created funds to the private sector

In such a system, the central bank could control stablecoin activities by establishing reserve requirements for stablecoin holdings. This would create a reserve demand by stablecoin issuers and provide the central bank with an indirect control mechanism. However, it is unclear whether a central bank could impose such requirements on issuers operating abroad.

Another way to control the issuance of bond-based stablecoins would be to increase the interest rate on traditional bank deposits through higher refinancing rates. If this proves ineffective, the central bank could influence deposit rates directly by offering interest-bearing central bank digital currencies (CBDCs). This would make non-interest-bearing stablecoins less attractive and reduce their ability to finance government deposits.

6.2.3 Bank-Based Stablecoins as Synthetic CBDCs

In his speech, Lane (2025) also describes a scenario in which stablecoins would operate like synthetic CBDCs.

'Critically, the ultimate nature of the two-layered system I described earlier would be preserved, with euro reserves issued by the Eurosystem providing the foundation of the new monetary order. The commercial banks with which stablecoin providers deposit their

[9] It is therefore not clear why Bezemer et al., (2025, p. 23) come the following conclusion: "Given little regulatory pressure, stablecoins might in time become more like banks, potentially leading to financial instability that could impact European banking sector."

funds would need to hold larger reserve accounts to accommodate withdrawal requests from the stablecoin provider.'

Stablecoin Issuer (SCI)	
Assets	**Liabilities**
1000 Bank deposits	1000 Stablecoins

Bank	
Assets	**Liabilities**
1000 Loans	1000 Stablecoin Issuer
1000 Reserves Stablecoin Issuer	1010 Refinancing Central Bank
10 Reserves Loans	

Household	
Assets	**Liabilities**
1000 Stablecoins	1000 Loan Bank

Central Bank	
Assets	**Liabilities**
1010 Refinancing Bank	1010 Reserves Bank

Figure 19: Stablecoins as synthetic CBDCs (Author's own illustration)

Assuming that commercial banks provided 100% reserve backing for stablecoins, the balance sheets would show that this would effectively lead to a stablecoin that is, in effect, **a "synthetic CBDC" (Adrian, 2019)**. In this case, the role of the central bank is unclear.

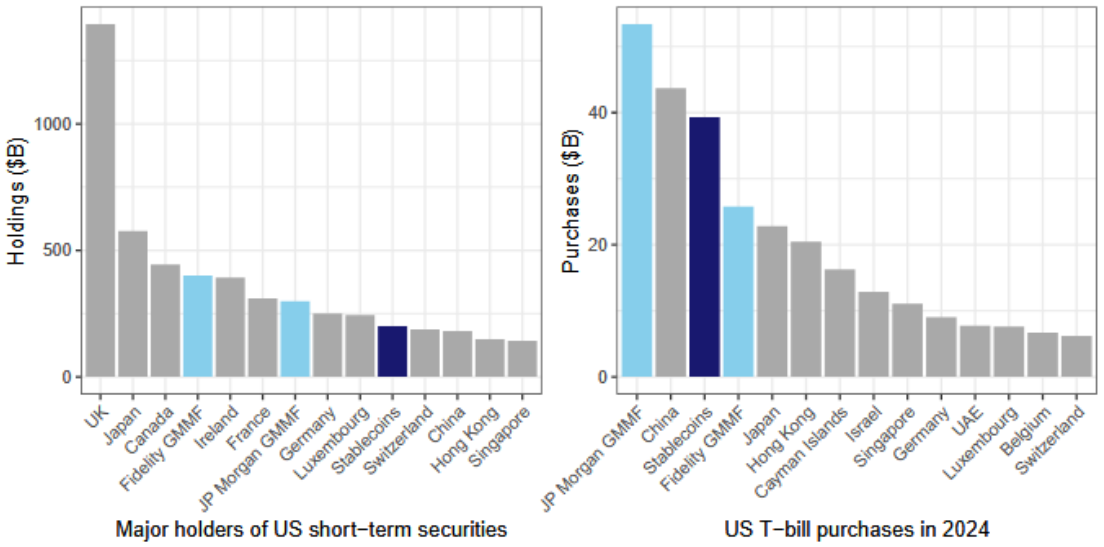
- If the central bank is willing to allow larger central bank deposits by non-banks, it could offer these deposits directly instead of via an indirect stablecoin deposit.
- If, however, the central bank wants to prevent larger central bank deposits by non-banks due to disintermediation risks for commercial banks, there would be no reason to provide the required reserve holdings to back stablecoin issuers' deposits with commercial banks.

7. Risks for Financial Stability

The growing political support for stablecoin assets has raised concerns about their implications for the stability of the global financial system. For example, in a recent BIS paper, (Ahmed & Aldasoro, 2025) conclude:

"Their growth blurs the lines between cryptocurrency and traditional finance, carrying implications for monetary policy, stablecoin reserve transparency, and financial stability — particularly during periods of market stress."

The authors demonstrate that stablecoin issuers are already major holders and buyers of US government securities.



Note: Data are sourced from US Treasury TIC, OFR, CoinMarketCap, and USDT and USDC reserve reports. Left-panel: Short-term US securities include US T-bills, agency and bank debt, bank deposits, negotiable CDs, repurchase agreements, commercial paper, money market funds, and other short-term securities. Foreign country holdings are as of December 2024, Fidelity and JP Morgan government money market fund holdings are as of February 2025, and stablecoin holdings are as of March 2025. Stablecoin T-bill purchases is the sum of USDT and USDC T-bill position changes from December 2023 to December 2024.

Figure 20: Stablecoin reserves and T-bill purchases relative to other major holders (Ahmed & Aldasoro, 2025)

When discussing the implications of stablecoins for financial stability, it is important to note that, in principle, stablecoin issuers are more stable than banks because they do not engage in lending activities. However, as previously mentioned, the stability of stablecoin issuers depends on their collateral.

The collateral of **bank-based stablecoins** mainly consists of bank deposits. As previously mentioned, according to the MICA, 'significant' stablecoin issuers must hold at least 60% of their collateral in bank deposits. However, the collapse of Silicon Valley Bank in March 2023 demonstrated that this creates a **'doom loop'** between bank runs and stablecoin runs. The intensity of this loop depends on the lack of diversification of the stablecoin issuer's bank holdings; however, MICA does not prescribe rules to prevent the excessive concentration of stablecoin bank collateral. Consequently, a run on a stablecoin issuer can destabilize specific banks, and vice versa.

The situation is entirely different for **bond-based stablecoins**. As long as treasuries are considered safe assets, there is no risk of a sudden decrease in the value of a stablecoin's collateral. However, if there is a run on the stablecoin issuer, selling treasuries could temporarily reduce liquidity in the treasury market. In such a situation, the central bank could intervene by purchasing treasuries at prices slightly below par and still make a profit from the intervention. Therefore, there is no risk of mutual doom loops for bond-based stablecoins. The effect of runs on stablecoin issuers on the treasury market can be contained if the Fed is willing to act as a **purchaser of last resort for government bonds.**

One stability risk for stablecoin issuers that has so far received little attention is **prolonged periods of very low, zero and, above all, negative interest rates**. Negative policy rates do not only erode the capital of a stablecoin issuer, they also create an additional demand for stablecoins as a store of value. While an issuer could protect itself against new stablecoin issues by no longer acquiring fiat currencies for stablecoins, it cannot 'throw out' existing stablecoin holders.

8. The Digital Euro: An ‘Effective Tool’ to Limit the Dominance of Foreign Stablecoins?

For the ECB, the Trump administration's promotion of stablecoins has become an additional justification for its digital euro project. For example, Piero Cipollone, Member of the Executive Board of the ECB, argued:

'By making central bank money available, we avoid the risk of other settlement assets being used, such as US dollar stablecoins, which would reintroduce credit risk, fragmentation, and dependency on non-European solutions.'

Philip Lane (2025) made a similar statement:

“The digital euro is also an effective tool to limit the dominance of foreign digital currencies, including the monetary sovereignty risks created by widely adopted foreign-currency stablecoins.”

8.1 The Risk of Dollarization in the Euro Area

This raises the question of whether the euro area is at risk of **foreign currency-denominated stablecoins** being widely adopted. Holding money balances denominated in a foreign currency for domestic payments exposes households and firms to exchange rate risk, unless widespread '**dollarisation**' occurs in the economy. Experience shows that such processes only occur in economies with very unstable domestic currencies. Provided that the ECB fulfils its core mandate of price stability, there is no reason for euro area households and firms to shift their money balances from euros to US dollars. Furthermore, it is already possible to hold bank deposits in foreign currencies.

However, Lane did not discuss the sovereignty risks associated with **euro-denominated stablecoins** issued by foreign issuers. As previously mentioned, the ECB would be able to control issuers of euro bank-based stablecoins by imposing minimum reserve requirements on the deposits they hold with euro area commercial banks. For bond-based stablecoins, the only way to influence issuers would be to offer interest-bearing central bank digital currencies (CBDCs). This would enforce minimum interest rates that issuers must offer to attract depositors.

8.2 The Contribution of the D€

Therefore, it is worth asking what the D€ could contribute to limiting the dominance of stablecoins denominated in a foreign currency or issued by a foreign issuer. As shown in **Section 4**, stablecoins are used for transactions on crypto exchanges, international transactions, and as a store of value in countries with unstable currencies and banking systems.

In its current design, however, the D€ could not fulfil these functions. As the European Commission states, its use is restricted to residents of the euro area (European Commission, 2025).

'The digital euro would be accessible to people, businesses and public entities that reside or are established in a euro area Member State on a temporary or permanent basis'.

In certain cases, the digital euro may also be accessible to people, businesses, and public entities that do not reside or are not established in a euro area Member State." Examples include:

- consumers and businesses that opened a digital euro account while residing or being established in a Euro Area Member State.
- consumers travelling to the euro area for personal or professional purposes;
- consumers who reside or are established in a non-Euro Area Member State or a third country, provided that predefined conditions are agreed with the relevant national authorities and/or central banks.

Therefore, the D€ cannot serve as an international payment object In addition, it will be based on a centralized account system run by the ECB, so it will not be usable in blockchains. A tokenized version of the D€ is not currently under discussion.

However, even within the euro area, the D€ payment scheme is intended for **retail payments made by private households**. Consequently, firms and financial institutions are not permitted to hold D€ deposits. In the retail sector, this is achieved through **'waterfall' functionality**, which automatically transfers all merchant D€ deposits to their commercial bank account.

Finally, the D€ is designed to be used as a means of payment with low holding limits. This prevents it from being used widely as a store of value. Consequently, it cannot serve as a digital substitute for euro cash holdings in countries with unstable currencies and/or banking systems.

In summary, the reasons why ECB representatives believe that the D€ could serve as an alternative to stablecoins in their current use cases are unclear. The D€ could only play such a role in the unlikely event that stablecoins were to become more widely used in the euro area for domestic retail payments.

9. The Implications of Stablecoins for European Policy Makers

The rise of stablecoins poses another threat to **Europe's digital sovereignty**. Europe is already dominated by US platforms in general, and especially by retail payment platforms such as VISA, Mastercard and PayPal. The dominance of a small number of providers in the stablecoin sector which has emerged in recent years makes it difficult for newcomers in Europe to gain a stronger position as issuers of stablecoins or providers of blockchains and crypto exchanges. There are very few examples of platform disruption (e.g. Skype/Zoom vs. TikTok, Instagram/Snapchat/YouTube).

The need for stablecoins as an innovation in EU cross-border payments seems limited, as **SEPA** (the Single Euro Payments Area) offers a fast (instant) and cheap payments infrastructure throughout the EU and associated areas. An indication for the limited potential of stablecoin payments in the EU is the low share (about 6 %) of euro denominated transactions in the Swift payment transactions (Figure 21). with the lion's share (about 87%) falling on the USD. The very low interest in euro-denominated stablecoins which are issued e.g. by Tether provides a similar picture (Section 3.1).

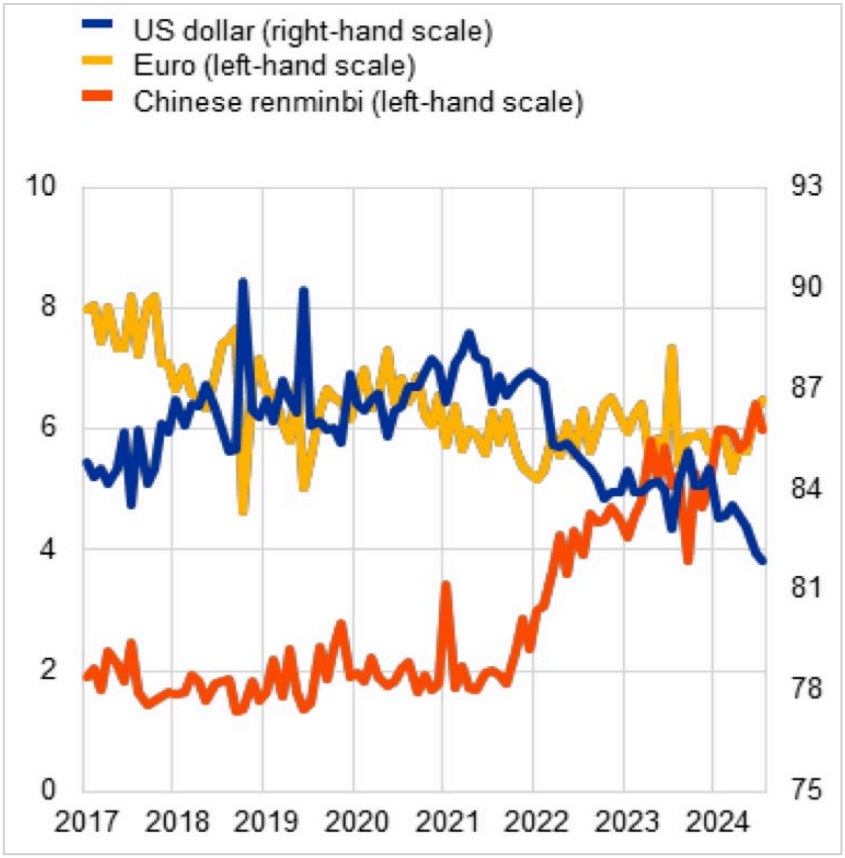


Figure 21: Top three currencies in Swift trade finance message (ECB (2025, p. 29))

A key step in boosting stablecoin issuance in Europe would be to **reform the MICA Regulation**, which currently requires "significant" stablecoin issuers to have 60%

coverage of outstanding stablecoins by bank deposits. As previously mentioned, this regulation is a recipe for disaster. A reformed MICA should at least leave open the question of which share of the collateral should be invested in bank deposits. It could follow the example of the Genius Act (GENIUS Act, 2025, Appendix 4).

To prevent the **emergence of stablecoin solutions in the retail sphere**, Europe should establish an independent retail payment infrastructure. The ECB is trying to achieve this by developing a new payment system based on the digital euro. But this system will not only have to compete with foreign but also with established national payment schemes. Additionally, D€ accounts are only available in the euro area. Ultimately, this could increase the fragmentation of the pan-European payment landscape. Therefore, a more promising approach would be to integrate the national payment systems of all EU member states. While this is not an easy task, it is nevertheless the best way to strengthen Europe's financial sovereignty.

As a last resort, the ECB could decide to become an active provider of stablecoins itself. Such a solution is suggested by the BIS (2025, p.79) when it refers to ‘tokenised central bank reserves’. By issuing stablecoins itself, the central bank prevents the emergence of seigniorage gains for foreign issuers. Although this promotes disintermediation of the banking system, it can be offset by an appropriate refinancing policy. In principle, this would be a **wholesale digital euro** that could be used for larger international payments.

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