Global stablecoins in 2030: a European perspective

This paper analyses the long-term consequences of different stablecoin adoption scenarios through a calibrated three-region flow-of-funds model

Ulrich Bindseil
Frankfurt School of Finance and Management

Romain Meuwissen
European Stability Mechanism

Giorgio Mondini
Frankfurt School of Finance and Management

Martin Rohár
European Stability Mechanism

Disclaimer
This working paper should not be reported as representing the views of the ESM. The views expressed in this Working Paper are those of the authors and do not necessarily represent those of the ESM or ESM policy.

European Stability Mechanism

Global stablecoins in 2030: a European perspective

Ulrich Bindseil Frankfurt School of Finance and Management
Romain Meuwissen European Stability Mechanism
Giorgio Mondini Frankfurt School of Finance and Management
Martin Rohár European Stability Mechanism

Abstract

This paper examines the implications of global stablecoin adoption for the monetary and financial architecture, with particular emphasis on the euro area. It employs a flow-of-funds framework tracing sectoral and cross-border balance-sheet adjustments as a function of funding sources and reserve asset composition, operationalised through a calibrated three-region model (United States, euro area, rest of the world), embedding alternative stablecoin growth scenarios for USD- and EUR-denominated stablecoins through 2030. The analysis finds that, even under high stablecoin growth assumptions, aggregate effects on the euro area financial system would likely remain manageable. The principal structural effect on banks is the conversion of stable, inexpensive retail deposits into more volatile and costly wholesale funding. Effects on securities markets, while meaningful in terms of demand reallocation toward short-term sovereign instruments, are likewise assessed as manageable. Stablecoin-specific financial stability risks, though real, are not fundamentally novel and are amenable to standard regulatory mitigation tools. Stablecoins are best understood as part of the continuing evolution of monetary architecture, the significance of which will depend on the efficiency gains they ultimately deliver and the adequacy of the regulatory environment. While financial stability and monetary architecture risks appear manageable, other important societal issues, such as their significant use for illicit payments and regulatory arbitrage, deserve more scrutiny.

Keywords: Stablecoins, flow of funds, financial intermediation, financial stability, financial regulation, monetary architecture, dollarisation, international role of the euro, bank funding, digital money

JEL codes: E42, E44, G28, O33

Disclaimer

This Working Paper should not be reported as representing the views of the ESM. The views expressed in this Working Paper are those of the authors and do not necessarily represent those of the ESM or ESM policy. No responsibility or liability is accepted by the ESM in relation to the accuracy or completeness of the information, including any data sets, presented in this Working Paper.

© European Stability Mechanism, 2026 All rights reserved. Any reproduction, publication and reprint in the form of a different publication, whether printed or produced electronically, in whole or in part, is permitted only with the explicit written authorisation of the European Stability Mechanism.

ISSN 2443-5503 doi: 10.2852/ 2175207
ISBN 978-92-95223-97-4 EU catalog number: DW-01-26-012-EN-N

Global stablecoins in 2030: a European perspective

Ulrich Bindseil, Romain Meuwissen, Giorgio Mondini, Martin Rohár[1]

October 2026

Abstract

This paper examines the implications of global stablecoin adoption for the monetary and financial architecture, with particular emphasis on the euro area. It employs a flow-of-funds framework tracing sectoral and cross-border balance-sheet adjustments as a function of funding sources and reserve asset composition, operationalised through a calibrated three-region model (United States, euro area, rest of the world), embedding alternative stablecoin growth scenarios for USD- and EUR-denominated stablecoins through 2030. The analysis finds that, even under high stablecoin growth assumptions, aggregate effects on the euro area financial system would likely remain manageable. The principal structural effect on banks is the conversion of stable, inexpensive retail deposits into more volatile and costly wholesale funding. Effects on securities markets, while meaningful in terms of demand reallocation toward short-term sovereign instruments, are likewise assessed as manageable. Stablecoin-specific financial stability risks, though real, are not fundamentally novel and are amenable to standard regulatory mitigation tools. Stablecoins are best understood as part of the continuing evolution of monetary architecture, the significance of which will depend on the efficiency gains they ultimately deliver and the adequacy of the regulatory environment. While financial stability and monetary architecture risks appear manageable, other important societal issues, such as their significant use for illicit payments and regulatory arbitrage, deserve more scrutiny.

Key words: stablecoins, flow of funds, financial intermediation, financial stability, financial regulation, monetary architecture, dollarisation, international role of the euro, bank funding, digital money.

JEL Codes: E42, E44, G28, O33

[1] U. Bindseil and G. Mondini Frankfurt School of Finance & Management; R. Meuwissen and M. Rohár: European Stability Mechanism, Luxemburg. Opinions expressed are those of the authors and not necessarily of their employers or institutional affiliations. We would like to thank Andreas Hertkorn (ECB), Elizabeth Holmquist, Matthew Hoops, and Ioana Neamtu (Fed) for their comments on our use of sectoral accounts statistics. We would also like to thank the participants of a NY Fed / University of Chicago Booth School Workshop on "The Future of Market Liquidity and Functioning" held on 9 July 2026 in New York for their comments, and in particular Eric Budish and Enrico Perotti. We are also grateful to Karol Siskind (ESM) for his careful editorial comments and suggestions, which substantially improved the clarity and presentation of the paper. Any remaining mistakes are ours.

Contents

1. Introduction *3*

2. The nature and use cases of stablecoins *5*

2.1 Defining "stablecoins" 5

2.2 Typology of stablecoins 8

2.3 The moneyness of stablecoins and the singleness of money 16

2.4 Stablecoins and related financial instruments 17

2.5 Use cases and adoption scenarios 20

3. Market and financial stability impact *22*

3.1 Impact of stablecoins on financial markets and structure 22

3.2 Impact of stablecoins on financial and monetary stability 24

4. Flow-of-funds modelling of stablecoins *32*

4.1 Why flow-of-funds? 32

4.2 One-country model 33

4.3 Three-country model 34

4.4 Sectoral account data for US and euro area for an empirical model 38

4.4.1 United States 38

4.4.2 Euro area 40

4.4.3 Rest-of-world and cross-country exposures 42

5. Scenario assumptions and output *46*

5.1 Scenario assumptions 46

5.2 Scenario output 51

6. Implications for euro area financial markets and stability *53*

6.1 Impact on key euro area financial metrics 53

6.2 Policy and regulatory implications 61

7. Conclusions *65*

Literature *69*

Annex 1: Further flow-of-funds analysis *73*

1. Introduction

While stablecoins have originated as a niche innovation within crypto-asset markets, they are now increasingly expected to develop into a widely used innovative instrument for payments, savings, and cross-border transactions, with the potential to reshape financial intermediation and market structure (Adrian et al. 2025; Shin 2025). Market projections suggest that their scale could expand substantially over the coming years, potentially by an order of magnitude that would raise more fundamental questions regarding their implications for financial markets, monetary systems, and financial stability (Citi 2025). At present, this development is asymmetric, with US dollar-denominated stablecoins dominating global circulation, while euro-denominated stablecoin circulation remains limited. This asymmetry raises concerns in Europe (and elsewhere), relating to monetary sovereignty, financial structure, and the international role of the euro (Aerts, Lambert, and Reinhold, 2025; ESRB, 2025a).

Despite growing academic and policy attention to the longer-term implications of future stablecoin usage, and a variety of publications on stablecoins, much of the empirical literature has focused on short-term effects, such as the impact of stablecoin flows on asset prices and yields over the same or subsequent days (Ahmed and Aldasoro 2025; Ante, Saggu, and Fiedler 2025), while largely neglecting the medium- to long-term structural implications of a substantially larger stablecoin sector. At the same time, policy-oriented contributions have emphasized financial stability risks, including run dynamics, reserve asset liquidation, and spillovers to traditional financial markets (ECB Crypto-Asset Task Force 2020; Adrian et al. 2025; Gross and Senner 2026). However, these strands of literature are rarely integrated into an analytical framework that simultaneously captures balance sheet adjustments, price effects, and systemic risk. Moreover, the predominance of US dollar stablecoins has led to limited attention to alternative scenarios, including the possibility of significant issuance and adoption of euro-denominated stablecoins. This paper seeks to address these gaps.

The core contribution of the paper is a medium- to long-term scenario analysis of stablecoin adoption, grounded in a flow-of-funds framework. Stablecoins are understood as balance sheet instruments embedded in the financial system, whose expansion necessarily implies corresponding adjustments across sectors and instruments. By embedding stablecoins into a consistent system of financial accounts, the analysis traces how issuance and reserve accumulation affect the balance sheets of households, banks, non-bank financial institutions, and the public sector. This approach allows for a structured assessment of how stablecoin growth reshapes funding structures, asset demand, and cross-sectoral linkages, complementing existing literature that focuses primarily on partial equilibrium effects.

This analysis calibrates a three-country model with hierarchical cross-border circulation of stablecoins using 2025 sectoral accounts data, projects the resulting balance sheets five years ahead, and incorporates assumptions about stablecoin growth. Building on this framework, the paper develops a set of forward-looking scenarios in which stablecoins reach substantial scale. These scenarios vary along key dimensions, including the overall size of stablecoin markets, their currency denomination, the geographical distribution of their circulation, and the composition of their reserve assets. Attention is paid to asymmetric configurations, such as the widespread use of US dollar stablecoins outside the United States, which may contribute to digital dollarisation and affect international capital flows (FSB 2024; Graf von Luckner, Koepke, and Sgherri 2024).

At the same time, alternative scenarios are considered in which euro-denominated stablecoins achieve significant adoption, both within the euro area and internationally. The analysis examines

the implications of such scenarios along three main dimensions. First, it assesses the impact on financial markets and financial structure, including effects on relative asset yields, demand for safe assets, and the pricing of short-term instruments (Ahmed and Rebucci 2024; Barthélemy, Gardin, and Nguyen 2026). Second, it evaluates the consequences for financial intermediation, in particular the potential substitution of bank deposits by stablecoins and the resulting effects on banks' funding models, liquidity ratios, and lending capacity (Coste 2024; Aldasoro et al. 2025; Altavilla et al. 2026). Third, it analyses financial stability risks, including both structural vulnerabilities and dynamic risks arising from large inflows into or outflows from stablecoins. These include run dynamics, fire-sale externalities, and increased sensitivity of financial markets to shifts in confidence (Gorton and Zhang 2023; Ma, Zeng, and Zhang 2025; Gross and Senner 2026).

Parts of the paper focus specifically on the euro area. It has been argued that the widespread use of foreign currency stablecoins in the euro area could weaken monetary policy transmission, complicate liquidity management, and raise concerns related to monetary sovereignty. On the other hand, a successful euro stablecoin ecosystem could support financial innovation, enhance the international role of the euro, and contribute to the demand for euro-denominated safe assets (Born et al. 2026). The paper also considers regulatory issues specific to the euro area, including the Markets in Crypto-Assets Regulation (MiCAR). In May 2026, the European Commission (2026) launched a targeted review of MiCAR with several questions relating to the regulation of electronic money tokens (EMTs). The paper revisits policy and regulatory considerations in light of the scenario analysis. It evaluates how existing regulatory frameworks interact with different possible configurations of the stablecoin ecosystem and discusses potential policy responses aimed at mitigating financial stability risks while fostering efficient and competitive market development. These include questions related to reserve requirements, access to central bank facilities, and the broader interaction between stablecoins and the banking system (CPMI 2023; FSB 2020).

The remainder of the paper is structured as follows. Section 2 revisits the nature and defining characteristics of stablecoins, including their legal and economic properties and main use cases. Section 3 reviews the literature on the impact of stablecoins on financial markets and financial stability. Section 4 introduces the flow-of-funds framework that underpins the scenario analysis. Section 5 presents the 2030 scenario assumptions and design. Section 6 revisits the possible longer-term implications of stablecoins on euro area financial markets and financial stability in the year 2030 based on the scenario analysis. Section 7 concludes that even under a "bullish" scenario of stablecoin issuance, the impact of stablecoins on global financial markets will likely be moderate in view of the other ongoing significant financial developments expected over the next five years (such as growing debt levels), and the general elasticity of securities supply and balance sheets of financial intermediaries in a medium-term perspective. Financial stability implications can be contained with effective regulation and if central banks do not exclude the future access of stablecoins to a conservatively designed lender of last resort facility. At the same time the paper recalls the still unaddressed risks of stablecoins in the field of illicit payments (Chainalysis, 2026; Financial Action Task Force, 2026) and regulatory arbitrage.

2. The nature and use cases of stablecoins

2.1 Defining "stablecoins"

The nature of stablecoins has been rendered somewhat opaque by their technological origins and the difficulty authorities have faced in translating grassroots vocabulary and aspirations of Decentralised Finance (DeFi) into the conceptual frameworks of monetary and financial systems. The term "stablecoin" emerged on online forums between 2011 and 2014, but without a settled meaning[2]. From 2014 onwards, the term came to be used more consistently and acquired a stable meaning, although neither the Tether (2014) nor the Libra (2019) White Paper used the term. In response to the Libra initiative, the Financial Stability Board (FSB) issued a consultative document in 2020 in which it provided official sector definitions that have influenced language and legislation until today: Digital assets were understood as "digital representation of value which can be used for payment or investment purposes". Crypto-assets were defined as "private digital assets that depend primarily on cryptography and distributed ledger or similar technology", and stablecoins were defined as "crypto-assets that aim to maintain a stable value relative to a specified asset, or a pool or basket of assets". While the FSB definition of "digital assets" is self-referential in that it explains the term using the word "digital", the subsequent definition of "crypto-assets" suggests that the FSB used "digital" to mean any form of electronic representation of value. This interpretation is inconsistent with the definition of "digital" in the Genius Act and with the standard use of the term in the crypto industry, where "digital" already implies reliance on distributed ledger technology (DLT). Moreover, the formulation "distributed ledger or similar technology" raises conceptual difficulties as "similar technology" is undefined.

Stablecoins (E-money tokens) according to MiCAR (2020-2023)

Legislative initiatives have broadly followed the FSB's approach. Article 3 (1), (2), (5), (7) of MiCAR defines the key terminology. Distributed ledger technology (DLT) is defined as "technology that enables the operation and use of distributed ledger", while a distributed ledger is an "information repository that keeps records of transactions and that is shared across, and synchronised between, a set of DLT network nodes using a consensus mechanism". Crypto assets are defined as a "digital representation of a value or of a right that is able to be transferred and stored electronically using distributed ledger technology or similar technology". Instead of using the term "stablecoin", MiCAR refers to electronic money tokens (EMTs), defined as a "type of crypto-asset that purports to maintain a stable value by referencing the value of one official currency". These definitions are partially circular, both internally and in relation to one another.[3]

The MiCAR definition of EMTs retains the FSB's vague definition of stablecoins as a category of crypto-assets, even though Recital 19 already states that "issuers of e-money tokens should ensure that holders of such tokens can exercise their right to redeem their tokens at any time and at par value against the currency referencing those tokens." Article 49 (4) further provides that "Upon request by a holder of an e-money token, the issuer of that e-money token shall redeem it,

[2] See e.g. Bindseil, Coste, Pantelopoulos (2024, 24).

[3] According to ISO704 (2022, 42) circularity occurs if "one concept is defined using a second concept, and if that second concept is defined using the designation or elements of the designation representing the first concept, the resulting definitions are said to be circular. Circular definitions, sometimes called tautological definitions, make it impossible to understand the concept and shall be avoided." Circularity can occur within a single definition or within a system of definitions. "A definition is circular within a system of definitions when two or more concepts are defined by means of each other."

at any time and at par value, by paying in funds, other than electronic money, the monetary value of the e-money token held to the holder of the e-money token." In light of these provisions, the definition of EMTs in Article 3(7) of MiCAR need not have relied on the imprecise formulation of "purporting to maintain a stable value".

By adopting the term "e-money token", MiCAR also builds on Directive 2009/110/EC, where "e-money" refers to electronic money issued by a non-bank payment services provider operating under a special license, with a narrow balance sheet, prohibited from granting credit, and required to hold highly liquid, short-term assets on the asset side. Nevertheless, neither the term "e-money" nor "token" resolves the linguistic concerns associated with the term "stablecoin." The term "e-money" is itself potentially misleading and insufficiently self-explanatory, since commercial and central banks also issue electronic forms of money.

Stablecoins according to US GENIUS Act

The US GENIUS Act of 2025 (Bill "Guiding and Establishing National Innovation for U.S. Stablecoins of 2025") specifies under Section 2 that a digital asset is "any digital representation of value that is recorded on a cryptographically secured distributed ledger", the latter being "technology in which data is shared across a network that creates a public digital ledger of verified transactions or information among network participants and cryptography is used to link the data to maintain the integrity of the public ledger and execute other functions". A payment stablecoin is "a digital asset that is, or is designed to be, used as a means of payment or settlement; and the issuer of which is obligated to convert, redeem, or repurchase for a fixed amount of monetary value."

Discussion

The term "stablecoin" presents s several conceptual challenges. First, the word "coin" may overemphasise the instrument's supposed bearer character.[4] Second, the qualifier "stable" is not sufficiently distinctive[5]. Third, the technological structure of the ledger database, including its validation mechanism, is generally irrelevant to the legal and economic nature of the asset it records and should therefore not determine its name.[6] If a stablecoin circulates on a *private* multi-asset programmable ledger platform, whereby users are accepted only after an identification procedure and demonstrating that they satisfy specified access criteria, it becomes quite obvious that the reliance on "DLT or similar technology" is not very relevant for the functionality and usage

[4] In practice, these instruments are registered and transferred within a system-of-accounts database. Although access through public DLT networks may give them certain features resembling bearer instruments, legally and economically they function as account-based claims rather than physical or purely bearer objects.

[5] Private money is expected to be stable insofar as it is redeemable into other forms of public or private money denominated in the national unit of account (the numéraire). This characteristic is shared by other forms of private money. Without such redeemability, an instrument would lack convertibility and would instead constitute an idiosyncratic payment or investment asset falling outside the "singleness of money" - a concept that is widely referenced but still evolving (Garratt and Shin, 2023; Bidder, 2025; Coste and Pantelopoulos, 2025; BIS, 2015). Both MiCAR and the GENIUS Act confirm this logic by requiring that stablecoins (designated as "e-money tokens" and "payment stablecoins," respectively) be redeemable and fungible forms of private money.

[6] A bond, for example, remains a bond regardless of whether ownership is evidenced by (i) a paper certificate, (ii) a handwritten registry, (iii) a centralised electronic ledger maintained by a central securities depository (CSD), or (iv) a distributed ledger or blockchain system. The recording technology does not redefine the asset itself. (Bindseil, Coste and Pantelopoulos, 2024).

of stablecoins on this platform. The growing realisation of this fact appears to be reflected in the changing emphasis across chapter 3 of the BIS Annual Economic Report (AER) of 2022, 2023 and 2025, each of which each addresses the future of money. Chapter 3 of the 2022 AER refers to "DLT" 38 times, while in 2023, only three such references are made (in the glossary). And finally, chapter 3 of the 2025 AER explicitly questions the relevance of DLT as defining element of tokenisation, and thereby also of tokenised forms of private money:

> *"At the heart of this vision is the concept of tokenisation, the process of recording claims on real or financial assets that exist on a traditional ledger onto a programmable platform. Tokenisation [...] enables the integration of messaging, reconciliation and asset transfer into a single, seamless operation. Its potential lies in its ability to knit together operations encompassing money and other assets that would reside on the same programmable platform. This could be made possible by a new type of financial market infrastructure – a "unified ledger" – which may or may not use distributed ledger technology (DLT)."*

At the core of stablecoins lies the "tokenisation" of a privately issued form of money, understood as its representation on a multi-asset programmable platform that enables atomic, straight-through processing (STP) of payment and settlement transactions. In the context of stablecoins, however, the term "tokenisation" may place undue emphasis on their prior existence on a traditional ledger, as both their representation and transferability are frequently native to the programmable platform itself. To qualify as money, stablecoins need to be redeemable into other forms of money, and ideally into the ultimate form of money – central bank money. To distinguish stablecoins from commercial bank deposit tokens, the definition of the former must include the transferability of stablecoins across the users of the platform, rather than limiting transfers to users who hold deposits with the entity issuing the stablecoins. Whitelisting may restrict this, but to preserve the nature of a private money token as a stablecoin (and not a commercial bank money token), the whitelisting must not be equivalent to a limiting holder to the depositors of the issuing institution. On a permissioned platform, all participants authorised to access the platform would therefore be eligible to hold the stablecoin.

Based on the discussion above, an appropriate definition of a "stablecoin" would be:

> *"Stablecoins are privately issued electronic monetary instruments represented on a multi-asset programmable ledger and transferable to parties with access to that ledger beyond those maintaining a direct contractual deposit relationship with the issuer. As monetary instruments, stablecoins must be redeemable at par into central bank money."*

Recently, public entities have also issued money tokens for circulation in public DLT networks, redeemable at par, such as the Frontier Stable Token issued by the State of Wyoming. If such instruments are to be included within the definition of stablecoins, the definition above could be modified by substituting "private" with "non-central bank". If the term "stablecoin" is to be avoided because of its linguistic flaws, a term such as "private electronic money token" could be used. Tokenised commercial bank deposits could be classified as a specific case of stablecoins, characterised by whitelisting that restricts access to existing depositors of the issuing bank.

2.2 Typology of stablecoins

A. Legal/institutional status of SC issuer

The issuers of the two by far largest global stablecoins, USDT and USDC, are non-bank financial entities not affiliated to a banking group. However, according to MiCAR and the GENIUS Act, banks can also issue stablecoins, either directly or indirectly. Recital 19 of MiCAR refers to "*an obligation for e-money tokens to be issued either by a credit institution [...] or by an electronic money institution*." Therefore, there is no need under MiCAR for a bank to establish a separate subsidiary for issuing a stablecoin. Indeed, according to the MiCAR White Paper[7] of ODDO BHF EURO STABLECOIN (EUROD), the bank ODDO BHF SCA is the direct issuer of the token. The issuer is not a newly established entity, but "*a family-owned business created in 1849, spanning five generations of stockbrokers*."

Banking Circle S.A. issues in Luxembourg a MiCAR compliant EMT called Eurite Euro Token (EURI), an ERC-20 token on the Ethereum Blockchain "backed 1:1 by cash in Euros", and redeemable at no fee. While this stablecoin is directly bank-issued, client funds would be segregated (unlike the above-described case of EUROD): "*By segregating funds in another account, separate from Banking Circle's own assets, Banking Circle creates a legal structure that institutional clients can actually trust. Client funds remain segregated from the bank's balance sheet and protected from any potential issuer distress*."[8]

Other European banks, such as Société Générale, have instead decided to create a fully owned non-bank subsidiary, SG Forge, which issues EUR CoinVertible (EURCV). According to its White Paper[9], "SG-FORGE is a fully integrated and regulated subsidiary of the European bank Société Générale, incorporated in France […]" SG-FORGE is a licensed investment firm under European MiFID regulation.[10] Similarly, Qivalis[11] will be an e-money institution fully owned by a consortium of European banks which intends to issue euro-denominated stablecoins. The common ownership by banks would imply that their "*collective credibility anchors Qivalis as the neutral cornerstone of a global digital infrastructure*". Other MiCAR regulated stablecoins, such as Circle's EURSC (Paris), Malta-based EURS issued by the e-money institution STASIS, and Iceland-based EURe issued by the e-money institution Monerium, are not bank-owned.

Under the **GENIUS Act**, only a "Permitted Payment Stablecoin Issuer" (PPSI) may issue a payment stablecoin[12]. The GENIUS Act however allows FDIC-supervised banks to issue payment stablecoins through a PPSI subsidiary and to engage in related activities. Such a bank seeking to issue payment stablecoins through a PPSI subsidiary is required to apply to the FDIC for the subsidiary to be approved as a permitted payment stablecoin issuer. "The GENIUS Act requires

---

[7] https://www.oddo-bhf.com/app/uploads/sites/2/2026/01/2026-01-27-oddo-bhf-eurod-emt-whitepaper-mica.pdf?utm_source=chatgpt.com

[8] https://www.bankingcircle.com/wp-content/uploads/2024/12/Eurite-Bankruptcy-Remote.pdf

[9] https://www.sgforge.com/wp-content/uploads/2023/04/SGF_Coinvertible_White-Paper-v1.0.pdf

[10] "Supervised by the Autorité de contrôle prudentiel et de résolution (ACPR) and controlled by the Autorité des marchés financiers (AMF)… For Digital Asset activities, SG-FORGE is registered as Digital asset service provider (Prestataire de services sur actifs numériques or PSAN) in France with the AMF on the assent of the ACPR".

[11] https://qivalis.eu

[12] GENIUS Act 139 STAT. 422: "Permitted payment stablecoin issuer. - The term "permitted payment stablecoin issuer" means a person formed in the United States that is—(A) a subsidiary of an insured depository institution that has been approved to issue payment stablecoins under section 5; (B) a Federal qualified payment stablecoin issuer; or (C) a State qualified payment stablecoin issuer."

the FDIC to receive and review applications and to issue implementing regulations establishing the application process. The proposed rule would implement the requirements of section 5 of the GENIUS Act with respect to evaluating applications based on the statutory factors, processing applications within specified timeframes, and establishing an appeal process for denied applications." (FDIC Press release, 16/12/2025).

What are the comparative advantages and disadvantages of banks versus non-banks in issuing stablecoins? Direct or indirect issuance by a bank offers the advantage of providing direct or indirect access to central bank facilities, including deposit funds and to central bank credit. Banking regulation is extensive and may enhance the confidence of stablecoin holders. In addition, direct issuance by a bank under its own brand, combined with the willingness to incur associated regulatory costs may serve as a credible signal of commitment, credibility, and long term-viability. On the other hand, banks may also face larger reputational or financial risk than a separately incorporated entity issuing a stablecoin. This is particularly the case if a stablecoin is found to have been used for illicit activities and that the issuer is perceived to have failed to take adequate preventive measures. Moreover, existing banking regulation may not be well-suited to stablecoin issuance, which may lead to regulatory inefficiencies in practice.[13]

Table 2-1: Relative advantages of three stablecoin issuer options, with respect to the breadth of the balance sheet of the issuer and its institutional format.

<table>
<tr><th>SC issuer</th><th colspan="2">Advantages</th></tr>
<tr><td>(1) Existing "broad" bank (ODDO-BHF)</td><td rowspan="2">Direct or indirect central bank access (to CB credit and to CB deposits remunerated at the rate obtained by banks); Trust created by reputational incentives</td><td>No set-up cost of new entity; rating; client base; synergies</td></tr>
<tr><td>(2) New, "narrow" non-bank subsidiary within banking group (SG-Forge, Qivalis)</td><td rowspan="2">Specialisation, simplicity, transparency</td></tr>
<tr><td>(3) Non-bank, "narrow" balance sheet (USDC, Tether, EURSC, Monerium)</td><td>More agile; avoids any reputational and legal risk for parent banks; No indirect burden relating to unsuitable banking regulation</td></tr>
</table>

B. Balance sheet: Narrow vs. broad

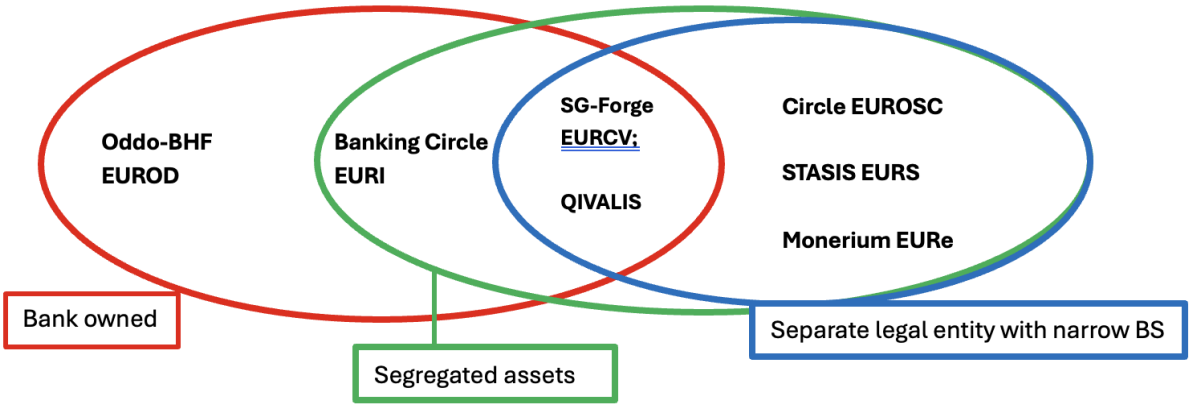
A narrow balance sheet of an issuer of monetary liabilities is one which focuses exclusively on issuance and holding highly liquid assets to match the maturity profile of liabilities. All the major stablecoins today are issued through entities with narrow balance sheets. Under the GENIUS Act, the requirement that the issuer be a separate legal entity (a PPSI), in conjunction with the reserve requirement, implies a narrow and separate balance sheet structure. By contrast, MiCAR also allows issuance by institutions with broader balance sheets.

[13] See also Sha and Nariyanuri (2026) for a discussion of current bank initiatives to integrate stablecoin issuance and the comparative advantages and disadvantages of banks in this context compared to independent entities.

One example of a bank issuing under a narrow balance sheet subsidiary construct is Société Générale: the SG Forge EUR CoinVertible White Paper (p. 13) explains that the "*full segregation of the assets backing the value of the stablecoin from SG-FORGE's and the fiduciary's own assets and activities and from the fiduciary's own assets and activities, so that they are only dedicated to such purpose, and they are bankruptcy remote in the event of an insolvency of SG-FORGE; - A direct recourse of the EUR CoinVertible holders on the collateral held through a fiduciary structure.*" By contrast, as mentioned above, the issuer of EUROD is not a newly established entity, but the ODDO-BHF bank itself. The EUROD White Paper also clarifies that the proceeds from issuing stablecoins would not be segregated: "The funds received in consideration for the issuance of EUROD are recorded on ODDO BHF's balance sheet and form part of the Bank's general assets." Although covered by MiCAR, this approach seems to be somewhat in contradiction to the philosophy of e-money and the general approach taken in MiCAR and the GENIUS Act to define in essence stablecoins as e-money tokens, i.e. as narrow balance sheet constructs.

We summarise the different types of stablecoins determined by the institutional status of the issuer and the balance sheet type in the figure below and illustrate it with examples from MiCAR compliant European stablecoin projects. The GENIUS-Act compliant stablecoins all fall under the category "separate legal entity with narrow balance sheet".

Figure 2-1: Banks and non-banks as issuers of stablecoins under MiCAR - examples



C. Types of ledgers on which stablecoins are issued: public versus private

Stablecoins may be issued for circulation on public DLT networks (in line with the original philosophy of DeFi), exclusively on private (permissioned) platforms, or on both. It is also relevant what policies the stablecoin issuer adopts with regard to bridges between DLT networks. These may include a liberal policy in which any party is allowed to build a bridge, or a conservative one in which such bridges are prohibited and the stablecoin issuer strictly controls the "minting" and "burning" of coins separately on each DLT(s) on which the stablecoin circulates. As stablecoins have rather conventional balance sheets (at least the successful ones), and their distinctive feature lies in the programmable multi-asset ledger on which ownership and transfers of ownership are registered, the choice of the DLT network constitutes an essential element for their classification. This is particularly important given the fundamental differences between programmable platforms (private vs. public DLT networks). Some authors, like Malekan (2026), have questioned the added value of DLT in private (or permissioned) networks. In his view, permissioned

networks, where validation is controlled by a central authority, do not qualify as true blockchains. Unlike permissionless systems such as Bitcoin or Ethereum, they lack decentralisation and independent consensus. According to Malekan, hashing in blockchains would ensure a collectively verified transaction history, but in permissioned systems it provides no real immutability since central authorities could alter records. As a result, such systems do not offer "endogenous property rights", since asset ownership depends on central control and thereby eliminating key blockchain features. Governance in permissioned networks remains hierarchical and subject to regulatory or institutional intervention. Claims of privacy or immutability rely on trust rather than cryptographic guarantees. Regulatory pressures would further reinforce central control, often requiring to identity verification and censorship capabilities. Overall, permissioned networks are better understood as traditional databases with added complexity, rather than as true blockchains.

Other authors have continued to question the usefulness of blockchain technology in a broader way. Critics such as Reed Stark (2026, section III) are aligned with Malekan when pointing to the various failed attempts to use blockchain technology in private platforms: "After almost two decades of promises, blockchain — crypto's underlying technology — has produced exactly one functioning use case, which is powering cryptocurrency itself. IBM and Maersk spent years and hundreds of millions of dollars on TradeLens, their celebrated blockchain shipping platform. They shut it down. Microsoft launched Azure Blockchain as a Service. They shut it down. The Australian Securities Exchange bet its entire clearing system on blockchain. They abandoned it after hundreds of millions wasted. Over 1500 engineers, scientists and programmers from Amazon, Apple, Google, Microsoft, Oracle, MIT, Stanford and Cornell signed an open letter to Congress concluding that blockchain is '*poorly suited for just about every purpose currently touted as a present or potential source of public benefit*.' … Amazon, Apple, Google, Microsoft and Oracle have collectively spent hundreds of billions of dollars figuring out how to store data and process transactions. If blockchain were genuinely revolutionary, these companies would be developing it aggressively. Instead, blockchain is essentially absent from their strategic priorities, their revenue streams, and even their casual conversation. For these companies Blockchain is gone by way of NFTs, the Metaverse and all of the other nonsensical blockchain-related absurdity."

On public blockchains, Reed Stark (2026, section IV and V) is equally critical, highlighting its massive use for illicit purposes (Chainalysis, 2026; Financial Action Task Force, 2026) and for regulatory arbitrage. Farrell (2026), like others before, has also expressed doubt that public blockchain architecture solves an important problem in payments: "Blockchain architecture was designed to solve a specific problem: how do you transfer value between parties who share no trusted institutional infrastructure? The distributed ledger is the trust mechanism. It replaces the intermediary when no intermediary exists or when existing intermediaries cannot be relied upon. That is a legitimate engineering solution [….] But the overwhelming majority of payments that occur every day do not have that problem. […] A trusted intermediary already exists. The bank is the trust infrastructure. It has been for centuries. It is regulated, supervised, capitalized, and accountable. Placing these transactions on a blockchain does not solve a trust problem. It adds a consensus mechanism on top of an institution that already provides consensus, introducing latency, complexity, and governance overhead that the transaction never required. The parties to the transaction are addresses, not relationships. The payment is an event on a ledger, not a confirmed agreement between known counterparties."

However, public blockchains, by disintermediating banks and other financial intermediaries and infrastructures, could generate efficiency gains, and stablecoins could play an important role in this context. Private multi-asset programmable platforms could also host stablecoins and be useful, even though they do not need to rely on DLT or blockchain (the official definitions of "stablecoins" would thus need to be revisited). Budish and Sunderam (2026) review what value added blockchain may have for traditional finance and conclude that "*the potential gains are large if and only if there is a long tail of relatively low surplus, relatively infrequent transactions for which traditional forms of trust are insufficient*". Regarding stablecoins, gains "*for legal actors [...] are most likely to come from stablecoins putting pressure on intermediation rents or inefficient regulation, or from the programmability of stablecoins facilitating a large number of small transactions that otherwise would not have been trustworthy*." With respect to the argument about "putting pressure on inefficient regulation" one may argue that in a democratic system, the first best solution should be to amend inefficient regulation, rather than allow regulatory arbitrage. Regarding facilitating "a large number of small transactions" the question arises if genuine level 1 blockchains are efficient enough to support small transactions, or to what extent the principles of DeFi need to be diluted for achieving transactional efficiency. As Budish (2025) notes, "*as expensive as traditional finance is, it is a bargain relative to the cost of Nakamoto-style trust at scale. The core problem is that Nakamoto trust relies on decentralized, anonymous majority voting*".

D. Whitelisting

Whitelisting is usually defined as a risk control measure in which only pre-approved devices, applications, or websites are granted access to specific systems or networks. In the case of stablecoins, the term refers to pre-approval requirements for stablecoin holders, regardless of whether they circulate on public or private DLT networks. The largest stablecoins generally do not apply whitelisting, and a core original principle of DeFi - and consequently of early stablecoins - was open access via cryptography to "public" ledgers. By contrast, SG Forge CoinVertible initially applied a whitelisting approach: "In order for stablecoin holders to benefit from the legally binding structure we put in place and to be protected by it, they all need to be known and onboarded by SG-FORGE at first. Therefore, only addresses that are whitelisted by SG-FORGE will be eligible to receive our stablecoins. Such whitelisting process based on the CAST Framework means that SG-FORGE has performed compliance controls (KYC, AML-CFT, sanctions and embargoes) according to Société Générale Group policies and has duly onboarded the owner of such address." In practice, whitelisting can be implemented in a way that provides indirect access to multiple users. For example, by whitelisting large wallet providers and exchanges (Coinbase, Binance, etc.), the clients of these firms can also hold the stablecoins via the omnibus accounts maintained by these firms on the base ledger.

E. Currency

Since stablecoins are usually understood as denominated in an official currency and as promising convertibility into that currency, they can be classified according to their denomination. Several structural and functional explanations have been provided for the predominance of USD denominated stablecoins. So far, the primary use case of stablecoins has been as on- and off-ramps for crypto speculation. Because most major crypto trading pairs historically have been quoted against the US dollar, dollar-denominated stablecoins became the natural settlement asset within exchanges and decentralised finance protocols. This path dependence has been reinforced by network effects: liquidity concentrates where other liquidity already exists. Beyond the crypto-native sphere, the global dominance of the dollar as an invoicing currency, reserve asset, and safe

collateral base further strengthens this equilibrium. The depth and perceived safety of US Treasury markets facilitate reserve management for stablecoins, while dollarisation motives in high-inflation or capital-controlled economies increase demand for digital dollar claims.

F. Jurisdiction of issue

The place of issuance of stablecoins often diverges from the jurisdiction of the currency in which they are denominated, which may relate to regulatory arbitrage. Most major stablecoins are denominated in US dollars, yet their issuers are partially incorporated in jurisdictions that are not the United States, such as offshore financial centres or countries with bespoke crypto-asset regimes. The denomination is typically chosen to maximise demand and liquidity, explaining the dominance of the dollar due to its global monetary role. The place of issuance is selected to optimise regulatory flexibility, capital requirements, disclosure obligations, and access to banking infrastructure. At the same time, choosing a jurisdiction associated with strict rules and supervision may also signal credibility and reliability. If the stablecoin is widely used abroad, regulatory authorities in such jurisdictions may assert extraterritorial oversight or impose access constraints, thereby influencing issuer location decisions ex ante. Under MiCAR, the possibility of multi-issuance, where multiple legal entities issue the same stablecoin across jurisdictions, has recently raised concerns.[14] While such arrangements were designed to combine global fungibility and compliance with distinct domestic regulatory frameworks, they fragment reserve management and complicate accountability. Divergent regimes with multi-issuance tend to create inconsistencies in enforcement and redemption rights, especially in stress scenarios. They may also weaken the clarity of the legal claim of holders against a specific balance sheet, which can negatively affect confidence. Moreover, multi-issuance increases coordination challenges among regulators and may amplify contagion risks if one issuing entity faces distress. A better alternative to multi-issuance may thus be to allow domestic circulation of foreign stablecoins that satisfy sufficiently equivalent, although not necessarily identical, regulatory requirements.

G. Applicable regulatory framework

An issuer may decide to issue a token redeemable into money without claiming that it complies with a certain type of stablecoin defined and regulated under a specific law, even if the issuer operates in a jurisdiction where such a law exists. This appears to be the case, for example, for FRNT (Frontier Stable Token) a "stable token" issued by the State of Wyoming. This would be "a virtual currency representative of and redeemable for one United States dollar held in trust by the state of Wyoming …. FRNT is designed to provide secure, transparent, and efficient digital transactions for individuals, businesses, and institutions - worldwide."[15] FRNT is thus not presented as a "payment stablecoin" falling under the GENIUS Act, although the redeemability feature makes it quite similar, from a user's perspective to a payment stablecoin. FRNT shows that the existence of certain regulations, such as MiCAR and the GENIUS Act, does not prevent the issuance and circulation of other stablecoin-like crypto-assets that fall outside their scope. Such assets may circulate on non-hosted wallets or through wallets offered by offshore service providers. Indeed, regulation in many jurisdictions (including the US and the EU) has been liberal towards crypto assets in general, like for example Bitcoin, hardly constraining them in any way. Therefore, a broad permissive approach appears to prevail in terms of crypto-assets outside the well-defined specific case of (payment) stablecoins. Further practice will determine how

[14] https://data.consilium.europa.eu/doc/document/WK-4742-2025-COR-1/en/pdf
[15] https://stabletoken.wyo.gov/pages/FRNT

authorities handle the tension between such a lenient approach and well-defined stablecoin regulatory regimes. In addition, as long as there are public DLT networks with pseudonymity and non-hosted wallets, any digital asset can be held on-chain. For example, EU residents are not prohibited from holding a non-MiCAR compliant stablecoin on chain. Yet, only EU licensed service providers are prohibited from distributing such stablecoins to EU residents, at least if they are labelled as "EMTs". An EU resident can also hold a non-MiCAR compliant stablecoin via e.g. an exchange or wallet-provider in a foreign jurisdiction, if the foreign laws do not prohibit the provider from serving non-residents. Under MiCAR, any crypto-asset service provider that offers services in the EU must be authorised in an EU Member State. If a foreign jurisdiction actively markets to, targets, or solicits EU residents, it would normally fall within the scope of MiCAR and require EU authorisation. However, MiCAR does not criminalise the EU customer's use of a foreign platform per se. A non-EU exchange may still be used by an EU resident if the relationship qualifies as so-called reverse solicitation, meaning the EU client approaches the platform entirely on their own initiative. This approach is consistent with EU financial services legislation, including MiFID II.[16]

H. Redemption mechanism

Regulatory redemption obligations for stablecoins have classificatory, prudential and protective objectives:

- **Classificatory:** they establish stablecoins as money rather than investment products. A core attribute of money is on-demand face-value convertibility, ensuring absolute liquidity. The singleness of money is based on at-par convertibility of one form of money into another, and ideally of all forms of private money directly into central bank money. Neither the GENIUS Act nor MiCAR explicitly requires redemption into central bank money, implying that convertibility of stablecoins into commercial bank money is regarded as sufficient.
- **Prudential:** they anchor the price of stablecoins, impose balance-sheet discipline on issuers, and thereby help mitigate run dynamics.
- **Protective:** they shield holders against unexpected liquidation losses.

Recital 67 of MiCAR provides that "*Holders of e-money tokens should be provided with a claim against the issuer of the e-money tokens. Holders of e-money tokens should always be granted a right of redemption at par value for funds denominated in the official currency that the e-money token is referencing*." (see also Articles 48-50). The GENIUS Act (Section 2, 22 (A) (ii) (I)) provides that the issuer "*is obligated to convert, redeem, or repurchase for a fixed amount of monetary value, not*

[16] Under MiCAR, the territorial scope is defined in Article 3, which makes clear that the framework applies to CASPs providing services "in the Union," including when a third-country firm targets EU clients. Article 24 establishes the core requirement: CASPs must be authorised in a Member State to provide crypto-asset services within the Union. Furthermore, Article 25 regulates the passporting regime, under which only EU-authorised CASPs may provide services across Member States, thereby excluding non-EU firms from benefiting from internal market access absent specific cooperation or equivalence arrangements. Although MiCAR does not contain an explicit reverse-solicitation clause, the concept is well established in EU financial law through Article 42 of Directive 2014/65/EU (MiFID II), which permits third-country firms to provide services at the exclusive initiative of the client, provided there is no active marketing or targeting of EU residents. In practice, supervisory interpretation of MiCAR's territorial scope, supported by ESMA guidance, draws on this MiFID II logic, meaning that non-EU exchanges may only lawfully serve EU residents without authorisation where the relationship genuinely results from unsolicited, client-initiated contact rather than targeted cross-border provision.

including a digital asset denominated in a fixed amount of monetary value," and Section 4. (B) states that the issuer must "*publicly disclose the issuer's redemption policy, which shall— (i) establish clear and conspicuous procedures for timely redemption of outstanding payment stablecoins, … and (ii) publicly, clearly, and conspicuously disclose in plain language all fees associated with purchasing or redeeming the payment stablecoins*".

The GENIUS Act itself does not specify what "timely" redemption means but the Office of the Comptroller of the Currency (OCC) defines (12 C.F.R. Article 15.12(b))[17] that "timely redemption may not exceed two business days following the date of the requested redemption." This is consistent with the approach adopted by the New York Department of Financial Services, in its stablecoin guidance of 8 June 2022.[18] This raises the question if US payment stablecoins are actually "readily available money", which would normally entail an immediate redemption obligation into other forms of money, and ideally into central bank money.

Moreover, the OCC proposal 12 C.F.R. Article 15.12(c) states that: "If a permitted payment stablecoin issuer faces redemption demands in excess of 10 percent of its outstanding issuance value in a single 24-hour period, the period for timely redemption … is immediately extended to seven calendar days" and this "applies to all redemption requests that are outstanding at the time the 10 percent threshold is met as well as any subsequent redemption requests."

I. Remuneration

Article 50(1) of MiCAR states that issuers of EMTs "*shall not grant interest in relation to e-money tokens*". Moreover, Article 50(2) provides that Crypto-Asset Service Providers (CASPs) "*shall not grant interest when providing crypto-asset services related to e-money tokens*." MiCAR therefore goes beyond regulating issuers alone: it also directly prohibits CASPs from paying interest on these stablecoins. Article 50(3) contains a very broad definition of "interest": Any remuneration or other benefit related to the length of time the token is held "shall be treated as interest". This includes: "net compensation or discounts" with an "effect equivalent to that of interest", received directly from the issuer or from third parties and either directly associated with the ART/EMT or arising from the remuneration or pricing of other products. Recital 68 (EMTs) explains the policy goal: to prevent these tokens from being used as a store of value by forbidding interest granted by both issuers and CASPs. The relevant GENIUS Act provision is Section 4(a)(11) – Prohibition on interest: "*No permitted payment stablecoin issuer or foreign payment stablecoin issuer shall pay the holder of any payment stablecoin any form of interest or yield […] solely in connection with the holding, use, or retention of such payment stablecoin*."

Unlike MiCAR, the text does not expressly extend this prohibition to crypto-asset service providers. Moreover, some offshore regimes may permit the remuneration of stablecoins. However, in the field of public DLT networks and crypto-assets, as noted beforehand, it is not possible to prevent the issuance and holding of tokens that are equivalent to remunerated stablecoins. Bindseil (2025) argues that prohibiting the remuneration of stablecoins is not a good tool for preventing flows from bank deposits into stablecoins, or more generally to achieve financial stability. Since interest rates fluctuate independently of this policy objective, its effects

[17] Department of the Treasury; Office of the Comptroller of the Currency; 12 CFR Parts 3, 6, 8, 15, and 19, Implementing the Guiding and Establishing National Innovation for U.S. Stablecoins Act for the Issuance of Stablecoins by Entities Subject to the Jurisdiction of the Office of the Comptroller of the Currency. P. 10271, p. 10291. https://www.govinfo.gov/content/pkg/FR-2026-03-02/pdf/2026-04089.pdf
[18] https://www.dfs.ny.gov/industry_guidance/industry_letters/il20220608_issuance_stablecoins

also fluctuate, with potentially large in- and outflows between remuneration-constrained (stablecoins) and unconstrained (e.g. money market funds, bank deposits) assets. Barbon et al (2025, 2) suggest that, in September 2025, USD 86 billion out of a total of USD 290 billion stablecoin supply would have been remunerated via lending protocols. The share of effectively remunerated stablecoins would thus be around 30%, while 70% would be unremunerated. The direct remuneration of stablecoins by the issuer via smart contracts would not have played a material role so far, although technically, this would be feasible. For example, USDY (US Dollar Yield Token) "*is a tokenized note secured by short-term US Treasuries and bank demand deposits. USDY holders receive yield generated from the underlying assets in the form of increasing redemption value (accumulating token). USDY contract is an upgradeable [...] ERC-20 token*". By the same issuer, mUSD "*is the rebasing version of USDY, maintaining a consistent peg to $1. Interest is distributed via new token units. Users can swap freely between USDY and mUSD*."[19]

J. Backing by reserves

Most viable and relevant stablecoins today are backed by liquid reserves, while in the past "algorithmic stablecoins," such as Terra and Luna, had also reached significant market value.[20] Algorithmic stablecoins continue to exist, although many now claim to be backed in various ways: For example, DAI is based on several eligible cryptocurrencies as collateral. Stablecoins backed by more conventional reserve assets can be subdivided in two categories: those backed exclusively by cash and fixed income assets (as required by the GENIUS Act and MiCAR), and those whose reserves also include other assets, like USDT, which is partially backed by gold and Bitcoin.

2.3 The moneyness of stablecoins and the singleness of money

Money is usually defined by its three functions: as a medium of exchange (means of payment), a unit of account, and a store of value. We consider briefly each of the three from the perspective of assessing whether an asset qualifies as money:

- **Medium of exchange and redeemability at par** (or means of payment): money should be widely and directly accepted "at par" in exchange for goods and services, i.e. without the need to liquidate it first, or without having to convert it another asset before use. At a minimum, this pre-exchange should be always possible without a loss, i.e. without liquidity or market risk and without delay. Immediate convertibility of private forms of money into central bank money - the ultimate anchor and legal tender - is generally regarded as key to preserving the singleness of money.
- **Store of value**: it should be possible to decide how much to hold of a monetary asset, without legal or practical constraints that undermine its effectiveness as a store of value. This does not imply that money is necessarily free of custody risk and that holders need not consider how much to hold of it in a particular instrument: both physical money and electronically stored money can be destroyed or stolen. Moreover, private money may lose its value through default of the issuer (protection against issuer default is not a defining characteristic of money).
- **Unit of account**: Money should be denominated in the predominant "numéraire" (unit of account) on which the economy relies. However, "dollarisation" shows that a foreign

[19] https://docs.ondo.finance/developer-guides/mantle-integration-guidelines?utm_source=chatgpt.com
[20] https://corpgov.law.harvard.edu/2023/05/22/anatomy-of-a-run-the-terra-luna-crash/

currency and thus also a foreign numéraire may be used domestically. The choice of the unit of account is pervasive and goes beyond the role of money as store of value and means of exchange, as it also defines legally the accounting treatment of changes in relative prices. For a stablecoin to be money, it needs to be defined in terms of one official currency, and the redemption promise needs to be anchored to that currency.

Non-remuneration should not be considered as a necessary criterion for money. For example, commercial bank money can be remunerated, although in many countries remuneration rates are low and do not follow short-term capital market rates closely.

Relevance for monetary policy transmission and/or the current statistical treatment by central banks should also not be a decisive criterion for defining whether an asset is money or not. For example, banknotes, wholesale central bank money, and the various components of monetary aggregates have very different properties from a monetary policy perspective. A 12-month term deposit would be classified as part of the monetary aggregate of M2, although it is obviously not a means of payment. In contrast, the classification of e-money tokens in monetary and financial statistics appears to depend on institutional factors and is likely to still evolve. E-money institutions issuing e-money tokens do not grant credit on their own account using deposit-like funding, and in this sense they fail the intermediation criterion required for monetary financial institution (MFI) classification. Only sight deposits issued by MFIs appear to be eligible to be included in M1. This would, however, also imply that the stablecoins issued by BHF-Oddo qualify for M1.

2.4 Stablecoins and related financial instruments

Financial instruments are often treated as clearly defined and mutually distinct. In practice, however, they frequently exist in hybrid and evolving forms, creating a continuum rather than a set of discrete categories. This observation applies equally to stablecoins. Recognising this fluidity and examining how changes in their design and parameters can gradually shift stablecoins towards other financial instruments, helps clarify their nature and conceptual boundaries. It also highlights the degree to which stablecoins may substitute for related instruments, and vice versa, which is important for assessing their implications for financial stability and the functioning of financial markets. The following sections develop this perspective for four financial instruments related to stablecoins: money market funds, tokenised central bank money, e-money, and tokenised deposits.

A. (Tokenised) Money Market Funds

Fixed Net Asset Value (NAV) government money market funds (MMFs), that is MMFs which hold only government-related liquid assets (such as T-Bills and repos) and that always have a price of one, appear close to stablecoins holding T-Bills and repos and promising redeemability at par. The differences between the two vehicles appear on the liability side: (i) remuneration, (ii) redeemability at par. MMFs, which are usually considered investment vehicles, distribute a yield to the holders of their shares and specifically for fixed NAV MMFs, the yield is distributed by giving additional shares to holders therefore maintaining the price of one. On the other hand, stablecoin issuers do not directly remunerate the holders of their tokens (either because of regulation or because of their choice).

Moreover, while both constant NAV money market funds and MiCAR-regulated e-money tokens provide investors with a direct claim and redemption rights at par, the robustness of these rights differs. Money market funds may, under certain circumstances, be subject to liquidity-management tools such as redemption gates, liquidity fees, or temporary suspensions of redemptions in periods of market stress. By contrast, MiCAR grants holders of e-money tokens an unconditional right of redemption at par vis-à-vis the issuer, reflecting the objective that such instruments remain continuously convertible into the referenced official currency.

Accordingly, MiCAR does not envisage redemption gates as a normal liquidity-management tool. In this respect, MiCAR-compliant e-money tokens provide a stronger assurance of par convertibility than money market fund shares, even where the latter maintain a constant NAV under normal market conditions. The difference is less clear for US payment stablecoins, which as mentioned in section 2.2 are legally obliged to redeem only at T+2. In practice, NAV MMFs typically redeem on T+1 at the latest, suggesting that the legal requirement applicable to US payment stablecoins would be less stringent than the current practice for NAV MMFs.

B. Tokenised central bank money

On-chain CBDC, i.e., tokenised central bank money, shares with stablecoins the feature of being electronic money on a DLT platform that can, in principle, be held by anyone with access to that platform. A gradual evolution of stablecoins towards tokenised central bank money is linked to the concept of "synthetic CBDC". If a stablecoin were fully backed by central bank money, i.e., 100% of its reserves consisted of central bank money (as proposed, for example, by the Bank of England, 2023), it would be free of market, credit, and liquidity risk. In that case, the stablecoin would effectively become a "pass-through" instrument sharing essential properties with tokenised central bank money. However, stablecoin holders would still be exposed to operational risks, including legal and fraud risks associated with the stablecoin issuer. These could be further mitigated through strict requirements imposed by central banks on stablecoin issuers permitted to hold 100% of their reserves with them, combined with close supervision. Such requirements could also serve broader public policy objectives (beyond reducing operational risks) such as enhanced monitoring of illicit use and the implementation of related safeguards.

Taken together, these measures would make such stablecoins increasingly resemble tokenised central bank money, both in terms of safety and in terms of design features aligned with the central bank's mandate to serve the public interest. In the limiting case, where the stablecoin is fully backed by central bank money and the central bank exercises complete control over the issuing vehicle, the stablecoin would have fully evolved into tokenised central bank money.

C. E-money

The difference between e-money and e-money tokens (understood as defined by EU regulations) lies in the type of ledger through which they are distributed. E-money is typically held and transferred via a conventional "central" ledger, typically that of the issuing institution, operating within a "closed loop" system such as PayPal. Transfers between commercial bank money and this ledger occur via the user's bank account (i.e. users can transfer funds between their bank account and their e-money account, but not directly from their e-money account to another person's commercial bank account).

By contrast, stablecoins ("e-money tokens") are held and transferred between users on a distributed ledger technology (DLT) system. The distinguishing feature is therefore not the nature of the asset itself (money redeemable at par on demand, typically issued by a narrow balance sheet vehicle) but the ledger through which it is distributed. A continuum arises because DLT platforms can approximate conventional ledgers, departing from the original philosophy of decentralised finance. A private DLT platform with standard governance may bear little relation to decentralised finance, and the use of blockchain may be optional, driven by marketing or regulatory arbitrage. Nevertheless, unlike e-money, a stablecoin operating on a private programmable platform forms part of an open system with multiple tokenised assets, and its issuer will generally not operate the ledger (in contrast to e-money in closed-loop systems such as PayPal).

D. Tokenised deposit

In its report on tokenised deposits, the European Banking Authority (EBA 2025, 6) defines the concept briefly as "deposit balance recorded on a DLT or similar technology". The report also explains (p. 9) that "*excluded from the scope of MiCAR are [...] financial product to which other regulation applies", which includes deposits with credit institutions, being defined for this purpose by reference to Article 2(1), point (3) of Directive 2014/49/EU (the Deposit Guarantee Schemes Directive; DGSD). Tokenised deposits are thus not regulated under MiCAR, but "the activity of accepting deposits from the public continues to be regulated by the CRD*" (p. 10). The report interprets the rules allowing in principle for a bearer-type tokenised deposit, although it acknowledges that the non-bearer type instrument seems more relevant and raises fewer questions:

> *"the claim of the deposit-holder is recorded on the DLT and bound to the identity of the account-holder, and, as a non-bearer instrument, the claim is not directly transferable to a non-client of the bank. However, a token-based model may also be contemplated, i.e. where the crypto-asset can be transferred from one person to another without the knowledge of the bank, akin to a bearer instrument. While the account-based model would resemble most conventional deposits recorded on traditional bank ledgers, the legal viability of a token-based model for deposits would need careful assessment against the applicable regulatory framework, and to determine its appropriate regulatory classification."*

The terminology proposed above, distinguishing between "token based tokenised deposits" and "account based tokenised deposits" is potentially confusing. The essential characteristic distinguishing a tokenised deposit from a stablecoin issued on a bank's balance sheet (like the ODDO-BHF token EUROD) is that a tokenised deposit can only be held by customers who maintain a deposit account with the bank. The closest variant of a stablecoin resembling a deposit token is thus the one issued by a bank without asset segregation. However, the key distinction remains whether the monetary liability has a bearer-like character, together with the applicable regulation which implies various disparities (deposit insurance, remuneration, compliance, treatment by liquidity regulation, etc.).

2.5 Use cases and adoption scenarios

Relying on an analysis by Citi, US Secretary of the Treasury, Scott Bessent, stated on 17 June 2025 that "*Recent reporting projects that stablecoins could grow into a $3.7 trillion market by the end of the decade*." In a study published in November 2025, Citi adjusted its own forecast to a base case estimate of $1.9 trillion by 2030, a "bull case" of $4.0 trillion (the previous 3.7 trillion scenario that Scott Bessent had referred to) and a "bear case" of $0.9 trillion. In mid-2026, the market capitalisation of USD stablecoins fluctuated around $310 billion, showing no real trend growth since mid-October 2025. Euro-denominated, MiCAR compliant stablecoins have been growing more dynamically recently, although they remain at a low absolute level of less than €1 billion, with EURSC, EURS and EURCV occupying the top three places.

The five following use cases may contribute to these scenarios:

1. As **on and off-ramp for crypto-assets** and Bitcoin speculation in particular. This was the initial large-scale use-case of stablecoins. The less favourable development of Bitcoin prices, and the resulting decline in speculative interest in the asset, may partly explain the moderation of stablecoin growth from October 2025 onwards.
2. **Store of value and means of payment in less stable currency areas**, possibly also to circumvent capital controls. In jurisdictions applying capital controls (e.g. India), stablecoins may facilitate their circumvention, which raises concerns from the perspective of monetary sovereignty. In countries with less stable currencies (e.g. Turkey), stablecoins denominated in more stable currencies may be regarded as a superior store of value to the domestic currency, even in comparison to remunerated domestic assets. Both cases may be considered problematic from a monetary sovereignty perspective, inter alia because they undermine domestic seigniorage income.
3. For **merchant use**: the use of stablecoins for retail payments would imply broad anchoring in society as means of payment. Several firms have been working towards this vision. In practice, however, such payments are unlikely to involve Layer 1 transfers of stablecoins. Instead, they would be executed on Layer 2 or as central ledger transfers, raising the question whether they could still be classified as true stablecoin payments.[21]
4. As **settlement asset (or vehicle) in global corporate and wholesale payments**, including FX settlement. Competing initiatives have recently been launched in this field.
5. In the context of the growing **tokenisation of securities and other financial assets**, stablecoins provide the payment leg in seamless on-chain financial operations with tokenised non-money assets. Stablecoins may also serve as collateral in on-chain financial market operations. Competition to stablecoins in this field could come in the form of central bank money-based solutions.,[22] Central banks have argued that for wholesale transactions, settlement in central bank money is preferable (as also stated in the Principles of Financial Market Infrastructures: CPSS-IOSCO, 2012).

The significance of these use cases in five or ten years is difficult to predict, and moreover, except for (2), it is not clear to what extent a successful deployment of the respective use cases could support high stablecoin issuance volumes. Much will depend on whether stablecoins evolve primarily as niche instruments embedded in specific crypto-asset or wholesale financial

[21] See for example https://stripe.com/en-de/newsroom/news/bridge-partners-with-visa
[22] See for example ECB Press release, "ECB commits to distributed ledger technology settlement plans with dual-track strategy", 1 July 2025,

infrastructures, or whether they achieve broader monetary functions comparable to those of bank deposits or electronic money. Regulatory treatment, the response of central banks (also in the context of wholesale central bank digital currency initiatives) and the macro-financial environment will further shape adoption. In this sense, projections of multi-trillion-dollar market capitalisations implicitly assume not only technological success, but also a shift in monetary preferences and institutional arrangements, which is not assured.

3. Market and financial stability impact

3.1 Impact of stablecoins on financial markets and structure

Impact of stablecoins on financial asset volumes and prices

Barthélemy et al. (2026) and Kim (2025a) empirically study the effects of stablecoin inflows on commercial paper (CP) volumes and prices for the period 2020–2021. Barthélemy et al. (2026) treat increased stablecoin demand as a plausibly exogenous shock in the CP market and find that it significantly raised CP issuance but had no economically significant impact on CP rates once the risk-free rate is controlled for, concluding that CP issuers could anticipate and absorb additional demand through a more price-elastic supply response, lowering financing costs for firms but exposing them to rollover risk. Kim (2025a) confirms the positive impact on CP issuance and additionally finds a significant next-day reduction in CP yields: a one standard deviation increase in USDT and USDC issuance raises CP issuance by ten percent and lowers yields by eighteen basis points. These effects are attributed to the CP market's small size, maturity segmentation, and CP dealers' inability to anticipate stablecoin demand.

Since Circle and Tether both announced that they would move their reserves from the CP market to short-term Treasury markets, and considering public pressure for more transparent disclosure, the attention of researchers and policymakers moved towards trying to understand potential spillovers from stablecoins to US Treasury bills. Ahmed and Aldasoro (2026) use daily data from 2021 to 2025 and instrumented local projection regressions to isolate the impact of stablecoins flows on 3-month Treasury yields, addressing the endogeneity bias by using "crypto shocks" constructed with the unforecastable component of the Bloomberg Galaxy Crypto Index (BGCI). The authors show a significant stablecoin-driven yield compression: a 2-standard deviation inflow into the stablecoin sector in 5 days ($3.5 billion) lowers 3-month Treasury yields by 2 to 2.5 basis points within 10 days. Outflows raise yields by two or three times as much as inflows lower them, highlighting the fire-sale risks associated with "runnable" stablecoin liabilities.

Kim (2025b) uses a high-frequency identification strategy by exploiting the precise timing of stablecoin issuance and redemption events and aligning them with intraday fluctuations in Treasury-linked asset prices. The author finds that large issuance events (top decile of absolute net flows) increase significantly the price of short-term Treasury instruments (BIL ETF) by 1.5 basis points in the hour following the event (temporary demand shock), whereas large redemption events produce no significant response in BIL prices. The author believes that this result is driven by the fact that stablecoin issuers may honour redemptions using internal cash or delayed reserve adjustments. The author focuses on mints and redemptions of USDT on the Ethereum blockchain, although around half of USDT supply comes from the Tron blockchain[23]. The author then provides a quantitative macro-finance model replicating the empirical findings and providing a structural evaluation of how the impact of stablecoin issuance scales with the expansion of the crypto market and identifies a highly nonlinear transmission mechanism: when the stablecoin sector crosses a critical threshold, further expansion generates disproportionately larger impacts on Treasury prices and credit provision.

Ante et al. (2025) investigate how Tether's market share of US Treasury bills influences its corresponding yields and find a non-linear impact on yields after a certain critical market share

[23] https://visaonchainanalytics.com/supply

of 0.973%. The authors do not check for the plausible reverse causality, namely that the short-term risk-free rate determines stablecoin volumes because the majority of stablecoins are unremunerated. Cerutti et al. (2026) construct high-frequency stablecoin shocks from daily stablecoin-related news from 2019 onwards using Google News and use those shocks to measure changes in market capitalization of USDC and USDT. They find that stablecoins shocks push short-term US Treasury bill yields (1-month and 3-month) persistently downwards: a stablecoin shock corresponding to a 1 percent increase in USDC and USDT market capitalisation lowers the 1-month T-bill yield by 1.9 basis points. Moreover, they also document spillovers to broader financial markets: the dollar index depreciates, the Bloomberg Galaxy Crypto Index (BGCI) increases, while equity prices have a more muted reaction.

Impact of stablecoins on financial market structure

Azzimonti and Quadrini (2025) develop a three-country general equilibrium model (United States, the rest of the world, and a distinct Digital Economy) to assess how stablecoin expansion could alter the structure of international financial markets. The paper concludes that stablecoins generate two competing forces affecting the global demand for dollar assets. Because stablecoins require reserve backing, their issuance mechanically increases demand for safe dollar-denominated instruments. At the same time, stablecoins can act as substitutes for traditional reserve assets, potentially eroding that demand. In the long run, the reserve-demand channel would dominate the substitution effect, and stablecoin growth would push US interest rates lower and expand US foreign borrowing.

Aldasoro, Beltran, and Grinberg (2026) study the parallel crypto-based foreign exchange ecosystem created by dollar-pegged stablecoins and document large and persistent gaps between the cost of acquiring dollar exposure through stablecoins and through traditional FX markets, driven by the balance-sheet constraints of arbitrageurs bridging the two ecosystems. An increase in stablecoin demand cannot be absorbed in isolation: it depreciates the local currency and raises the cost of obtaining dollars through FX swaps, with spillovers amplified when intermediary capital is depleted. The results are especially pronounced for emerging market currencies and suggest that stablecoins offer a relatively frictionless route for residents to shift savings into dollar-denominated instruments outside traditional regulated channels.

The resemblance between stablecoin issuers and money market funds (MMFs), together with their direct connectedness through reserves holdings has sparked interest in analysing the similarities and differences in their behaviour. Aldasoro et al. (2025b) show that, while stablecoin market capitalisation reacts to both crypto and monetary policy shocks, MMFs only react to the latter. Following a monetary policy shock, stablecoin market capitalisation declines, while prime MMF assets increase. While the authors do not discuss the possible underlying reasons, one plausible explanation could be the non-remuneration of stablecoins, whereas MMFs remuneration closely tracks short-term risk-free rates. Anadu et al. (2025) show that in times of stress, both stablecoins and MMFs are subject to similar flight-to-safety dynamics: when the crypto market is under stress (e.g. a drop in Bitcoin price) or when other stablecoins experience difficulties, stablecoin investors shift from riskier stablecoins to safer ones. A further parallel with MMFs concerns the pattern of these flows. On large and relatively safe blockchains, investors tend to shift from riskier to safer stablecoins, while remaining on the same blockchain. By contrast, on smaller and riskier blockchains, flows out of riskier stablecoins are also associated with outflows from the blockchain itself.

3.2 Impact of stablecoins on financial and monetary stability

Most risks discussed in the literature, such as spillovers to sovereign bond markets, pressures on bank funding or the impact on monetary policy transmission (detailed below), are primarily linked to the aggregate size of stablecoin issuance. Other types of risks arise from how stablecoins are used. For instance, if stablecoins are mainly used for everyday transactions by households, it will raise the volume and frequency of on- and off-ramping activity, which in turn could increase intraday liquidity needs and settlement volatility in payment systems, thus heightening operational and liquidity management challenges for banks. By contrast, corporate treasury management and FX-related use cases, including remittances, primarily transmit risks through their impact on banks' profitability via lower fee income from payment and FX services, rather than through funding stress. While such effects are unlikely to pose acute risks in the near term, they could weaken banks' business models and hence their resilience over time (Cheng and Finesi, 2026). In the remainder of this section, we systematically review the findings of the literature on stablecoins' impact on financial stability and monetary policy.

The risk of runs on stablecoins and effects of rapid stablecoin asset liquidation on financial markets

The ECB Crypto-Asset Task Force (2020) provides an early assessment of the monetary policy, financial stability, payments, and supervisory implications of stablecoins. A central risk identified is their vulnerability to liquidity runs if the issuer's ability to redeem at par is called into question. In such a scenario, the issuer could default or be forced to meet redemptions through rapid liquidation of reserve assets, thereby transmitting stress to other financial assets, possibly impairing market functioning. Aerts et al. (2025) warn that these risks can be amplified by the high concentration of issuance among a small number of dominant stablecoin issuers. Born et al. (2026) further note that in the case of the euro area, diversified holdings of sovereign bonds are warranted to mitigate issuer-specific shocks. Gross and Senner (2026) further highlight that the risk of spillovers from fire sales is amplified by a structural mismatch: stablecoins can face redemption pressure 24/7/365, while bond and repo markets are not continuously liquid (overnights/weekends), potentially concentrating asset sales when markets reopen.

Beyond run-driven fire sales, a large-scale adoption of stablecoins may structurally affect sovereign bond markets through changes in demand for high-quality liquid assets. Aerts et al. (2025) emphasise that the largest fiat-backed stablecoins (e.g., USDT and USDC) hold reserve assets comparable in size to major money market funds and rank among the significant holders of US Treasury bills. While the market for euro-denominated stablecoins is still very small, Born et al. (2026) estimate that their growing market capitalisation could translate into sizeable sovereign bond holdings, either directly through reserve assets or indirectly through banks' liquidity management responses (i.e. to keep their LCR constant). However, the scale of this pass-through depends on the stablecoin issuer type (banks versus e-money institutions), the stablecoin issuer's reserve composition, banks' liquidity preferences, but also the source of the funds used to acquire the stablecoin.

Aldasoro et al. (2025) and Altavilla et al. (2026) argue that stablecoin reserve investment behaviour may influence yields and thereby the transmission of monetary policy. Altavilla et al. (2026) also investigate the impact of broader stablecoin adoption on banks' lending and deposit rates - the two channels of monetary policy transmission. They find a stronger lending channel and weaker deposit channel, for banks relying more on wholesale funding, and conclude that the

net effect of these opposing forces on loan supply is ultimately an empirical question. The authors further argue that the deterioration of banks' liquidity coverage ratio (LCR) and net stable funding ratio (NSFR) associated with greater reliance on wholesale funding has direct implications for bank lending, as banks may have to rebalance their assets away from illiquid, long-maturity loans, toward liquid assets or tighten lending standards by reducing loan volumes, shortening maturities or increasing loan pricing. Finally, Altavilla et al. (2026) highlight the risk of spillovers across the banking system if the withdrawal of stablecoin issuers' deposits from banks are not compensated by corresponding inflows into retail deposits. This effect may be amplified if monetary tightening leads to a sharp repricing of the yield curve, causing valuation losses on stablecoin issuers' holdings of sovereign bonds.

Negative implications of stablecoins on bank funding

Retail-oriented banks in particular are concerned that stablecoins constitute a destination for structural (and stress-related) deposit outflows, and they are especially concerned about direct and indirect forms of remuneration of stablecoins (e.g. BPI, 2025). Liao and Caramichael (2022) model the risks that stablecoins create for bank funding as they facilitate deposit outflows. Given the reserve requirements of MiCAR, stablecoin issuers will redeposit part of their reserves with banks, which are then considered as wholesale deposits - a shift that worsens banks' liquidity metrics.

Coste (2024) explores the relationship between banks and stablecoins and their issuers, focusing on the mechanical effects on banks' capital and liquidity ratios. He shows that converting retail deposits into deposits from stablecoin issuers weakens banks' LCR, effectively transforming a retail deposit into wholesale funding even if reinvested into high-quality liquid assets. If a credit institution issues its own stablecoins, the impact on LCR depends on whether stablecoin holders can be identified; unknown holders tend to weaken the LCR, which could incentivise banks to issue stablecoins only when they can continuously identify holders to obtain more favourable regulatory treatment (Coste, 2024).

Aldasoro et al. (2025) extend this by emphasising reserve-management channels that deepen interconnections: stablecoin issuers may use reverse repos and hold deposits at banks due to regulatory requirements in some jurisdictions. This can pool dispersed (often insured) retail funds and re-channel them back to banks as uninsured wholesale deposits or through repo transactions, potentially amplifying funding fragility under stress. Besides the LCR, the shift from retail to wholesale deposits also worsens banks' NSFR, as wholesale deposits have lower available stable funding weights, given their greater sensitivity to market stress and shorter maturities. Nigrinis (2025) argues in a study sponsored by the US Consumer Bankers Association (CBA) that the negative effects of stablecoins on bank funding, and thus also on bank lending would be enormous. Risks would be significant even with non-remunerated stablecoins, and if remuneration would be permitted in the US, deposit losses would be amount to 25.9% of total bank deposits, "erasing roughly $1.5 trillion in lending". The Council of Economic Advisers (2026) disagrees with these conclusions and argues that eliminating stablecoin yield would increase bank lending in the US only by a negligeable $2.1 billion.

Bindseil and Senner (2023, sections 4 and 5) discuss stablecoins and other non-bank payment service providers (PSPs) as destination of deposit outflows of banks, explaining the relevance for aggregate sectoral financial accounts of whether the destination has itself access to central bank deposits or not. Adrian et al. (2025) similarly argue that stablecoin growth can change deposit

composition and intermediation chains, making it important to assess banking-sector spillovers and liquidity dynamics, not just "crypto market" volatility.

Altavilla et al. (2026) for instance highlight the risk of spillovers across the banking system if the withdrawal of stablecoin issuers' deposits from banks are not compensated by corresponding inflows into retail deposits. This effect may be amplified if monetary tightening leads to a sharp repricing of the yield curve, causing valuation losses on stablecoin issuers' reserve assets. Altavilla et al. (2026) also note that a broad adoption of non-euro pegged stablecoins in the euro area will complicate banks' liquidity management, given MiCAR's requirement to hold reserve assets in the same currency as the stablecoin. Banks would have to match the USD-denominated stablecoin deposits with USD-denominated assets or do FX hedging.

Cross-border payments, EMDE-specific risks and monetary sovereignty

Both the Committee on Payments and Market Infrastructures (CPMI, 2023) and the International Monetary Fund (IMF, 2025) point to potential efficiency gains from stablecoins in payment, including cross-border transactions, but stress that such gains are conditional on proper design, robust regulation and governance. Beyond payment efficiency considerations, the literature identifies various channels through which foreign-currency-pegged global stablecoins can generate macro-financial risks in emerging markets and developing economies (EMDEs), including currency substitution/dollarisation risks; weaker monetary policy control; challenges to capital flow management (including via pseudonymous channels); bank disintermediation and potential increases in credit costs; heightened systemic vulnerability to external shocks; and leakage of seigniorage to private issuers (often foreign) and constraints for the central bank's ability to act as lender of last resort (Sankar, 2025, Kendrick and Jha, 2025, Graf von Luckner et al, 2024, Adrian et al., 2025). Aldasoro et al. (2026) further note that the rise of foreign-currency pegged stablecoins effectively increases the degree of financial openness of the economy and thereby intensifies the trade-off between exchange rate stability and monetary autonomy, even without formal changes to capital account policy. In addition, widespread adoption risks may erode monetary sovereignty by enabling rapid currency substitution, which is difficult for authorities to monitor or control.

Operational risks

Public crypto networks and the decentralised applications that operate on top of them carry specific operational risks. Both the Basel Committee on Banking Supervision (2024) and the CPMI (2024; section 4) have discussed operational risks relating to public blockchains, with the latter focusing on tokenisation.

- Legal risks arise where tokenised assets lack clear legal equivalence with their traditional forms, especially in insolvency proceedings. Cross-border transactions further complicate enforceability, as ownership may span multiple jurisdictions. The bearer-like nature of crypto assets may also create conflicts with established property rights, particularly in cases of theft.
- Governance in decentralised systems is fragile, due to issues like low participation, collusion, and slow crisis response.
- Technological risks include bugs, hacks, and oracle problems[24], making DeFi systems frequent

[24] Blockchains use so-called oracles to obtain real-world data for smart contracts. The "oracle problem" arises because information originating outside the blockchain cannot be validated through the

targets of attack. Blockchain networks also face consensus and uptime risks, though large-scale attacks remain costly and rare. Institutional adoption is hindered by custody challenges and regulatory constraints around key management.

- Finally, crypto's pseudonymity facilitates illicit activities, giving rise to money laundering and terrorism financing concerns, despite increasing regulatory efforts (Chainalysis, 2026). Stablecoins have become a dominant vehicle in illicit on-chain transactions[25], reflecting their widespread availability, global reach and relative ease of transfer. Their use is facilitated by structural features of public blockchain environments, including pseudonymous peer-to-peer transfers via non-hosted wallets and the possibility to obscure transaction chains across multiple intermediaries. The Financial Action Task Force (2026) highlights that the effectiveness of existing regulatory frameworks is weakened by two factors. First, the intrinsically cross-border nature of stablecoin activities enables issuers to operate internationally while locating in jurisdictions with comparatively weaker regulatory regimes, limiting supervisory oversight. Second, peer-to-peer transfers via non-hosted wallets may fall outside the scope of standard AML/CFT obligations, making them inherently difficult to monitor and control. As a result, illicit activity poses risks not only to financial integrity, but because they may amplify operational, legal and reputational risks for stablecoin ecosystems and their intermediaries.

Carapella et al. (2026) further highlight two main structural weaknesses in the stablecoin ecosystem. First, the involvement of multiple intermediaries in the provision of services creates both contagion risks and reduces transparency. When multiple third parties are part of a stablecoin's operational structure, it becomes difficult for market participants to pinpoint the origin of financial stress, which can intensify panic during crises. For example, some crypto wallet providers issue stablecoins that rely on external digital asset firms for infrastructure, sometimes even embedding another firm's stablecoin within their own product. Such arrangements create layered dependencies and may leave fallback mechanisms unclear. Second, risks may arise from vertical integration, whereby a single entity performs multiple roles within the stablecoin value chain. If counterparties lack full insight into the breadth of such entities' activities, they cannot effectively hedge against risks, which may amplify shocks. Examples of this trend include crypto exchanges launching their own Layer 2 networks, payment companies and venture capital firms developing new blockchains, and stablecoin issuers building dedicated infrastructure.

Regulatory and other policy measures to address the financial stability concerns raised by stablecoins

A growing body of formal modelling work deepens the analysis of run dynamics and implications on prudential design. Gross and Senner (2026) model how stablecoin redemptions deplete reserves, prompt asset sales, depress bond prices, erode the issuer's solvency, and thereby amplify further redemptions. Their framework links key design parameters—capital and liquidity buffers, reserve composition, redemption gates, and related features—to outcomes such as run frequency, fire-sale intensity, and bond market volatility. The economic discussion and model

blockchain's consensus mechanism. As a result, smart contracts must rely on external data providers, introducing trust, security, and reliability risks.

[25] According to Chainalysis (2026), stablecoins now account for 84% of all illicit transaction volume on public DLT networks.

analysis conclude that robust prudential design can stabilise both stablecoins and their surrounding market environment.

Ahmed et al. (2024) examine how public information and learning shape coordination failure risk among stablecoin holders. Using a global games framework, they argue that reserve characteristics are key and show that the impact of disclosure on run risk is ambiguous: greater transparency may increase run risk when expectations are pessimistic, yet strengthen the peg when priors are favourable. They also predict inertia and path dependence in aggregate behaviour, whereby small public shocks induce reversion to historical outcomes, while large negative (positive) shocks can trigger widespread runs (recoveries).

Adrian et al. (2025) similarly stress that stablecoin stability is highly confidence-sensitive and that disclosure and governance arrangements must be designed with run dynamics in mind. The US Treasury (2021) likewise treats run risk as a core vulnerability requiring prudential regulation and strong reserve and redemption requirements. The broader problem of stablecoin runs and contagion is further analysed by Gorton and Zhang (2023), Goel et al. (2025), Ma et al. (2025), and Anadu et al. (2025).

Bindseil (2025), Gross and Senner (2026), and Gersbach et al (2026) discuss regulatory approaches and tools for addressing financial stability implications of stablecoins. Gross and Senner (2026) consider capital buffers and cash reserve requirements as preventive stabilisers, reducing the likelihood and severity of stress episodes, while redemption gates and shorter reserve duration would mitigate market spillovers once stress materialises. We briefly review ten possible regulatory measures below. The first five instruments can be regarded as measures to reduce the risk of stablecoin runs and to mitigate their severity and negative effects. The remaining measures are primarily aimed at protecting banks from the consequences of widespread stablecoin adoption. As of August 2026, the regulatory framework for stablecoins remains in flux. In the EU, the European Commission (2026) launched a "Targeted consultation on the review of Regulation on the Markets in Crypto-Assets (MiCA)" in May 2026, while in the United States the Clarity Act ("Digital Asset Market Clarity Act" H.R. 3633) has not yet been passed by the Senate.

1) Capital requirements. Capital protects the solvency of a stablecoin against operational risks and losses arising in case of the need to fire-sell assets, making runs on the stablecoin less likely. Goel, Lewrick and Agarwal (2025) provide an analytical framework to calibrate regulatory capital and liquidity requirements for stablecoins.[26] Based on US stablecoins and Treasury market data, they find that "*combining a 1% capital requirement with a 30% liquidity requirement can reduce default probabilities to about 0.2% and cap the expected price impact of bond sales.*" Liao, Fishman, and Fox-Geen (2024), introduce a "Token Capital Adequacy Framework (TCAF)", which is a risk-based approach on assessing the capital adequacy of stablecoins. Goel et al (2025) analyse both capital and liquidity (see next point) requirements on stablecoins and conclude that both liquidity and capital requirements are useful, although they do not produce identical effects: "liquidity requirements are more effective in curbing market spillovers, while capital requirements are better suited to lowering default probabilities". Based on US data, they reach the conclusion that "combining a 1% capital requirement with a 30% liquidity requirement could limit an issuer's

[26] They rightly cover jointly liquidity and capital requirements, i.e. point 1) and point 2) in our list of regulatory approaches. Indeed, capital and liquidity jointly determine the stability of the balance sheet structure of any entity engaged in liquidity transformation.

default probability to around 0.05 basis points per year and restrict the expected price impact of bond sales in the Treasury market to around 65 basis points.

2) Requirements regarding a stablecoin's reserve holding (liquidity requirements). A high degree of liquidity of reserves (i) reduces the likelihood of a run on a stablecoin, and should a run nevertheless occur, mitigates its consequences. In particular, (ii) fire-sale losses incurred by the stablecoin issuer will be lower, (iii) the likelihood of issuer insolvency is reduced; and (iv) fire-sale and other negative externalities are limited. Regulatory requirements may include: (a) minimum share of reserves in the form of very short-term deposits with financial institutions combined with granularity, maximum maturity, and rating requirements for deposits with banks, thereby reducing the likelihood that withdrawals of the funds by the stablecoin issuer could create secondary risks; (b) Minimum share of reserves in the form of deposits with the central bank (which first requires granting access to central bank deposit facilities). Withdrawals from central bank deposits do not cause any financial stability concerns, since central banks are never liquidity-constrained and do not need to liquidate assets in response to such withdrawals; and (c) eligibility criteria for securities holdings and portfolio constraints: granularity, maximum maturity, issuer rating requirements, etc. Short-term and highly rated securities tend to remain liquid in periods of financial stress, so that fire sales generally do not lead to strong negative price effects and contagion. The MiCAR requirement that a significant share of the issuer's reserve assets be held as bank deposits (30% for regular issuers and 60% for systemic ones) has been criticised as counterproductive for financial stability (Gersbach et al, 2026, Bofinger, 2025). Views among central banks on granting access to stablecoins to central bank deposits as reserve assets widely diverge. The Bank of England (2023) initially expressed a preference for 100% reserve holdings with the central bank, while the ECB excluded the safeguarding of stablecoin client funds in the form of central bank deposits. In December 2025[27], the Fed opened a public consultation on offering "skinny" accounts to e.g. stablecoin issuers. These accounts would be non-interest-bearing, subject to balance caps, and would not provide access to any form of central bank credit. The notice explains that "The Board is considering setting the overnight balance limit at the lesser of $500 million or 10% of the Payment Account holder's total assets", implying that central bank deposits would remain a small reserve class, in particular for large issuers.

3) Access to central bank lender of last resort (LOLR) facilities. LOLR facilities can help prevent fire sales during periods of market turmoil. Thanks to the properties of the modern central bank to (i) never be liquidity-constrained and (ii) to be risk-free from the perspective of borrowers providing collateral, it can provide a substantial amount of additional liquidity in crisis situations without creating material risks for taxpayers. A critical perspective is taken by Bidder (2025) and Gersbach et al (2026), both of whom emphasise the global nature of stablecoins and the moral hazard implications of an access to LOLR facilities. On the other hand, it could be argued that (i) stablecoins could create significant monetary income to a jurisdiction, in particular in case of large-scale foreign circulation, justifying consideration of access to LOLR facilities; (ii) LOLR facilities against high-quality assets can be designed to imply almost no financial risk for the central bank; (iii) the purpose of LOLR is not necessarily to support the stablecoin issuer itself, but to prevent negative externalities affecting other participants of the financial system.

[27] See press release of 19 December 2025, December 19, 2025, "Federal Reserve Board requests public input on "payment account," which eligible financial institutions could use for the limited purpose of clearing and settling their payments".

4) Applying a deposit insurance scheme to stablecoins. Deposit insurance has been accepted as a key instrument for mitigating bank runs and it could be argued that by analogy, a similar mechanism should apply to stablecoins. However, the pseudonymity of stablecoin holdings on public blockchains would present additional challenges. Moreover, such a system would entail administrative costs and could distorts incentives, as with any insurance scheme. Therefore, a deposit insurance scheme for stablecoins has not emerged as a prominent policy proposal.

5) Redemption obligations for stablecoins. Private money is typically defined by a redemption promise: the issuer (whether a commercial bank issuing sight deposits, an e-money institution issuing e-money, or a stablecoin issuer issuing an e-money token or a payment stablecoin) promises at any time to redeem funds into central bank money at par, or at least into another forms of private money. By contrast, highly liquid assets such as short-term sovereign debt instruments or money market funds must first be liquidated to obtain money and remain subject to market and liquidity risk.

Regulatory redemption obligations for stablecoins can serve classificatory, prudential and protective objectives: Classificatory: redemption obligations can qualify stablecoins as money rather than investment products. A core attribute of money is on-demand face-value convertibility, which ensures absolute liquidity. The singleness of money is based on the at-par convertibility of different monetary forms into the other, and ideally, of all private money directly into central bank money. Gersbach et al (2026) review regulatory rules on redemption and note that the direction of travel is clear: "Conditioning market access on enforceable redemption rights and robust legal structures" should be recognised as a key building block for establishing credible stablecoin par convertibility. Garratt and Shin (2023) argue that private tokenised money should not replicate the arrangements of the free-banking era, when clearing houses emerged to support par exchange among members' notes in the absence of central bank settlement assets.

6) Limiting and/or disincentivising access of stablecoin issuers to central bank deposits. This would have two advantages from the perspective of banks: first, it would prevent bank deposits from being ultimately absorbed by the central bank, and second, it would prevent stablecoin issuers from being perceived as secure as central bank money if central bank deposits were to constitute a large share of their reserves. This measure is the opposite of one of the options discussed under point 2 above, namely, allowing or encouraging stablecoin issuers to deposit client funds with the central bank to avoid secondary repercussions from asset liquidation when stablecoins experience a run.

7) Specific provisions to address significant (large) stablecoins. Additional regulatory requirements for very large stablecoins can aim either to discourage their growth, or to address the potentially greater negative externalities associated with them, in principle as in the case of global systemically important banks. A more granular stablecoin market structure reduces the negative repercussions of a run on any individual stablecoin and may also be beneficial in terms of maintaining competition. At the same time, means of payment benefit from network effects, thus fragmentation may also reduce their utility.

8) Imposing limits on stablecoin holdings. The Bank of England is the only central bank to have considered per-person limits on stablecoin holdings. Implementation would appear challenging,

given that stablecoins would continue to be held through *anonymous* (non-KYC) wallets. Proposals to prohibit anonymous wallets have faced fierce opposition from crypto lobbyists, and legislators have ultimately refrained from pursuing such a prohibition.

9) Prohibit the remuneration of stablecoins. Traditionally, payment instruments have been assumed to be non-remunerated. This assumption is largely rooted in the technical difficulties involved in remunerating paper-based means of payment such as banknotes. However, today many monetary assets are not subject to remuneration constraints: both sight deposits with banks and wholesale deposits held by banks with the central bank can be remunerated. Currently, only e-money and stablecoins are subject to legal remuneration constraints. In general, regulatory remuneration restrictions on means of payment in an increasingly electronic and market-oriented world may appear anachronistic and warrant reconsideration. Why should holdings of means of payment remain unremunerated regardless of the short-term treasury market rate? The main reason for prohibiting the remuneration of stablecoins appear to be concerns about the structural disintermediation of banks. Bindseil (2025) argues that remuneration constraints can actually undermine financial stability because they create unintended flows of funds when interest rates change. Assets of the highest liquidity will have lower yields than other assets, yet not zero, regardless of the interest rate level. Reichlin et al (2026) also support allowing renumeration of EU stablecoins. Gersbach et al (2026, 10-11) take the opposite view and contend that remunerated stablecoins increase financial stability risks.

4. Flow-of-funds modelling of stablecoins

4.1 Why flow-of-funds?

A global flow-of-funds representation of stablecoins provides an analytical foundation for a structural scenario analysis of how stablecoin (SC) growth may affect the financial system as a whole. Global flow-of-funds analysis has been developed as a tool for international statistics and balance-of-payment analysis with the aim of understanding how the international use of financial instruments and implied capital flows affect the financial positions and vulnerabilities of economic and financial sectors. For example, Errico et al. (2014) develop an IMF Global Flow of Funds (GFF) framework to map the shadow banking system through sectoral and cross-border financial linkages. Zhang and Zhao (2018) extend the GFF concept by proposing a comprehensive statistical framework integrating multiple international datasets to construct "from-whom-to-whom" matrices capturing bilateral financial positions across countries and instruments, enabling detailed analysis of global financial interconnectedness. They demonstrate how GFF matrices can reveal structural imbalances, transmission channels, and systemic risks. By embedding stablecoins into a consistent global financial accounts framework, we can trace how balance sheets adjust across sectors as stablecoin issuance expands and reserves accumulate. This approach builds on and extends the stylised framework developed in Bindseil (2025), refining it to capture cross-sectoral and cross-border interlinkages more systematically. While Bindseil (2025) provides financial accounts for both one- and two country case, we provide a slightly modified one-country case and then a three-country model, considering the United States, the euro area and the rest of the world in our empirical specification. The starting point is a stylised flow-of-funds model that simplifies the financial system by consolidating sectors and grouping financial instruments into limited number of balance sheet categories thereby identifying the funding choices for stablecoin purchases, the investment of reserve assets, and the balance sheet positions that expand or contract as a result.

To move from a stylised to an empirical model, the framework must be mapped into observable data. This requires embedding stablecoins and their reserve portfolios into actual sectoral financial account statistics, complemented by additional data sources such as detailed issuance and reserve disclosures from major issuers. The aim is to construct a closed and internally consistent system of financial accounts in which stablecoins appear explicitly as liabilities of the issuing sector and reserves as corresponding assets in relevant instrument categories. Once such a system is established, scenario-based flow-of-funds analysis becomes feasible. One can impose alternative growth trajectories for stablecoins and specify assumptions about (i) the sources of inflows (e.g. substitution from bank deposits, money market funds, or cross-border capital inflows), and (ii) the composition of expanding reserve assets (e.g. sovereign bonds, central bank reserves, or other short-term instruments). The resulting balance sheet adjustments across sectors and countries can then be traced consistently, allowing for a structured assessment of financial stability, monetary policy transmission, and cross-border effects.

4.2 One-country model

Stablecoins are created through "flows of funds", i.e. shifts between financial assets and liabilities that must be mutually consistent (e.g. Jacewitz, 2025; Ahmet et al 2025, p. 33, p. 50). We need to parametrise certain assumptions on the flows of funds originating from stablecoins. First, we consider the case of a single country. We assume that households and non-bank financial institutions (NBFIs, which we treat together as one sector) finance SC purchases potentially in three ways:

- share $\boldsymbol{\beta} \in [0,1]$ of their stablecoin investment by reducing sight deposits with banks,
- share $\boldsymbol{\mu}$ in $[0,1-\boldsymbol{\beta}]$ in the form of banknotes
- share $\mathbf{(1-\mu-\beta)}$ by reducing their holdings of debt instruments.

We moreover assume that that the stablecoin's reserve is held in the following three forms:

- share $\boldsymbol{\alpha} \in [0,1]$ is held in the form of commercial bank deposits.
- share $\boldsymbol{\delta} \in [0,1-\boldsymbol{\alpha}]$ is held in the form of deposits with the central bank
- share $\mathbf{(1-\alpha-\delta)}$ is held in the form of bonds. In the stylised model in which we had aggregated households and NBFIs, the bonds can only come from banks.

Let the total amount of stablecoins created be SC. The following system of financial accounts (Figure 4-1) shows how, given these parameters, funds flow across the financial system and change the financial accounts of sectors when stablecoins with a value C are created. If the assets that households and NBFIs sell to acquire stablecoins match what stablecoin issuers purchase for their reserve portfolios (i.e. the sources of funding and the investment destinations match one-for-one or $\beta = \alpha$ and $\mu = \delta$), then the introduction of stablecoins is neutral in this stylised one-country framework. Stablecoins would therefore not appear to change the relative demand for different types of financial assets. However, the stylised model ignores the actual heterogeneity of both deposits and securities. Stablecoin issuers normally hold, for economic or regulatory reasons, safe assets within these categories (e.g. bonds with particularly short maturities and high credit ratings). As stablecoin volumes grow, households and NBFIs would thus tend to hold a larger share of longer-duration or lower-credit-quality securities. Credit and interest-rate risk may therefore become more concentrated outside the stablecoin sector, which would increase the risk premia required to hold these assets. Moreover, deposits of stablecoins with banks are concentrated (both in terms of depositors, and in terms of banks where they are deposited), unstable and expensive relative to retail deposits. This means that banks' funding costs will increase – not only because the average deposit remuneration rate would rise, but also because banks need to increase the share of stable long-term funding to compensate for the less stable deposit mix. These implications for banks result both from economic and regulatory factors, which ideally should be aligned.

Households could also fund their purchases of stablecoins by selling money market fund (MMF) shares. MMFs themselves invest into the same asset categories as stablecoin issuers: short-term government debt, bank deposits (or short-term bank paper) and potentially central bank deposits (as in the case of the US Federal Reserve's reverse repo facility, which is also accessible to MMFs. In our stylised flow of funds model, we address this possibility by consolidating the household and NBFI sectors. In other words, the model implicitly allows for the possibility of selling of MMF shares to purchase SC, and the parameters (μ, β) can be interpreted accordingly. Explicitly separating the NBFI sector would allow us to distinguish four sources of household financing for SC purchases and to incorporate the three investment options available to MMFs, with separate

parameters for the shares invested in bank debt/deposits, non-bank debt, and secured central bank deposits, the latter illustrated by the Fed's reverse repo facility. One can then derive the parameters of the aggregate model from a more disaggregated specification that treats households and MMFs separately. In that specification, households allocate stablecoin purchases across four funding sources, requiring three independent parameters, while MMFs allocate their portfolios across three asset categories, requiring two independent parameters. The resulting five-parameter system can then be mapped into the two parameters of the aggregate model, which captures funding flows using only three broad asset categories.

Figure 4-1: Sectoral accounts and flows of funds from stablecoin creation, single-country case

Households and NBFIs			
Sight deposits	-β SC	Other net liabilities	
Stablecoin	SC		
Banknotes	- μ SC		
Bonds	– (1-μ-β) SC		
Stablecoin issuer			
Deposits with banks	α SC	STC issued	SC
Deposits with central banks	δ SC		
Bonds	(1-α-δ) SC		
Commercial Banks			
Bonds	(α + δ - μ - β) SC	Sight deposits.	-β SC
		Stablecoin deposits	α SC
		Central bank credit	(δ - μ) SC
Central Bank			
Credit to banks	(δ-μ) SC	Banknotes issued	- μ SC
		Stablecoin deposits	δ SC

4.3 Three-country model

In view of the current global predominance of USD stablecoins, the flow-of-funds analysis also needs to be extended to an asymmetric two- or three-country model. While Bindseil (2025) provides a two-country model, we present an asymmetric three-country model, which is used later in our empirical calibration. For example, Kendrick and Jha (2025) predict that around USD one trillion of deposits will leave emerging market banks in the medium term and flow into US stablecoins. Graf von Luckner et al (2024) and Cardoso et al (2024) discuss the potentially large impact of crypto-assets on international capital movements. Rey (2025, 25) identifies both advantages and disadvantages of the international use of stablecoins: "*On the negative side are dollarization and its side effects, financial stability risks, potential hollowing out of the banking system, currency competition and instability, money laundering, fiscal base erosion, privatisation of seigniorage, and intense lobbying. On the positive side, cross-border payments may be quicker and cheaper, which matters especially for remittances. And citizens of countries with poor governance would have access to more stable and convenient means of payment and store of value than their domestic currency*."

We assume a hierarchy as summarised in Figure 4-2. In particular, we assume that country C has no domestic stablecoin issuance. We therefore abstract from the case in which country C issues stablecoins that circulate domestically, although this is also a possible configuration. In Annex 1, we also consider a case in which stablecoins issued in country B circulate in country A.

Figure 4-2: Hierarchy of stablecoin issuance assumed in this section.

	Held in		
	Country A	Country B	Country C
Country A issued SCs	Yes	Yes	Yes
Country B issued SCs	No	Yes	Yes
Country C issued SCs	No	No	No

We denote cross-border stablecoin circulation by, for example, $\mathbf{SC_{AB}}$ representing stablecoins issued in country A and circulating in country B. We assume for presentational simplicity that the exchange rate between the currencies is one. For country B we now need to introduce the following additional parameters:

- share $\boldsymbol{\beta^*} \in [0,1]$ of stablecoin investment by reducing sight deposits with banks,
- share $\boldsymbol{\mu^*}$ in $[0,1-\boldsymbol{\beta^*}]$ in the form of (domestic) banknotes
- share $\mathbf{(1-\mu^*-\beta^*)}$ by reducing their holdings of (domestic) debt instruments
- demand in country B for stablecoins issues in country B: $\mathbf{SC_{BB}}$
- share $\boldsymbol{\alpha^*} \in [0,1]$ is held by SC issuer B in the form of commercial bank deposits.
- share $\boldsymbol{\delta^*} \in [0,1-\boldsymbol{\alpha^*}]$ is held by SC issuer B in the form of deposits with the central bank
- share $\mathbf{(1-\alpha^*-\delta^*)}$ is held by SC issuer B in the form of (domestic) debt instruments.

For country C we need the following parameters:

- demand in country C for stablecoins issued in A: $\mathbf{SC_{AC}}$
- demand in country C for stablecoins issued in B: $\mathbf{SC_{BC}}$
- demand in country B for stablecoins issued in B: $\mathbf{SC_{BB}}$
- share $\boldsymbol{\beta\#} \in [0,1]$ of stablecoin investment by reducing sight deposits with banks,
- share $\boldsymbol{\mu\#}$ in $[0,1-\boldsymbol{\beta\#}]$ in the form of (domestic) banknotes
- share $\mathbf{(1-\mu\#-\beta\#)}$ by reducing their holdings of (domestic) debt instruments

Figure 4-3 shows the implied flow of funds. It is noteworthy that in country B, the aggregate dependence of banks on central bank credit declines with the circulation of A-country stablecoins, to the extent that households reduce their holdings of banknotes to finance their stablecoin purchases. In this sense, the aggregate liquidity position of the banking system improves. However, when considering the liquidity situation of individual banks, negative effects are likely to prevail for most of them. As in the domestic case, the newly acquired (wholesale) deposits, in this case from A-country banks, are likely to be more expensive, more concentrated, and less stable than the previous sight deposits held by households. Most banks will experience outflows from household deposits without corresponding inflows of deposits from A-country banks. Figure 4-3: Financial account representation of flows of funds from stablecoin-creation, three-country case in which A-stablecoins circulate globally, B-stablecoins only in B and C, and C is solely a stablecoin user country

Country A (in currency A)	
Households and NBFIs	
Sight deposits $-\beta\ SC_{AA}$ Stablecoin SC_{AA} Banknotes $-\ \mu\ SC_{AA}$ Bonds $-\ (1-\mu-\beta)\ SC_{AA}$	Other net liabilities
Stablecoin issuer	
Deposits with banks $\alpha\ (SC_{AA}+SC_{AB}+SC_{AC})$ Deposits with CBs $\delta\ (SC_{AA}+SC_{AB}+SC_{AC})$ Bonds $(1-\alpha-\delta)(SC_{AA}+SC_{AB}+SC_{AC})$	STC issued $SC_{AA}+SC_{AB}+SC_{AC}$
Commercial Banks	
Bonds $(\alpha+\delta-\mu-\beta)\ SC_{AA} - (1-\alpha-\delta)(SC_{AB}+SC_{AC})$ Claims Banks in B SC_{AB} Claims Banks in C SC_{AC}	Sight deposits $-\beta\ SC_{AA}$ SC issuer dep. $\alpha\ (SC_{AA}+SC_{AB}+SC_{AC})$ CB credit $(\delta-\mu)\ SC_{AA} + \delta\ (SC_{AB}+SC_{AC})$
Central Bank	
Credit to banks $(\delta-\mu)SC_{AA} + \delta\ (SC_{AB}+SC_{AC})$	Banknotes issued $-\ \mu\ SC_{AA}$ Stablecoin issuer deposits $\delta\ (SC_{AA}+SC_{AB}+SC_{AC})$
Country B (in currency B; exchange rate 1:1)	
Households and NBFIs	
Sight deposits $-\beta^*(SC_{AB.} + SC_{BB})$ A-SCs SC_{AB} B-SCs SC_{BB} Banknotes $-\ \mu^*(SC_{AB.} + SC_{BB})$ Bonds $-\ (1-\mu^*-\beta^*)(SC_{AB.} + SC_{BB})$	Other net liabilities
Stablecoin issuer	
Deposits with banks. $\alpha^*(SC_{BB}+SC_{BC})$ Deposits with CBs $\delta^*(SC_{BB}+SC_{BC})$ Bonds $(1-\alpha^*-\delta^*)(SC_{BB}+SC_{BC})$	SC issued $SC_{BB}+SC_{BC}$
Commercial Banks	
Bonds $(1-\mu^*-\beta^*)(SC_{AB.}+SC_{BB})-(1-\alpha^*-\delta^*)(SC_{BB}+SC_{BC})$ C-country banks SC_{BC}	Sight deposits. $-\beta^*\ (SC_{AB.} + SC_{BB})$ SC issuer deposits $+\ \alpha^*\ (SC_{BB} + SC_{BC})$ CB credit $-\ \mu^*(SC_{AB.}+SC_{BB})+ \delta^*(SC_{BB}+SC_{BC})$ A-country banks SC_{AB}
Central Bank	
Credit to banks $-\ \mu^*(SC_{AB.}+SC_{BB})+ \delta^*(SC_{BB}+SC_{BC})$	Banknotes issued $-\ \mu^*(SC_{AB.}+SC_{BB})$ SC deposits. $\delta^*(SC_{BB}+SC_{BC})$

Country C (in currency C; exchange rate 1:1)			
Households and NBFIs			
Sight deposits	$-\beta\#(SC_{AC} + SC_{BC})$	Other net liabilities	
A-Stablecoin	SC_{AC}		
B-stablecoins	SC_{BC}		
Banknotes	$-\ \mu\#(SC_{AC} + SC_{BC})$		
Bonds	$-\ (1-\mu\#-\beta\#)(SC_{AC}+SC_{BC})$		
Commercial Banks			
Bonds	$(1 - \mu\# - \beta\#)(SC_{AC}+SC_{BC})$	Sight deposits.	$-\beta\#\ (SC_{AC}+SC_{BC})$
		A-country banks	SC_{AC}
		B-country banks	SC_{BC}
		Central bank credit	$-\ \mu\#(SC_{AC}+SC_{BC})$
Central Bank			
Credit to banks	$-\ \mu\#(SC_{AC}+SC_{BC})$	Banknotes issued	$-\ \mu\#(SC_{AC}+SC_{BC})$

In annex 1 we examine some **further specific flow-of-funds topics**:

(1) **Bitcoin**: The largest use case for stablecoins still appears to be as a means of payment in 24/7 crypto speculation, primarily for buying and selling Bitcoin. Unbacked crypto-assets, despite recent valuation losses, still have a market capitalisation of more than USD 2 trillion - around seven times larger than that of stablecoins. It is therefore plausible that significant structural flows from Bitcoin to stablecoins could materialise.

(2) **Substituting foreign assets with foreign stablecoins**: If, for example, USD-denominated stablecoins become widely used in Argentina, the accumulation of such positions can also occur through the exchange of USD cash, USD deposits, or USD-denominated securities into USD stablecoins (i.e. not only through the conversion of domestic currency assets). This distinction matters for balance-of payments and exchange rate effects.

(3) **Eligible vs. non-eligible securities:** In the financial accounts above, we considered only one category of securities assets for each sector. In practice, however, stablecoin issuers can only invest in high-quality, short-term debt instruments. As a result, flows from securities into stablecoins, and back from stablecoins into securities, even if equal in size, are not neutral.

4.4 Sectoral account data for US and euro area for an empirical model

To empirically estimate the impact of stablecoins' growth on the financial system, it is necessary to gather data not only for the three separate countries of interest (US, euro area, and rest of world), but also for cross-country exposures. In this section, we explain the process of gathering the necessary data, the assumptions we take when certain data are not available, and how we construct a compact, but representative three-country financial system including the currently missing stablecoin issuers.

4.4.1 United States

To construct a representative US financial system, we use the "From-Whom-to-Whom" data[28] published by the Fed as part of its quarterly "Z.1 Financial Accounts" release. The data contain relationships between sectors at the instrument level: for each instrument included in the financial accounts (e.g. currency and deposits, debt securities, loans, etc.), we can identify the amounts issued by specific sectors (e.g. private depository institutions, NBFIs, government, households, etc.) and holders of each instrument. We aggregate the raw data to obtain a matrix that contains the sector-instrument breakdowns needed for our analysis. Where a sector issues several instruments that are not directly relevant to our analysis, we only report the aggregated issuance for that sector without an instrument breakdown. This applies, for example, to households and non-profit organisations, non-financial businesses, and the central bank). Where we are interested in a specific instrument, such as treasuries, bank deposits, etc., we instead create a separate account for each sector issuing that specific instrument. Thus, for example, we have separate accounts for bonds issued by the government, deposits issued by banks, and repo financing of banks and NBFIs). This process ultimately yields the US financial accounts presented in Table 4-1.

In constructing our US financial accounts matrix we make the following approximations: (i) the instrument "Monetary Gold and SDRs" is excluded as these are mostly financial assets with no corresponding liability; (ii) "Currency" and "Checkable deposits" are not two separate instruments in the raw data. We assume that, when banks are the issuers, the value corresponds entirely to deposits, while when the central bank is the issuer and households / nonfinancial businesses are the holders, then the value corresponds entirely to banknotes. The resulting approximation of circulating banknotes appears to be broadly consistent with Federal Reserve statistics.[29] In 2025, the total value of circulating banknotes was around $2.4 trillion, while our accounts show a total approximated value of $2.1 trillion, of which $1 trillion was held domestically by households and non-financial businesses and $1.1 trillion held in the rest of world; (iii) "Deposits" issued by banks include checkable, time, savings, other deposits, and interbank deposits; (iv) the "Banks" sector comprises: US-Chartered depository institutions, foreign banking offices in the US , banks in U.S.-affiliated areas, and credit unions; (v) the "NBFIs" sector comprises: Property-casualty insurance companies, life insurance companies, private and public pension funds, retirement funds, money market funds, mutual funds, closed-end funds, ETFs, government-sponsored enterprises, agency- and GSE-backed mortgage pools, issuers of asset-backed securities, finance companies, mREITs, security brokers and dealers, holding companies, and other financial business.

[28] The data is available at: https://www.federalreserve.gov/releases/efa/fwtw.htm
[29] https://www.federalreserve.gov/paymentsystems/coin_data.htm

The missing component in the current US financial accounts are USD-denominated stablecoins. To incorporate them in the current financial accounts, we consider the two major USD-denominated stablecoins, USDC issued by Circle and USDT issued by Tether, and assume that they represent the entire universe of USD-denominated stablecoins. In Q3 2025, Circle issued about $74 billion USDC tokens and held $74 billion in assets, of which $64 billion was held in the Circle Reserve Fund, a money market fund managed by BlackRock. The fund invested about 35% in short-term US Treasury securities and the remainder in US Treasury reverse repurchase agreements with banks. The remaining $10 billion was held in the form of deposits with regulated financial institutions. For simplicity, we assume the following total asset distribution: 15% in bank deposits, 55% in repos, and 30% in Treasuries.

Given that the Circle Reserve Fund is a regulated MMF, the current US financial accounts already include the assets held by that fund under the "NBFI" sector. Accordingly, when adding the assets of the "stablecoin issuers" sector, we reduce the corresponding holdings of the NBFI sector by the same amount.

Tether is a more complicated case, as the parent company of the USD-denominated USDT, is Tether International S.A. de C.V., a company located in El Salvador, and thus falls under the "rest of world" sector in the US financial accounts. In Q3 2025 Tether issued about 174 billion USDT tokens and had $181 billion in assets, comprising $112 billion in US Treasury Bills, $21 billion in US reverse repurchase agreements, $6 billion in money market funds, $0.3 billion in cash and bank deposits, $0.5 billion in non-US treasury bills, and the remaining $41 billion in other miscellaneous investments, such as loans, bonds, gold, and bitcoin. Given USDT's close integration with the US financial system, we treat Tether as a USD-stablecoin issuer rather than a rest-of-the-world stablecoin issuer.

For simplicity, we assume that the net worth of Tether is zero, so that (i) the value of tokens equals the value of the reserve assets, amounting to $174 billion. We also replicate Circle's total asset distribution allocated in US: 15% in bank deposits, 55% in repos, and 30% in Treasuries. Even though this assumed distribution differs from Tether's current asset distribution, we do not expect this difference to affect our analysis of the impact of future stablecoin growth on the financial system (see Section 5.1 for further details). Our underlying assumption is that stablecoins compliant with the GENIUS Act will predominate in the future and that the distribution of their reserve assets will broadly resemble that of USDC. We therefore add Tether's relative asset holdings to the "stablecoin issuers" sector in the US (alongside Circle's holdings) and reduce the corresponding holdings of the rest-of-the-world sector by the same amount.

Finally, we create a row for stablecoin issuers, with stablecoin tokens recorded as a liability. For this purpose, we treat Circle and Tether as similar and assume that 25% of the outstanding tokens are held in the United States. by US households (Reuter, 2025 provides estimates of where USD stablecoins are held; see Section 5.1). We deduct the amount of stablecoin holdings from households' holdings of other NBFI-issued instruments. For stablecoins held domestically, the deduction is made from the holdings of domestic households and non-profit organisations. For stablecoins held in the rest of world, the corresponding deduction is made from the holdings of rest-of-the-world households and non-profit organisations.

Table 4-1: Modified US financial accounts, Q3 2025 (billions of US dollars)

Holders: → / Issuers/debtors:	Households & non-profits	NFCs	Govt	Central Bank	Banks	NBFIs	**Stable-coins**	Rest of world	Totals
Households and non-profits	344	463	1902	0	6915	11591		47	21262
NFCs	47000	21139	2011	29	7147	37650		35939	150915
Government: Treasuries	2890	220	1574	3831	1940	8325-**22**	**+74**	9249-**52**	28029
Government: Other	2411	1545	235	5	424	8328		443	13391
Central bank	768	281	889	0	3083	486		1085	6592
Banks: Deposits	13983	4266	748	7	109	1349-**11**	**+37**	3055-**26**	23517
Banks: Fed funds / Repos	0	7	22	0	75	538-**41**	**+137**	292-**96**	934
Banks: Other	45	806	196	2	39	3974		750	5812
NBFIs: Fed Funds / Repos	0	29	101	6	267	2003		1311	3717
NBFIs: Other	67475-**62**	5338	1273	1806	4620	29405		11620-**186**	121537-**248**
Stablecoins	**+62**							**+186**	**+248**
Rest of world	6333	10685	601	19	4153	16010			37801
Totals	141249	44779	9552	5705	28772	119659-**74**	**+248**	63791-**174**	

Sources: US financial accounts; Authors' calculations.

4.4.2 Euro area

To construct the euro area financial accounts, we need to make additional assumptions, as the available data are less granular than the US data. We start from the ECB's quarterly sector accounts (QSA), which provide euro area financial stocks by instrument and institutional sector. In contrast to the US "From-Whom-to-Whom" accounts, the QSA data provide bilateral holder–issuer matrix at the level of detail only required for deposits, debt securities, listed shares, and investment funds. Therefore, we use the QSA as the main sector-by-instrument benchmark and reorganise the data into the simplified matrix structure used in this paper.

We retain the sectors provided in the QSA (households and non-profit organisations, non-financial corporations, general government, MFIs, central bank, Other MFIs[30]), and we aggregate other non-bank financial institutions into a single sector.[31] Instruments are selected based on their relevance for the stablecoin flow-of-funds exercise: currency, deposits, debt securities, loans,

[30] We use all three as depending on instrument, sometimes a clean breakdown is not available.
[31] Specifically, we use S124, S12O, and S12Q to denote NBFI.

equity, MMF shares, non-MMF shares and residual "other" positions.[32] Where the QSA provides both sectoral asset positions and corresponding liability positions, we use these to populate the issuer–holder matrix in a way that preserves instrument-level totals and maintains consistency between each sector's financial assets and liabilities as far as possible. Where the QSA information is insufficient to identify the full counterparty split, we allocate the missing positions proportionally based on the available sectoral distribution for the same instrument. We then apply a small number of manual adjustments described below to align the matrix with the categories used in the model.

From the aggregated data, we manually adjust the following accounts: (i) the reported data on bank deposits do not provide all the sectoral breakdowns, as deposits held by households, non-financial businesses, and NBFIs are not available. We therefore use values from the ECB's bank balance sheet statistics;[33] (ii) as for the US data, we exclude the instrument "Monetary gold and SDRs" since it is an asset without a corresponding liability; (iii) the reported data on loans do not differentiate between loans issued by the central bank, banks, and MMFs, therefore we make the assumption that all loans are issued by banks; (iv) we exclude the following instruments because no breakdown by issuer is available: Investment fund shares, equity, insurance and pension schemes, financial derivatives and other accounts receivable;[34] (v) we assume that the reported data on currency refers to the domestic holdings of banknotes and coins by the household and the non-financial business sectors. These amount to €1.1 trillion, or approximately 70% of the total €1.6 trillion of outstanding euro banknotes[35] in Q3 2025; we assume that the remaining 30% is held by rest-of-world households. We take the deposits of banks with the Eurosystem from the Eurosystem's published weekly financial statement of 25 September 2025. Additionally, we convert euro amounts into US dollars using the exchange rate of 1.174 USD per euro, as reported by the ECB on 30 September 2025.

The resulting euro area financial accounts in Q3 2025 are shown in Table 4-2. As for the US, we include a "stablecoin issuer" sector. Given the small amount of EUR-denominated stablecoins in circulation and the regulation in place in the euro area (EA), we assume that the $300 million of stablecoins in circulation in September 2025 are backed by reserves consisting of 60% bank deposits in the EA and 40% public debt securities. Moreover, we assume that 60% of the total amount of EUR-denominated stablecoins are held by EA households, while the remainder is held by the rest of world (excluding the US). We deduct the corresponding stablecoin amounts, both on the liability and the asset sides, from the 'other NBFIs' sector.

[32] This instrument category contains Insurance, pension and standardized guarantee schemes, Financial derivatives, and Other accounts receivable.

[33] https://data.ecb.europa.eu/key-figures/money-credit-and-banking/bank-balance-sheets/deposits?tab=Corporations

[34] The sizes of these accounts held by the household sector are $4 trillion (investment fund shares), $8 trillion (equity), and $10 trillion (insurance and pension schemes, financial derivatives and other accounts receivable).

[35] https://www.ecb.europa.eu/stats/policy_and_exchange_rates/banknotes+coins/circulation/html/index.en.html

Table 4-2: Modified EA financial accounts, Q3 2025 (billions of US dollars)

Holders: → Issuers/debtors:	Households & Non-profits	NFCs	Govt	Central Bank	Banks & MMFs	Other NBFIs	**Stable-coins**	Totals
Households and nonprofits	31	38	100	0	8004	1103	0	9276
NFCs	159	6870	358	237	10144	3469	0	21237
Government: Debt Securities	486	143	441	3345	2232	3722-**0.12**	**+0.12**	10369
Government: Other	2	142	1908	154	2312	223	0	4742
Central bank	1088	185	36	0	2785	0	0	4094
Banks & MMFs: Deposits	11327	4262	287	3712	8982	3062-**0.18**	**+0.18**	31632
Banks & MMFs: Debt Securities	389	84	109	486	1488	1425	0	39821
Banks & MMFs: Other	150	180	14	0	0	583	0	927
Other NBFIs	4678-**0.18**	1576	664	181	6311	13731	0	27141-**0.18**
Stablecoins	**+0.18**	0	0	0	0	0	0	**+0.18**
Totals	18310[36]	13480	3917	8115	42258	27318-**0.3**	**+0.3**	

Sources: QSA; ECB; Authors' calculations.

4.4.3 Rest-of-world and cross-country exposures

Since our analysis is centred on the effects of stablecoin growth on the US and EA financial systems, we do not need to populate the complete rest-of-world financial accounts, which would in any case be challenging. Instead, we focus on the relative cross-country exposures required to translate the theoretical flow-of-funds model into an empirical exercise: (i) Holdings of EA and rest-of-world bank assets by US banks; (ii) Holdings of rest-of-world bank assets by EA banks; (iii) Holdings of USD-denominated stablecoins by EA and rest-of-world households; (iv) Holdings of EUR-denominated stablecoins by rest-of-world households.

To estimate (i), we combine data from several ECB datasets. The Balance of Payments Statistics (BPS) provide the bilateral country dimension that is missing from the domestic QSA matrix. The starting point is the total position of US residents vis-à-vis the euro area by broad instrument. Where the BPS provides the required bilateral instrument directly, we use the observed bilateral total. Where only a broader bilateral aggregate is available, we split it using sectoral weights for rest-of-world vis-à-vis the euro area derived from the QSA. For debt securities and investment fund shares, we use ECB Securities Holdings Statistics (SHSS) because it provides a more granular holder-sector distribution.

[36] As explained above, some instruments are excluded from the analysis because of missing granularity from the raw data on the issuer side. The size of the household sector is therefore underestimated by about $22 trillion. Since the US data did not require a similar exclusion, the difference in household financial assets between the two currency areas is overstated in the matrices.

In general terms, for country c, sector s, and instrument i, the bilateral position is obtained as $X(c,s,i) = X_{BPS}(c,S1,i)\ \omega_{W1}(s,i)$ where $\omega_{W1}(s,i)$ is the relevant sector share from QSA or SHSS vis-à-vis the rest of the world. On the liability side, this amounts to identifying which foreign sectors hold euro area-issued instruments. On the asset side, the same logic is mirrored by using euro area asset positions vis-à-vis the relevant foreign counterpart.

A specific assumption is required for direct investment debt instruments. Foreign direct investment (FDI) debt is not an additional instrument in the flow-of-funds matrix, but a BPS functional category that must be mapped back into QSA instruments. In BPS, FDI debt instruments are recorded as a functional-category item, while in QSA the empirical flow-of-funds matrix is organised by instrument. We therefore do not retain FDI debt as a separate instrument, but reallocate it across the three QSA instrument categories into which FDI debt can economically fall: loans (F4), debt securities (F3), and trade credit/other accounts (F8).

We assume that the composition of FDI debt vis-à-vis the US can be inferred from the euro area's rest-of-world relationship between QSA instrument positions and the corresponding BPS items in case bilateral instrument composition vis-à-vis the U.S. is not available. In other words, the W1 structure is used as the benchmark for decomposing the bilateral US–euro area FDI debt total.

The decomposition is implemented sequentially. First, we identify the loan component. For each sector, we compare the QSA loan position vis-à-vis the rest of the world with the loans already observed in the BPS under other investment. The positive difference is interpreted as the loan-like part of FDI debt. This amount is bounded between zero and the total FDI debt position, so that the procedure cannot create a negative loan component or allocate more loans than the available FDI debt envelope. Formally, the calculation note defines this as

$$gap_{F4}^{X}(s) = QSA_{W1,X}(F4,s) - BPS_{W1,X}(OI_loans,s),$$

with the loan-like share of FDI debt capped at the available BPS FDI debt amount. The resulting loan share is then applied to the bilateral US FDI debt position.

The remaining FDI debt position is treated as a residual to be allocated between debt securities and trade credit/other accounts. The assumption here is that, after the loan component has been removed, the residual FDI debt reflects the remaining QSA gaps in F3 and F8. The residual is therefore split according to their relative weights: the debt-security share is given by the relative F3 gap, and the trade-credit/other-accounts share is the remaining part. Specifically, $FL_{resid,US}^{X}(s)$ is allocated using

$$\omega_{F3}^{X}(s) = gap_{F3}^{X}(s)/(gap_{F3}^{X}(s) + gap_{F8}^{X}(s)),$$

with the complement allocated to trade credit/other accounts F8. This preserves the observed bilateral BPS total, while keeping the final matrix consistent with the QSA instrument classification required for the empirical flow-of-funds exercise.

The resulting matrix is presented in Table 4-3 Panel A, which is a matrix showing the holdings by US sectors of instruments issued in the euro area. This matrix allows us to identify, for example, the amount of assets issued by EA banks that are held by US banks. We then combine this information with the US "From-Whom-to-Whom" matrix (interbank deposits of US banks as holders and total rest-of-world as issuers) with the information from the cross-country exposure of US banks vis-à-vis EA banks and obtain an estimate for the cross-country exposure of U.S. banks vis-à-vis rest of world banks. In our case, the interbank deposits of US banks as holders and total

rest-of-world as issuers in Q3 2025 are $1,390 billion. Of this amount, $639 billion represents the cross-country exposure of US banks vis-à-vis EA banks. The resulting cross-country exposure of US banks to rest-of-world banks is therefore $751 billion ($1,390 billion - $639 billion).

Table 4-3: Cross-country exposures, Q3 2025 (billions of US dollars)
Panel A: US holders and EA-issued instruments

U.S. holders: → EA instruments:	Households & non-profits	NFCs	Govt	Central Bank	Banks & MMFs	Other NBFIs	Totals
Currency	10	10	10	10	10	29	78
Deposits	0	0	8	38	639	0	684
Debt Securities	0	21	350	0	174	218	763
Loans	3	375	27	0	0	865	1270
Equity	530	530	0	0	530	1591	3182
Investment fund shares	0	0	0	314	0	1672	1986
MMF shares	0	0	0	993	0	0	993
Non-MMF shares	0	0	0	0	0	993	993
Others	110	156	116	110	116	481	1090
Totals	653	1092	511	1465	1469	5849	

We follow a similar process to obtain (ii), that is the holdings of EA banks in rest-of-world banks, by -constructing the relative cross-country exposure matrix (Table 4-3, Panel B). This yields a value of $1,988 billion. For (iii) and (iv), we assume that EA households hold 7.5% of the total circulating USD-denominated stablecoins, equivalent to $19 billion, and rest-of-world households hold 67.5% of the total circulating USD-denominated stablecoins, equivalent to $167 billion, and 40% of the total circulating EUR-denominated stablecoins, equivalent to $120 billion (see Section 5.1 for the motivation underlying these assumptions).

By bringing putting together all the elements discussed in the previous subsections, we obtain Table 4-4, which is a matrix representing country and cross-country exposures for Q3 2025. This provides a sufficient empirical specification of our three-country model, allowing us to extrapolate numbers into 2030 based on assumed universal nominal growth rates, and then incorporate various assumptions regarding stablecoin growth and distribution into the scaled 2030 financial accounts. For compactness, this version of the matrix only presents the sectors to be affected by stablecoin growth through the flow-of-funds model, whereas the other sectors are omitted.

Panel B: EA holders and rest-of-world issued instruments

EA holders: → RoW instruments:	Households & Non-profits	NFCs	Govt	Central Bank	Banks & MMFs	Other NBFIs	Totals
Currency	0	0	0	0	0	1	1
Deposits	84	107	23	44	1988	531	2777
Debt Securities	2	127	103	357	1685	3127	5401
Loans	3	803	85	0	1882	1697	4470
Equity	1618	1618	0	0	1618	4854	9708
Investment fund shares	30	7	4	0	12	374	427
MMF shares	0	0	0	0	0	0	0
Non-MMF shares	0	0	0	0	0	0	0
Others	91	91	91	91	89	262	715
Totals	1828	2816	306	492	5656	10846	

Sources: BPS; QSA; SHSS; Authors' calculations.

Table 4-4: Selected country and cross-country exposures, Q3 2025 (billions of US dollars)

	Holders:→	U.S.				EA				RoW
Issuers:		Households & non-profits	Central bank	Banks	Stable-coins	Households & non-profits	Central bank	Banks	Stable-coins	Households & non-profits
U.S.	Government: Treasuries	2890	3831	1940	74					
	Central bank	768	0	3083	0					1085
	Banks: Deposits	13983	7	109	37					
	Bank: Repos	0	0	75	137					
	Stablecoins	62	0	0	0	19				167
EA	Government: Debt					486	3345	2232	0.12	
	Central bank					1088	0	2785	0	317
	Banks: Deposits			639		11327	3712	8982	0.18	
	Stablecoins					0.18	0	0	0	0.12
RoW	Banks			751				1988		

Sources: US Financial Accounts; BPS; QSA; SHSS; ECB; Authors' calculations.

5. Scenario assumptions and output

This section discusses the main assumptions regarding the future growth and adoption of stablecoins (Section 5.1) and analyses the effects of a "baseline" scenario on the financial accounts constructed in the previous section (Section 5.2).

5.1 Scenario assumptions

The stylised flow-of-funds analysis in Section 4.3, together with the discussion in section 4.4 on its mapping to a real-world system of sectoral financial accounts, provides the foundation for adopting the alternative assumptions used in our scenario analysis. An overview of all the scenarios is provided in Table 5-1, with each assumption explained below. Our scenarios are structured around a single "baseline scenario" (Scenario B), with variations in individual parameters considered in separate "sensitivity scenarios" (Scenarios C – I). Scenario A represents a no-growth scenario.

Global USD stablecoin circulation. A key assumption underpinning all scenarios concerns the projected size of USD- and EUR- stablecoin markets. For USD-denominated stablecoins, we rely on the scenario analysis presented by Citi (2025),[37] which forecasts a base case of USD 1.9 trillion in stablecoin circulation by 2030, alongside a "bull case" of USD 4.0 trillion and a "bear case" of USD 0.9 trillion. Our baseline scenario adopts Citi's central estimate of USD 1.9 trillion, with end-September 2030 defined as the reference date across all scenarios, i.e. five years after the sectoral financial accounts snapshot.

This choice does not imply that Citi's baseline necessarily represents the most accurate forecast. Indeed, developments in total stablecoin volumes since the publication of Citi's analysis in late 2025 have been somewhat weaker than anticipated, suggesting that the baseline could plausibly be revised downward. However, by incorporating Citi's bull and bear cases as sensitivity scenarios, we ensure coverage of a sufficiently broad and relevant range of potential outcomes. Should actual developments fall below even the bear-case scenario, the resulting impact of stablecoins on the financial system would be comparatively limited and therefore less relevant for the purposes of this analysis.

Global EUR stablecoin circulation. With respect to EUR-denominated stablecoins and given their currently very limited circulation (below EUR 0.5 billion), we consider a range of scenarios

[37] Citi (2025) models stablecoin demand in 2030 as equivalent to 2.5% of U.S. bank system deposits, driven by the expansion of digitally native firms—particularly in e-commerce—that promote stablecoins as both a payment method and an in-platform token. Assuming total bank deposits grow in line with nominal GDP between 2025 and 2030, this 2.5% substitution corresponds to roughly half a year's deposit growth in 2030 (and twice that share in a bull-case scenario). The analysis also incorporates a shift of international deposits and liquidity into stablecoins held outside the US, denominated either in USD or USD-linked currencies such as HKD and AED. On a global scale excluding the US and China, stablecoin issuance is assumed to reach 0.75% of deposits—approximately matching onshore demand. The base case further includes a 10% substitution of US banknotes held overseas into stablecoins, alongside a 2.5% substitution of domestically held U.S. banknotes. Outside the US and China, 0.5% of local currency banknotes are assumed to transition into stablecoins, implying a comparable share of global stablecoin demand to the proportion of US banknotes held abroad (8%). Finally, projections of the 2030 stock of monetary aggregates (cash in circulation, M0, M1, and M2) are based on nominal GDP growth, with regional variation in adoption: the euro area and the United Kingdom could see local-currency stablecoin issuance, while China would more likely rely on a sovereign CBDC rather than foreign privately issued stablecoins.

spanning EUR equivalents of USD 0, 0.5, and 1.0 trillion. These are labelled as "low," "medium," and "high" scenarios, respectively, with the USD 0.5 trillion equivalent serving as the baseline.

Table 5-1: Summary table of baseline and sensitivity scenarios. Scenario B is the "baseline" scenario. The assumptions deviating from the "baseline" scenario assumptions are highlighted in grey.

Parameters	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**
Total USD SC circulation	248 bn	1.9 tn	4 tn		1.9 tn	4 tn	1.9 tn		
Total EUR SC circulation	0.3 bn	0.5 tn			1 tn				
Geography of USD SC	25% (US) 7.5% (EA) 67.5% (RoW)			25% (US) 15% (EA) 60% (RoW)	25% (US) 7.5% (EA) 67.5% (RoW)				
Geography of EUR SC	0% (US) 60% (EA) 40% (RoW)						0% (US) 25% (EA) 75% (RoW)	0% (US) 60% (EA) 40% (RoW)	
Investments of USD SC	15% (Bank Deposits); 55% (Treasury Reverse Repurchase Agreements); 30% (Treasury Bonds)[38]; 0% (Central Bank Reserves)								
Investments of EUR SC	60% (Bank Deposits) 40% (Government Debt)[39]							30% (Bank Deposits) 70% (Gvt Debt)	25% (Bank Deposits) 25% (Gvt Debt) 50% (Central Bank Res.)
Exchange rate	€1 = $1.174								
Sourcing factors	80% Bank Deposits; 16% Government Debt; 4% Banknotes (US) 88% Bank Deposits; 4% Government Debt; 8% Banknotes (EA) 88% Bank Deposits; 4% Government Debt; 8% Banknotes (RoW)								
Geography of USD currency	50% (US); 0% (EA); 50% (RoW)								
Geography of EUR currency	0% (US); 70% (EA); 30% (RoW)								
Sectoral accounts growth	Identical nominal growth rate for all regions and sectors of 4% per year								

Geographical distribution of USD stablecoins. A key modelling question concerns the allocation of USD and EUR stablecoin circulation across the three regions in our framework (United States, euro area, rest of the world). Reuter (2025, 4),[40] based on Ethereum blockchain data, estimates stablecoin outflows from North America to other regions at USD 54 billion in 2024.

[38] Residual maturity of maximum 93 days.
[39] In the absence of clear rules under MiCAR on maximum maturity, we would assume the same as applicable to the GENIUS, i.e. maximum residual maturity of 93 days.
[40] Other studies of the international circulation of stablecoins are Cardozo (2024), von Luckner (2024), and Auer (2025).

Given that total stablecoin volumes increased from approximately USD 130 billion to USD 200 billion over the same period (i.e. by USD 70 billion), this implies that roughly 77% (54/70) of incremental issuance was held outside the United States. This magnitude appears plausible, as USD stablecoins are widely used globally for crypto trading, corporate payments, illicit transactions, and in particular as a vehicle for circumventing capital controls or accessing a stable store of value in jurisdictions with weaker monetary stability. Accordingly, we assume in the baseline that approximately 75% of USD stablecoins circulate outside the United States.

The regional allocation of this external circulation remains uncertain. Reuter (2025) provides indicative evidence from centralised exchange flows, showing USD 54 billion in outflows from North America distributed across regions as follows: USD 8.6 billion to Africa and the Middle East, USD 20.8 billion to Asia-Pacific, USD 25.0 billion to Europe, and USD 10.6 billion to Latin America and the Caribbean. In addition, an estimated USD 8.3 billion flowed from Asia-Pacific to Europe, likely also USD-denominated and thus relevant for assessing European holdings. For self-custodial wallets, the same source reports USD 21 billion in outflows from the United States and between USD 7.18 billion and USD 8.42 billion in inflows to Europe, depending on the treatment of intra-regional flows.

However, the definition of "Europe" in Reuter (2025) follows IMF classifications and includes non-euro area economies such as Russia, Ukraine, Turkey, and the United Kingdom, which are likely to account for a substantial share of USD stablecoin usage in the region. Given these limitations and considering that key use cases (particularly store-of-value demand and transaction anonymity) are likely to be more prominent outside the euro area, we assume that only a relatively small share of global USD stablecoin circulation is held in the euro area.

In the baseline scenario, global USD stablecoin circulation is therefore distributed as follows: United States 25%, euro area 7.5%, and rest of the world 67.5%. As a sensitivity scenario (Scenario D), we consider a higher euro area share of 15%, with a corresponding reduction of the rest of the world share to 60%.

EUR stablecoin circulation outside the euro area. The geographical distribution of a potential future EUR stablecoin market is subject to considerable uncertainty, as current circulation levels are negligible and, to date, to our knowledge no empirical research has been published on the regional distribution of EUR-denominated stablecoins. Moreover, the dominant future use cases remain unclear. In the absence of more direct evidence, our baseline scenario therefore draws on the observed geographical distribution of euro banknotes, of which approximately 60% circulate within the euro area and 40% outside. We further assumed that EUR stablecoins would not circulate in the United States, or only in negligible amounts, consistent with the limited use of euro cash in that jurisdiction. As a sensitivity scenario (Scenario G), and by analogy with the more globally distributed pattern observed for USD stablecoins, a more outward-oriented configuration is considered, in which only 25% of EUR stablecoins circulate within the euro area and 75% in the rest of the world.

Reserve assets of USD stablecoins. The reserve composition of USD stablecoins is assumed to follow that of Circle's USDC, which appears most representative of stablecoins expected to comply with emerging US regulatory frameworks such as the GENIUS Act and is therefore likely to dominate future growth. While alternative models, such as Tether's USDT, may remain significant, their less standardised and evolving reserve structures make forward-looking assumptions more difficult. As described in Section 4.4, we approximate Circle's reserve composition as of

September 2025 as follows: 15% in bank deposits, 30% in short-term US Treasury securities, and 55% in reverse Treasury repurchase agreements. Depending on the analytical perspective, repurchase agreements may be treated as broadly equivalent to short-term sovereign securities in terms of liquidity and risk characteristics. No additional sensitivity scenarios are specified for the reserve composition of USD-denominated stablecoins.

Reserve assets of EUR stablecoins. For EUR-denominated stablecoins, we assume that, if they become quantitatively significant, most would qualify as "significant" e-money tokens under Markets in Crypto-Assets Regulation (MiCAR). This would imply a reserve structure with 60% held in bank deposits and 40% in securities. Within the euro area, further assumptions are required regarding the allocation of these securities across sovereign issuers; proportional allocation across eligible public debt instruments is adopted as the baseline.

As a sensitivity scenario (Scenario H), a potential legislative adjustment to MiCAR requirements is considered, reducing the minimum share of bank deposits for significant EMTs from 60% to 30%, with a corresponding increase in the share of securities to 70%. The maturity limits applicable to EUR-denominated reserve assets remain insufficiently specified in the current regulatory framework.[41] For simplicity, and by analogy with US proposals such as the GENIUS Act, we assume a maximum maturity of 93 days. In any case, the maturity structure is not central to the core scenario design and becomes relevant only in subsequent analysis, particularly with respect to yield-curve effects.

Moreover, we also explore another scenario (Scenario I) in which EUR-denominated stablecoins hold part of their assets directly at the central bank. In this specific scenario, we assume a 50% share of assets in central bank reserves, 25% in bank deposits, and 25% in government debt.

Exchange rate. We assume an unchanged USD/EUR exchange rate across all scenarios, based on the rate observed on 30 September 2025, namely 1 USD = 0.852 EUR and 1 EUR = 1.174 USD, using the European Central Bank's reference rates.

[41] MiCAR establishes that reserve assets backing e-money tokens (EMTs) must be invested in "secure, low-risk assets that qualify as highly liquid financial instruments," without specifying an explicit maximum maturity at Level 1 (European Union 2023, Art. 54). This qualitative standard is complemented by requirements to ensure redemption at par at all times, thereby implicitly constraining duration and market risk. The European Banking Authority operationalises these principles through regulatory technical standards mandated under MiCAR, introducing explicit liquidity buckets that require a significant share of reserve assets to mature within one and five working days (EBA 2024). These provisions align the reserve composition broadly with the concept of high-quality liquid assets under the liquidity coverage ratio framework, while imposing even shorter effective liquidity horizons. Supervisory guidance from authorities such as the CSSF reinforces that reserve portfolios should exhibit minimal market and interest rate risk, effectively resembling or exceeding the conservatism of money market fund portfolios (CSSF 2025). Stress-testing requirements over one-, five-, and thirty-day horizons further anchor this interpretation by necessitating immediate or near-immediate liquidity under adverse conditions. In practice, this framework implies a strong preference for central bank deposits, overnight instruments, and highly liquid short-term sovereign securities, while discouraging longer-duration or illiquid assets. Although MiCAR does not prescribe a fixed maturity cap, the combined effect of Level 1 principles, Level 2 technical standards, and supervisory expectations results in a de facto restriction to very short-term instruments. European Union. 2023. Regulation (EU) 2023/1114 on Markets in Crypto-Assets (MiCAR); European Banking Authority (EBA). 2024. Regulatory Technical Standards on Liquidity Requirements for Asset-Referenced Tokens and E-Money Tokens under MiCAR; Commission de Surveillance du Secteur Financier (CSSF). 2025. Circulars and Guidance on MiCAR Implementation.

Sources of stablecoin inflows. In the baseline specification, inflows into stablecoins are assumed to be proportional across all eligible funding sources. This assumption ensures internal consistency by implying a linear adjustment process in which inflows scale proportionally with the available stock of assets up to their theoretical exhaustion. In our setting, we infer the weights for each eligible funding source from the composition of households' existing asset portfolio. US households hold $2,890 billion in Treasuries, $768 billion in banknotes, and $13,983 billion in bank deposits. The resulting weights for the sources of stablecoin inflows by US households are therefore 16% government debt, 4% banknotes, and 80% bank deposits. We apply the same approach to euro area households, obtaining weights of 4% government debt, 8% banknotes, and 88% bank deposits. For the rest-of-world households, we assume the same weights as for EA households. These weights apply regardless of whether domestic or foreign issued stablecoins are purchased.

In a more sophisticated version of this analysis, one could use the exact ratios of all eligible funding sources. As part of the sensitivity analysis, alternative assumptions could also be considered, such as higher substitution rates from specific asset classes (for example, a stronger substitution of USD cash into USD stablecoins relative to domestic currency cash). However, such alternative specifications would introduce non-linearities, as the relative importance of different funding sources would change once those with higher substitution rates become depleted. In the currently considered scenarios, we do not assume a higher rate of substitution from EUR banknotes held by rest-of-world households as they represent a negligible share of their total financial assets.

The role of existing dollarisation. The presence of dollarisation—manifested in USD cash, deposits, and US-issued securities held outside the United States—raises important modelling considerations. Distinguishing these external USD positions from domestic financial assets is relevant for two reasons. First, the substitution of an existing USD-denominated asset held abroad (e.g. in Argentina) with a USD stablecoin does not constitute an international capital flow and therefore does not require an offsetting financial flow between countries, unlike the conversion of a domestic-currency asset into a USD-denominated instrument. Second, foreign USD positions may be closer substitutes for USD stablecoins, potentially implying higher substitution rates compared to domestic assets.

While this argument is conceptually plausible, it is not incorporated in the baseline scenario for reasons of simplicity. Instead, substitution is assumed to occur proportionally across all funding sources, implying that in highly dollarised economies, USD cash and deposits would naturally play a larger role in financing stablecoin purchases. At the aggregate level of the rest of the world, however, dollarisation remains a relatively limited phenomenon, and its explicit treatment is therefore of secondary importance in the present three-region framework. It would become more relevant in a more granular setting - for example, if a highly dollarised economy such as Argentina were modelled separately.

Empirical estimates suggest that approximately 30–50% of euro banknotes circulate outside the euro area (Lalouette et al., 2021), consistent with the empirical result obtained in Section 4.4 when constructing the EU financial accounts, where 30% of euro banknotes are allocated to the rest-of-world households. For the US, Judson (2024) estimates that "half or a bit more" of US dollar cash circulates abroad. Accordingly, we identify a similar distribution in Section 4.4 when constructing the US financial accounts. Therefore, a value of 50% is assumed, again fully

attributed to the rest-of-world households rather than the euro area. For USD- and EUR-denominated deposits and securities held abroad, refer to Section 4.4.

Growth of sectoral accounts between 2025 and 2030. We need to incorporate the stablecoin issuance assumptions into sectoral accounts for end-Q3 2030, which are derived from the Q3 2025 accounts. To do so, we assume that all 2025 financial positions across all regions grow at an annual rate of 4%.

5.2 Scenario output

This section presents the results of the "baseline" scenario (Scenario B in Table 5-1) applied to the empirical financial accounts derived in Section 4.4 and following the theoretical model introduced in Section 4.3. Table 5-2 presents a condensed version of the financial accounts, showing the positions after growing the Q3 2025 accounts to Q3 2030 at a nominal growth rate of 4% per year, together with the relative changes resulting from stablecoin growth.

This condensed version of the financial accounts displays only whose positions change as a result of stablecoin growth. For example, households and non-financial businesses are two sectors that do not experience any changes on their liability side, and are therefore not shown in the matrix. Similarly, government liabilities are affected only through the "Treasuries" component, while other government liabilities remain unchanged and are therefore omitted. As a result, the sectoral asset and liability totals in this condensed matrix will not be consistent with the totals of the more granular versions of the country-specific matrices derived in Section 4.4. To avoid confusion, these totals are therefore not shown.

Instead, the focus is on the net changes in the positions of each sector. Positions that remain unchanged are omitted from the tables. Since the resulting changes in assets and liabilities are equal and opposite, they cancel out in net terms, leaving total balance-sheet sizes unchanged while altering their composition.

United States. The projected volume of USD-denominated stablecoins of $1.9 trillion in the baseline scenario translates into an increase of $1,652 billion of USD-denominated stablecoins in addition to the $248 billion outstanding in Q3 2025, of which $413 billion in additional stablecoins is held by US households. To purchase stablecoins, US households reduce their positions in Treasuries, banknotes, and bank deposits by $66, $17, and $330 billion, respectively.

Even though banks' liabilities decline as a result of a decrease in households' bank deposits, stablecoin issuers' deposits with banks increase by $248 billion, and reverse repo transaction with banks increase by $908 billion. Moreover, US banks strengthen their cross-country positions through an increase in bank deposits of $124 billion with euro area banks and of $1,115 billion with rest-of-world banks. The sell-off of Treasuries by US households is completely offset by purchases of Treasuries by stablecoin issuers to back their tokens. The US central bank's balance sheet contracts by $17 billion, corresponding to the reduction in banknotes held by households as they purchase stablecoins.

Euro area. In the baseline scenario, the projected volume of EUR-denominated stablecoins is $500 billion. In the euro area, this interacts with the increase in the supply of USD-denominated stablecoins, giving rise to two forces: (i) an increase of $124 billion in USD-denominated stablecoins held by euro area households; (ii) and increase of $300 billion in EUR-denominated

stablecoins held by euro area. EA households finance their purchase of USD- and EUR-denominated stablecoins by reducing EUR-denominated instrument holdings. Accordingly, EA households will decrease their holdings of government debt, banknotes, and bank deposits by $17, $34, and $373 billion, respectively.

As in the US case, household deposits with EA banks decline, but EUR-denominated stablecoin issuers replace these deposits. EA banks experience an inflow of capital through US banks' deposits (+ $124 billion), but, at the same time, experience an outflow of capital to rest-of-world banks (-$200 billion). The EA central bank's balance sheet contracts by $34 billion, corresponding to the reduction in banknotes held by households as they purchase stablecoins.

Table 5-2: Financial accounts in the "baseline" scenario (Scenario B, billions of US dollars)

Holders:→		US				EA				RoW	Total Δ
Issuers:		Households	Central Bank	Banks	Stable-coins	Households	Central Bank	Banks	Stable-coins	Households	
US	Government: Treasuries	3516 **-66**	4661	2361 **-430**	74 **+496**						**0**
	Central bank	934 **-17**	0	3752	0					1320	**-17**
	Banks: Deposits	17013 **-330**	9 **-17**	133	37 **+248**						**+809**
	Bank: Repos	0	0	92	137 **+908**						
	Stablecoins	62 **+413**	0	0	0	19 **+124**				167 **+1115**	**+1652**
EA	Government: Debt					592 **-17**	4069	2716 **-183**	0.12 **+200**		**0**
	Central bank					1324 **-34**	0	3388	0	343	**-34**
	Banks: Deposits			777 **+124**		13781 **-373**	4517 **-34**	10928 **+300**	0.18		**+17**
	Stablecoins					0.18 **+300**	0	0	0	0.12 **+200**	**+500**
RoW	Banks			914 **+1115**				2419 **+200**			**+1315**
Total Δ		**0**	**-17**	**+809**	**+1652**	**0**	**-34**	**+17**	**+500**	**+1315**	**+4242**

Sources: Authors' calculations

6. Implications for euro area financial markets and stability

Focusing mainly on the scenarios developed in Section 5, this section assesses financial market and stability implications for the euro area (Section 6.1) and discusses possible policy implications (Section 6.2).

6.1 Impact on key euro area financial metrics

Table 6-1 summarises the impact of the stablecoin scenarios presented in Section 5 on the euro area in terms of changes in eleven selected key financial metrics. The effects on these metrics are subsequently discussed from a monetary sovereignty, financial structure and financial stability perspective.

Table 6-1: Impact of eight stablecoin scenarios on eleven euro area financial system metrics; in billions of US dollars (rounded) or %. Fields in grey are the value of the metrics in the respective row that show the biggest deviation from scenario A (no stablecoin growth scenario)

	A. No SC growth	**B.** SC baseline scenario	**C.** High USD SC (4 tn)	**D.** 15% EA circul. of High USD SC	**E.** High EUR SC (1 tn)	**F.** High EUR SC & High USD SC	**G.** 75% RoW EUR SC circ & high EUR SC	**H.** EUR SC 70% in Secur. for EUR SC High	**I.** EUR SC 50% in CB reserves; EUR SC High
1. USD SC held in Europe	19	143	300	600	143	300	143	143	143
2. EUR SC circulating abroad	0	200	200	200	400	400	750	400	400
3. Total SC circulating in Europe	19	443	600	900	743	900	393	743	743
4. Total EUR SC circulation	0	500	500	500	1,000	1,000	1,000	1,000	1,000
5. HHs deposits at banks	13,781	13,408 (- 2.7%)	13,269 (- 3.7%)	13,022 (- 5.5%)	13,144 (- 4.6%)	13,005 (-5.6%)	13,452 (-2.4%)	13,144 (-4.6%)	13,144 (-4.6%)
6. Total deposits at banks	39,318	39,335 (+0.0%)	39,341 (+0.1%)	39,352 (+0.1%)	39,347 (+0.1%)	39,353 (+0.1%)	39,682 (+0.9%)	39,047 (-0.7%)	39,496 (+0.5%)
7. Share SCs in bank deposits	-	1%	1%	1%	2%	2%	2%	1%	1%
8. Share HHs fin. assets in SCs	-	2%	3%	4%	3%	4%	2%	3%	3%
9. Δ size of CB balance sheet	-	- 34	- 46	-69	- 58	- 70	- 30	- 58	442

10. Share short-t. Gvt debt held by SCs	-	11%	11%	11%	21%	21%	21%	37%	13%
11. Net change in EA banks' cross-border interbank deposit positions[42]	-	-76	82	363	-276	-118	-626	-276	-276

Sources: Authors' calculations

The most extreme values of the metrics are highlighted in Table 6-1 in grey. A similar analysis could be conducted for the US. Below, we explain the relevance of each of the 11 metrics and interpret the figures in the table and their potential implications for financial stability. For the baseline scenario, Table 6-2 provides a comprehensive overview of the changes to the financial accounts in a simplified version of the three-country model. It presents the same figures as Table 5-2 but focusing exclusively on the euro area. Table 6-3 presents scenario F in the same format; similar tables could of course be constructed for any of the other scenarios. In these tables, we show the US and the rest of the world only to the extent that stablecoin issuance and cross border circulation affect their cross-border positions vis-à-vis the euro area.

Table 6-2: Euro area sectoral financial accounts, as impacted by stablecoin issuance and circulation under the baseline scenario B. All figures in USD billion

Holders: → Issuers:	U.S. Banks	EA Households	EA Central bank	EA Banks	EA Stablecoins	RoW Households	Total Δ
U.S. Stablecoins		19**+124**					**+124**
EA Gov.		592**-17**	4069	2716**-183**	0.12**+200**		**+0**
EA CB		1324**-34**	0	3388	0		**-34**
EA Banks	777**+124**	13781**-373**	4517**-34**	10928	0.18**+300**		**+17**
EA SCs		0.18**+300**	0	0	0	0.12**+200**	**+500**
RoW banks				2419**+200**			**+200**
Total Δ	**+124**	**+0**	**-34**	**+17**	**+500**	**+200**	**+807**

Sources: Authors' calculations.

[42] A positive value means that the net deposits of foreign banks with euro area banks increased.

Table 6-3: Euro area sectoral financial accounts, as impacted by stablecoin issuance and circulation under the baseline scenario F ("high USD and EUR stablecoin circulation"); all figures in USD billion

Holders: → Issuers:	U.S. Banks	EA Households	EA Central bank	EA Banks	EA Stablecoins	RoW Households	Total Δ
U.S. Stablecoins		19+281					+281
EA Gov.		592-36	4069	2716-364	0.12+400		+0
EA CB		1324-70	0	3388	0		-70
EA Banks	777+281	13781-775	4517-70	10928	0.18+600		+35
EA SCs		0.18+600	0	0	0	0.12+400	+1000
RoW banks				2419+400			+400
Total Δ	+281	+0	-70	+264	+1000	+400	+1647

Sources: Authors' calculations.

1. The circulation of USD stablecoins in the euro area is a potential policy issue from the perspective of monetary sovereignty (including monetary policy, control of illicit payments, and seigniorage income) and could also be relevant from an exchange rate perspective, as large scale European demand for US stablecoins could in an extreme scenario weaken the euro relative to the US dollar. The most adverse scenario from this perspective would be scenario D, in which 15% of USD 4 trillion of USD stablecoins are held in Europe, corresponding to USD 600 billion. Assuming a 3% seigniorage income, this would generate $18 billion in annual monetary income for the United States.

To the extent that US stablecoins held by European households would substitute previous retail deposits and banknotes, this would translate into a loss of European monetary income. Where stablecoin purchases are financed through retail deposits - the predominant form of financing under our assumption of proportionality of financing sources relative to initial stocks - these deposits are transformed into more expensive wholesale deposits. The resulting spread between the two financing costs represents a loss of European monetary income that would have been generated by banks through deposit issuance.

Monetary policy transmission would be affected to some extent, although not fundamentally, since the ratio of USD stablecoin circulation in the euro area relative to M1 would be only in the order of 4%. It is difficult to assess to what extent a total circulation of $600 billion could facilitate illicit payments relative to today's much lower level of stablecoin holdings. In general, a large volume of stablecoin circulation would also imply a high penetration rate, i.e. a high share of the population holding USD stablecoins, including through non-hosted wallets, potentially generating network effects also in illicit usages. Nevertheless, the use of stablecoins for illicit activities does not in itself require particularly high volumes.

2. The circulation of EUR stablecoins abroad may generally be considered positive by EU policymakers: it can generate additional (private) seigniorage income for the euro area and contribute to strengthening the international role of the euro, while complementing other euro-denominated financial instruments. Some effects on third countries may nevertheless be negative, such as the transfer of seigniorage income, which was discussed in the previous paragraph in the context of USD stablecoin circulation in the euro area.

In a scenario of stablecoins developing legitimate use cases, the circulation of EUR stablecoins abroad could however also be positive for user countries, in particular if European stablecoins are encouraged or eventually required to adopt effective safeguards against illicit use cases. Such safeguards would, all else equal, reduce the competitiveness of EUR stablecoins. Under scenario G, foreign circulation of EUR stablecoins is highest, with 75% of the $1 trillion total, i.e. $750 billion. Assuming 3% interest, this would generate (private) seigniorage income of $22.5 billion.

3. Total stablecoin circulation in Europe would be highest under scenarios D and F, reaching $900 billion in both cases, of which $200 billion and $400 billion, respectively, would be euro-denominated stablecoins. This metric is relevant from the perspective of the re-allocation of financial assets of households, including, for example the loss of cheap and stable retail deposits by banks, and the loss of household income from substituting remunerated securities holdings with unremunerated stablecoins. From these perspectives, it does not matter if stablecoins are USD- or EUR-denominated, as we assumed that household purchases of the two are financed with asset liquidations (banknotes, bank deposits, securities) of identical proportions.

4. Total EUR stablecoin circulation is directly determined by the EUR stablecoin scenario considered – either $500 billion (main scenario, see columns B,C,D in Table 6-1) or $1,000 billion (high scenario, see columns E,F,G,H,I) in total. This metric captures the possible run risk associated with EUR stablecoins, i.e. the negative externalities of a run by stablecoin holders, the resulting liquidation needs for the stablecoins' reserves, and the associated risk of destabilising bank funding through withdrawals of stablecoin deposits and disrupting securities markets through asset fire sales.

It could be argued that the risks of banks relying disproportionally on unstable wholesale short-term funding sources are not linked specifically to stablecoins: banks have economic incentives to limit such reliance, and liquidity regulation already addresses the issue. Regarding the possible repercussions for EUR securities markets in case of a run on stablecoins, the most demanding scenario would be H, which combines a $1 trillion volume of EUR stablecoins with a changed regulatory framework in which 70% of reserves are held in the form of securities, corresponding to EUR 700 billion.

5. and 6. Impact of stablecoins on deposits with banks. The main structural negative impact of stablecoins on banks is associated with the loss of granular, cheap and stable deposits, which are typically household deposits subject to deposit insurance up to €100,000. Stablecoins transform such deposits into unstable and more expensive wholesale deposits, with a worse liquidity coverage ratio (LCR). In the EU, retail deposits are subject to LCR run-off ratios of 3% or 5%, while NBFIs and correspondent banks are subject to assumed run off ratios of 100%. One should assume that the LCR regulation is well calibrated and that assumed run-off rates are aligned with the economics of such deposits, including their pricing: close to zero (in the current

rate environment) for stable retail deposits, and close to short-term risk-free capital market rates for wholesale financial deposits.

The transformation of household deposits into wholesale deposits thus provides insight for both the deterioration of the LCR and on the increase in banks' funding costs of banks under the various scenarios. Total deposits with euro area banks increase under all scenarios except scenario H, where we assume that euro stablecoins invest 70% of their assets in securities, and only 30% in deposits. However, household deposits decrease proportionally to the total amount of stablecoins circulating in Europe and the decline is thus highest under scenarios D and F, in which banks lose about 6% of their deposits, or slightly more than $750 billion. If the funding cost of wholesale deposits is 2 percentage points above that of retail deposits, this would cost banks $10 billion in interest rate income per year. $750 billion is also the order of magnitude of the stable funding lost from the perspective of LCR.

The aggregate figures do not, however, capture the strong variation across bank types. Savings banks with retail-deposit oriented business models can lose significantly more than the 6% of retail deposits indicated above, while banks with fewer and wealthier households and more corporate clients will see more marginal effects and larger net positive effects in terms of total deposits than indicated in row 6.

Table 6-4: LCR run-off rates for deposits according to Articles 24-32 of the LCR delegated regulation[43]

Deposit / Funding Type	EU LCR run-off rate	Explanations
Stable retail deposits	5% or 3%	Covered by EU dep. guar. scheme
Other retail deposits	10%	Retail deposits not qualifying as "stable"
Higher-risk retail deposits	10–20%	High-value, rate-sensitive, FX, internet deposits, wealthy clients
SME deposits treated as retail	5-10%	SME relationship operationally similar to retail banking
NFCs, sovereigns, CBs, PSEs, etc.	20-40%	Excess treasury balances, investment cash
Oper. deposits from financial inst.	25%	Only where strictly tied to operational services
Non-operational deposits from banks and NBFIs deposits	100%	Unsecured interbank and financial-sector funding; NBFIs

Although the impact of the more bullish stablecoin issuance scenarios on euro area banks is non-negligible, it does not raise obvious public policy concerns. Stablecoins can be seen as a new form of liquidity transformation. If widely adopted, they could be expected to improve the total liquidity transformation capacity of the financial system. Based on this and the assumed favourable safety and liquidity properties of stablecoins, investors (including households) may

[43] Commission delegated regulation (EU) 2015/61 of 10 October 2014 to supplement Regulation (EU) No 575/2013 of the European Parliament and the Council with regard to liquidity coverage requirement for Credit Institutions.
https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32015R0061

be willing to hold a larger share of riskier assets, such as equity and longer-maturity bonds. This should compensate, at the level of the economy as a whole, for the slightly higher overall funding costs faced by banks, due to the presence of stablecoins. Concerns would therefore arise only if there were specific reasons to question the ability of stablecoins to enhance liquidity transformation, for example because of negative externalities. In the absence of such evidence, the introduction of a new solution should not be expected to reduce the total intermediation capacity or efficiency of the financial system.

7. Share of stablecoins in total bank deposits. The size and total share of stablecoin deposits with banks in total bank deposits provide another measure of the financial stability risk that could arise from the rapid liquidation of stablecoins by their holders, and the resulting withdrawal of bank deposits that serve as reserve assets for stablecoins. The most relevant scenarios in this respect are scenarios E, F, and G, where the share of stablecoin deposits amounts to 2%.

One could, however, question whether this figure is not redundant relative to metrics 5 and 6, which capture substitution of retail with wholesale deposits. Indeed, it should not fundamentally matter for a bank if a wholesale deposit is placed directly by a European stablecoin issuer, or whether it is a cross-border bank deposit resulting from the circulation of USD stablecoins in Europe. Both types of wholesale deposits should have broadly similar properties, being relatively unstable and expensive.

More generally, one could argue that the need for a sound bank liquidity management should in any event be addressed through regulatory liquidity requirements, in addition to banks' own economic incentives to maintain stable balance sheets. An increase in stablecoin deposits should therefore not raise fundamental financial stability concerns. Rather, it would require banks to make structural adjustments to their balance sheets to preserve a stable asset-liability structure. These adjustments imply a certain loss of competitiveness for banks relative to other forms of financial intermediation, but this does not provide a justification for public policy intervention.

8. Share of household financial assets held in stablecoins. This metric may be relevant from the perspective of monetary policy transmission because stablecoin remuneration does not respond to changes in ECB interest rates: EUR stablecoins are strictly unremunerated, and US stablecoins are not denominated in EUR. The metric also provides a broader indication of the relative importance of stablecoins amongst financial assets. The values in this row are proportional to the total stablecoin circulation in the euro area, as shown in row 3. Accordingly, scenarios D and F lead to the largest effects, with unremunerated stablecoins accounting for 4% of household financial assets.

This could have some implications for household income and for the sensitivity of household income to the interest rate level (and associated incentives), but neither the effectiveness of monetary policy nor the general income situation of households would be fundamentally affected. Regarding the latter, it should be noted that the households' shift into stablecoins (which are low-risk and highly liquid) could affect the remainder of their portfolios. For a given level of liquidity and risk preferences, households may reallocate the rest of their financial assets towards higher-risk, higher-yield assets. A partial analysis focusing only on stablecoins would therefore be misleading.

9. Size of the central bank balance sheet. In all scenarios except scenario I, the growth of stablecoins affects the size of the central bank balance sheet mainly through the assumed use of banknotes to fund stablecoin holdings. The central bank balance sheet therefore shrinks, although only by a relatively small amount, since the role of banknotes in financing stablecoin purchases is low (proportional to the absolute size of banknotes vs. deposits vs. securities in household portfolios). Scenario F leads to the largest decline of banknotes in circulation, and therefore to the largest reduction of the Eurosystem balance sheet (- €70 billion).

Banknotes in circulation currently amount to around €1,500 billion. Assuming an annual growth of 4% until 2030, this stock would rise to about €1,850 billion. A decline of €70 billion would correspond to a reduction of around 4% and a loss of seigniorage income of around €2 billion per year, depending on the level of euro area interest rates.

In practice, other factors could weigh more heavily on banknote demand, and consequently, on central bank seigniorage income. These include a further decline of the use of cash in point-of-interaction (POI) and peer-to-peer (P2P) payments, as well as more effective measures against the use of cash for tax evasion. A successful digital euro that is not overly constrained could counterbalance this.

Scenario I is fundamentally different from the others in its impact on the size of the Eurosystem balance sheet because euro stablecoin issuers would deposit 50% of their reserves (of €1 trillion) with the Eurosystem. As a result, the balance sheet would increase by €442 billion, after accounting for the reduction in the volume of banknotes in circulation.

The structural position of banking system vis a vis the central bank would change similarly to the size of the central bank balance sheet. Scenario I is therefore the only scenario in which banks would become more dependent on Eurosystem credit and collateral scarcity would increase. However, the Eurosystem could offset this increased dependence by purchasing securities, so that the increase in central bank liabilities in the form of stablecoin deposits would be exactly matched by a corresponding increase in the central bank's securities portfolio. European banks currently still have a significant liquidity surplus with the Eurosystem resulting from past asset purchase programmes, which were much larger than €442 billion. Central banks, including the Eurosystem, have the tools and a suitable operational framework to react to changes in autonomous liquidity factors.

10. Share of short-term euro area government debt held by stablecoin issuers. This metric is determined by the issuance of EUR stablecoins, regardless of where they circulate. Scenarios E, F, and G would lead to a share of short-term euro area government debt held by stablecoin issuers of 21%, rising to 37% in scenario H. We assume that short-term government debt (i.e. debt with a residual maturity of one year or less) accounts for around 15% of total outstanding debt in the euro area.[44] We therefore calculate the absolute value of short-term euro area government debt by applying this percentage to total outstanding government debt. Holdings of short-term euro area government debt by stablecoin issuers would be particularly large under scenario H, which

[44] https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Structure_of_government_debt#Breakdown_by_financial_instrument

assumes high stablecoin issuance with a regulatory change under which stablecoin issuers would allocate 70% of their reserves to short-term euro area government debt.

This can be assessed from different perspectives:

- Impact on the **steepness of the yield curve:** Assuming sovereigns do not adjust their issuance patterns, the yield curve would become steeper in the 1-2 years segment. This effect would likely be contained by opportunistic investors, who would then largely avoid the short end of the curve, where stablecoin issuers tend to concentrate their investments.
- Impact after considering possible **adjustments to issuance patterns:** Higher demand in the short-term segment would reduce issuance costs of short-term debt, making it more attractive for sovereign issuers. They could therefore adjust their issuance plans to mitigate any impact on the steepness of the yield curve. Such adjustments could, however, increase rollover risks, as highlighted by Borensztein et al (2004): "*reliance on short-term [...] debt is associated with a higher frequency of debt crises [....] Short-term debt [...] is associated with vulnerability to sudden changes in market sentiment: worsening perceptions of the country's creditworthiness can quickly feed into higher interest costs, often leading to vicious circles*." (p. 6-7)
- **Portfolio preferences of stablecoins issuers**. Stablecoin issuers may favour higher yielding or higher rated sovereign issuers and may prefer a high degree of diversification. One reason for a bias towards highly-rated government bonds is reputational. As stablecoins cannot compete through the remuneration of their monetary liabilities, issuers may instead seek to compete by signalling the perceived safety of their reserve assets. The average rating of their assets may be considered important in this respect. Stablecoin issuers will also likely prefer more liquid sovereign bonds, but it is unclear whether this preference is stronger than that of other market participants. More generally, it remains difficult to predict at this stage the future portfolio management preferences of significant euro stablecoin issuers and how their attitudes towards liquidity, credit quality, yield and diversification will evolve.
- **(In)stability of stablecoin issuers as investors:** Stablecoin issuers may be more "erratic" in rebalancing their portfolios across sovereign issuers, contributing further to rollover risk. One possible reason is that stablecoin issuers are subject to greater scrutiny and run risk relative to other institutional investors, such as pension funds or sovereign wealth funds. Moreover, the demand for stablecoins may itself be unstable, leading to fluctuations in their aggregate investment volumes and therefore creating demand shocks to the entire short-term euro area sovereign bond market. Overall, stablecoin issuers could be less stable investors than other non-bank financial institutions, both in terms of aggregate investment levels and portfolio allocation.

11. Net change in euro area banks' cross-border interbank deposit positions and exchange rate implications: The net capital flows created by stablecoins can be positive or negative, depending on the balance between the use of USD stablecoins in the euro area and the holdings of EUR stablecoins in the rest of the world. Among the scenarios described above, the largest euro area capital outflow associated with stablecoins occurs in scenario D, which combines high USD stablecoin issuance ($4 trillion) with a large share of USD stablecoins circulating in the euro area (15%). In this case, total stablecoin related capital outflows amount to $363 billion, which need to be offset by inflows from other parties, such as banks, potentially exerting some pressure on the exchange rate. The scenario with the largest capital inflow associated with stablecoins occurs

in scenario G, which combines $1 trillion of EUR stablecoin circulation with 75% of stablecoins circulating outside the euro area. In this case, net inflows amount to $626 billion and could create some appreciation pressure on the euro. However, even these extreme capital flow scenarios appear moderate considering the scale of the euro area's balance of payments. The euro area runs a large current account surplus vis-à-vis the rest of the world, of around €420 billion (about 2.8 % of GDP), while its current account with the US is broadly balanced. Therefore, net capital flows of $363 or $626 billion over five years would still be moderate, and are unlikely to have a major impact on exchange rates.

The scenario analysis focuses on medium-term balance-sheet configurations in 2030 and therefore primarily captures the effects of stablecoin adoption once financial markets and intermediaries have had time to adjust. The finding that even relatively large stablecoin sectors can be accommodated without major disruption should not be interpreted as implying that all transition paths would be equally benign. A rapid reallocation of funds from bank deposits and other financial assets into stablecoins could generate temporary liquidity pressures, funding strains, and asset-price adjustments that are materially larger than those suggested by the steady-state results. The manageability of the scenarios analysed in this paper is therefore conditional not only on the ultimate scale of stablecoin adoption, but also on the transition occurring at a pace that allows banks, sovereign debt markets, and reserve asset providers to adapt.

6.2 Policy and regulatory implications

The value added and potential risks of stablecoins for society have been extensively discussed. Legislators in major jurisdictions, notably the European Union and the United States, have concluded that well-regulated stablecoins should be permitted and have enacted comprehensive regulatory frameworks (MiCAR in the EU and the GENIUS Act in the US). From a European perspective, however, two concerns remain. First, MiCAR may not fully capture certain risks. Second, MiCAR may be over-ambitious in some respects, particularly given the global nature of the stablecoin market. From this perspective, even our $500 billion baseline scenario for EUR stablecoin circulation may look optimistic. The worst outcome is presumably one in which stablecoins are generally successful as implied by the baseline assumptions of high USD stablecoin circulation, while MiCAR-compliant stablecoins remain marginal, as is currently the case. Given the path dependencies and network effects associated with the broader dominance of the US dollar, euro-denominated stablecoins may in any event struggle to gain market share. This would imply not only that MiCAR's domestic public policy objectives for e-money tokens (EMTs) are not achieved, but also that the income generated by stablecoin issuance accrues largely outside Europe. At the same time, it would expose Europe to the risk of 'infrastructure dollarisation' (Reichlin et al., 2026) and limit Europe's ability to shape global standards in the emerging digital finance ecosystem.

The structural framework developed in this paper provides a useful starting point for reconsidering these policy issues from a European perspective. In particular, the three-country flow-of-funds framework shows, among other things, that foreign-currency stablecoins circulating in Europe do not mechanically reduce bank deposits. Instead, they transform granular, stable, and inexpensive retail deposits into concentrated, potentially unstable, and more costly wholesale deposits.

Euro-denominated stablecoins have similar, although not identical, effects on the deposit base of European banks. From a European policy perspective, however, they appear preferable for several reasons. First, as MiCAR-compliant instruments, they reflect the preferences of the European legislator. Second, they generate monetary income within Europe. Third, they may strengthen demand for European safe assets, in particular if held abroad. Fourth, they may support the international role of the euro and complement broader policy efforts in this direction. Whether euro stablecoins circulate primarily within the euro area or abroad is of limited importance from the perspective of European financial stability, since neither the deterioration of banks' funding conditions nor the risk of sudden outflows from stablecoin holders depend, a priori, on the geographical distribution of stablecoin use.

However, net cross-border flows of stablecoins, defined as inflows of foreign stablecoins into Europe minus outflows of euro stablecoins to the rest of the world, could affect the exchange rate. By combining a five-year projection of sectoral financial accounts with a range of stablecoin scenarios over the same horizon, the analysis focuses on a realistic setting in which stablecoins become materially more important than they are today and their structural and financial stability effects become economically significant.

In reconsidering MiCAR and the broader regulation of stablecoins, EU legislators should first reaffirm their general policy stance and their preference for the development of euro-denominated stablecoins embedded in MiCAR. At the same time, several critical perspectives, although beyond the scope of the flow-of-funds analysis of this paper, should not be dismissed entirely. Stablecoins continue to be used extensively for illicit transactions (Chainalysis, 2026; Financial Action Task Force, 2026). Public blockchains remain subject to unresolved governance and regulatory issues, while international institutions such as the Bank for International Settlements continue to highlight risks to monetary integrity and financial stability. Moreover, the efficiency gains often attributed to stablecoins in cross-border payments may largely reflect an uneven regulatory playing field between the traditional banking system and public blockchains. If robust and well-regulated blockchain infrastructures were to emerge, central bank money available on-chain could become the preferred settlement asset. In permissioned private blockchain environments, the incremental value of blockchain and distributed ledger technology may in any case be limited. In addition, the international circulation of euro stablecoins could be seen as undermining the monetary sovereignty of other jurisdictions and therefore to be inconsistent with the European Union's values and its broader commitment to international cooperation. From this perspective, alternative approaches to strengthening the international role of the euro might be preferable.

A more affirmative view would start from the premise that stablecoins may support productive use cases and that these should be given an opportunity to emerge in Europe. Such an approach would recognise the potential benefits to Europe if stablecoins deliver on their promises and develop broadly in line with the more optimistic scenarios for euro stablecoins explored in the five-year structural analysis presented in this paper. It would also be more consistent over time, as it aligns with the apparent intentions of the legislator when adopting MiCAR. On this basis, both the MiCAR provisions governing e-money tokens (EMTs) and related policies, such as the Eurosystem's approach towards granting stablecoin issuers access to its balance sheet, could be revisited with the aim of increasing the likelihood that euro stablecoins ultimately achieve meaningful scale.

Policy options to strengthen euro-denominated stablecoins

Several measures could improve the attractiveness and competitiveness of euro-denominated stablecoins (e.g. Bindseil and Voloder, 2026; Reichlin et al, 2026):

- First, while prudential safeguards relating to liquidity, capital, and governance should remain stringent, the current prohibition on remunerating EMT holders lacks a compelling economic rationale and could be reconsidered.
- Second, the requirement to hold a large share of reserves as bank deposits could be replaced by a principles-based approach allowing issuers to allocate reserves across a diversified pool of high-quality liquid assets. This would reduce concentration risk and limit the risk of negative feedback loops between banks and stablecoins. In this context, the set of eligible reserve assets could be broadened and aligned more closely with the logic of the LCR as applicable to banks, including the possible inclusion of selected Level 2A euro-denominated assets.
- Third, the transparency regime could be made more proportionate and risk-based. Significant EMT issuers could face more frequent and standardised disclosures, similar to those required for asset-referenced tokens, while smaller issuers could continue to face lighter reporting obligations to preserve contestability and innovation.
- Fourth, the framework could place greater emphasis on diversification, stress testing, and liquidity management by requiring issuers to demonstrate their ability to withstand severe redemption scenarios and by introducing concentration limits and explicit liquidity buffer arrangements.
- Fifth, EMT issuers could be granted carefully calibrated access to central bank settlement infrastructure for liquidity and risk management purposes, potentially subject to quantitative limits and tiered remuneration to safeguard the implementation of monetary policy.
- Sixth, allowing EMT issuers to hold reserves at the ECB could strengthen trust in stablecoins. This, in turn, would reduce the risk of runs, de-pegging and fire sales of reserve assets. Finally, the European Commission could provide clarity and establish a coherent framework for cross-border stablecoin use that reconciles territorial supervision with the inherently global nature of digital payment systems. Ultimately, multi-issuance[45] frameworks appear

[45] Under MiCAR, multi-issuance refers to a structure in which an EU-authorised issuer of an EMT issues a token that is economically and technologically fungible with a token issued by an affiliated or partner entity in a third country. In such arrangements, holders cannot distinguish whether a specific token unit was issued inside or outside the Union and may seek redemption from the EU issuer even when the corresponding reserves are held outside the EU. The European Central Bank and the European Systemic Risk Board have argued for a more restrictive interpretation or legislative amendment, warning that EU issuers could face global redemption claims without holding the associated reserves within the Union. In a period of stress, third-country authorities might ring-fence assets while non-EU holders could redeem through the EU entity because MiCAR provides stronger redemption rights and prohibits redemption fees. Two broad approaches can be considered. One would establish an equivalence regime under which multi-issuance remains permissible. The other would abandon multi-issuance and instead allow the direct distribution in Europe of foreign stablecoins under an equivalence regime. In the flow-of-funds model used in this paper to analyse the circulation of US dollar stablecoins in Europe, multi-issuance was not modelled explicitly, because from a macro-financial perspective a segregated reserve located in Europe and invested in US dollar assets makes little difference. Such reserves ultimately remain claims on US counterparties, as European banks receiving US dollar deposits from local EMT reserves would typically channel these funds back to the United States rather than maintain unhedged foreign currency positions. If anything, multi-issuance appears to add complexity, costs, and potentially additional vulnerabilities. More fundamentally,

inefficient relative to a simple equivalence regime that would allow some international stablecoins to be directly distributed by crypto asset service providers (CASPs) in the euro area. If all jurisdictions adopted strict multi-issuance rules, including segregated domestic reserves for foreign stablecoins, the cross-border use of stablecoins would become significantly less viable. The EU approach also seems inconsistent, when looking at the relatively light treatment by MiCAR of Bitcoin and other unbacked crypto-assets, despite their lack of intrinsic value.

The five-year structural scenarios analysed in this paper suggest that, from a narrow financial stability and monetary policy perspective, even high levels of stablecoin circulation do not raise fundamental concerns. This holds even under bullish assumptions in which the circulation of euro stablecoins reaches €1 trillion. The flow-of-funds analysis also shows that similar structural effects, most notably the transformation of granular household deposits into concentrated wholesale deposits, also arise when US dollar stablecoins circulate in Europe. Actively limiting the development of euro stablecoins through policy choices would therefore not shield Europe from these effects.

From the perspective of European sovereign and supranational debt markets, an expansion of euro stablecoins could be beneficial. Additional demand for debt securities would be welcome in an environment of rising public debt. The total additional demand for public debt stemming from stablecoins under the bullish scenarios (in both the US and the euro area) falls short of the expected additional net public debt issuance over the coming years under the current fiscal trajectory. In this sense, the bullish scenarios would support debt sustainability but should not be misunderstood as sufficient to create genuine new fiscal room for manoeuvre. Some have also argued that stablecoin-related demand could tilt sovereign debt issuance towards shorter maturities. However, sovereigns are not compelled to reduce the average maturity of their liabilities simply because short-term funding costs decline. It remains their responsibility to manage rollover risk and preserve a robust maturity structure. Greater diversification of stablecoin reserves across securities issuers may also be desirable. It could improve the functioning of securities markets, strengthen the resilience of stablecoin issuers, and reduce risks for banks holding these reserve assets. At the same time, given the uncertainty around the behaviour of future large stablecoin issuers, it may be premature to introduce highly prescriptive new rules.

---

an equivalence regime combined with multi-issuance does not resolve the arbitrage problem created by maintaining multiple reserve pools for a single globally fungible token. Only perfectly identical legal and regulatory rules could eliminate this problem, and no practical equivalence framework is likely to achieve such uniformity in the stablecoin context. Given the leading role of the US dollar in global stablecoin issuance, the only conceivable way for the European Union to eliminate this arbitrage entirely would be to adopt exactly the same reserve rules as the GENIUS Act, which appears unlikely. From an economic perspective, the most coherent solution therefore seems to be to permit the distribution in Europe of foreign stablecoins under an equivalence regime. This assumption is, in effect, already embedded in the flow-of-funds framework used in this paper to analyse the circulation of US dollar stablecoins in Europe.

7. Conclusions

This paper has examined the possible medium- to long-term implications of large-scale stablecoin adoption for financial markets, financial intermediation, monetary architecture, and financial stability, with particular attention to the euro area. While stablecoins are often defined in terms of a specific technological innovation (being recorded and transferred on distributed ledgers), they are ultimately balance-sheet instruments embedded in the broader financial system. To capture this, the paper uses a flow-of-funds framework that traces the sectoral and cross-border adjustments implied by their issuance and circulation. These adjustments depend on the sources of funds invested into stablecoins and on the composition of their reserve assets. The analysis is based on a three-region model comprising the United States, the euro area, and the rest of the world. By combining this structure with alternative assumptions for stablecoin growth through 2030, the paper assesses how stablecoins may affect funding structures, demand for reserve assets, capital flows, and financial stability risks.

The analysis suggests that even if stablecoins were to expand substantially over the coming five years, their aggregate effects on the euro area financial system would remain manageable. While stablecoins would induce meaningful reallocations within the financial system, we believe that they would not necessarily lead to strong changes in relative asset prices, nor create financial stability risks of unprecedented nature or scale in the euro area. Their growth would transform portions of household deposits, cash holdings, and securities into new forms of privately issued money backed by reserve assets that are often similar, although not identical, to those funding sources. This transformation would affect the composition of financial intermediation, but not in a way that would exceed the adaptive capacity of markets, governments, and central banks over a medium-term horizon.

The main structural effect of stablecoins (whether USD or EUR) on banks is not the disappearance of deposit funding but the conversion of granular, stable, and inexpensive retail deposits into more concentrated, expensive, and volatile wholesale deposits. This change may increase average funding costs and worsen certain liquidity metrics unless banks respond through additional balance sheet adjustments. The retail-oriented banks will lose a valuable source of stable funding that supports their business model. At the same time, banks receiving wholesale deposits must avoid becoming overly dependent on them because of their instability, as reflected in their less favourable LCR treatment. At the aggregate level, however, these effects still appear moderate relative to the size of the euro area banking system, and they should be absorbable through balance-sheet adjustments and revised funding strategies.

Nevertheless, from a funding perspective banks will still prefer a world without stablecoins. Existing prudential regulation would also be expected to ensure that banks adjust adequately to the new situation. Some retail-oriented banks may lose a part of their competitive advantage relative to other financial intermediaries. In any case, such an adjustment does not imply a market failure requiring regulatory intervention. The conclusion that stablecoins would raise funding costs for the real economy is likely premature and based on a partial analysis. The deployment of stablecoins adds a new form of financial intermediation and should thereby strengthen the overall financial intermediation capacity of the economy. A priori, and in the absence of identifiable market failure, stablecoins could improve rather than undermine the ability of the real economy to obtain long-term stable funding, even if it leads to some adjustments in the overall structure of financial intermediation.

The implications for securities markets could likewise be relevant but not destabilising in structural terms. Large-scale stablecoin issuance would increase demand for short-term sovereign debt, repurchase agreements, and bank deposits. In the United States, this would reinforce demand for Treasury bills and related instruments. In the euro area, depending also on the scale of foreign circulation, the emergence of sizable euro-denominated stablecoins could create a new investor base for sovereign and supranational short-term securities. In an environment of rising public debt and increased financing needs, a stable source of demand may be beneficial as it would tend to lower yields at the short end of the curve. This could, in turn, alter issuance incentives and lead to more short-term issuance and thus higher roll-over risks. However, sovereign issuers are aware of such risks and retain broad discretion over maturity structures, allowing them to balance the benefits of lower short-term funding costs against the risks of overexploiting this in a way that deteriorates their funding stability.

From the perspective of financial stability, the paper does not dispute that stablecoins pose risks analogous to those associated with money market funds and other maturity transformation vehicles. Sudden losses of confidence could trigger large-scale redemptions, forcing reserve liquidation and transmitting stress to banking systems and securities markets. Yet these risks are not fundamentally novel. Even under the scenarios of high stablecoin issuance, they could be mitigated through robust reserve requirements, diversification, stress testing, disclosure, and, where appropriate, access to carefully designed central bank facilities. The current MiCAR rules cover some of these requirements, although even in these areas improvements may be warranted, in particular with respect to the high required share of bank deposits and regarding diversification of the reserve more generally. With the exception of the Bank of England, major central banks currently do not signal a readiness to grant stablecoin issuers access to central bank facilities.

Another conclusion concerns the distinction between foreign-currency stablecoins circulating in Europe and euro-denominated stablecoins issued under European regulation. The widespread use of US dollar stablecoins in the euro area could raise concerns relating to monetary sovereignty, seigniorage, and the international role of the euro. However, the quantitative scenarios suggest that these effects would remain modest compared with the scale of euro area monetary aggregates and would therefore have only limited effects on monetary policy transmission and exchange rate dynamics. Still, if stablecoins become an important component of the future monetary landscape, Europe has a strong interest in ensuring that euro-denominated alternatives play a meaningful role. The potential development of a substantial euro stablecoin ecosystem appears economically feasible and, under plausible assumptions, compatible with financial stability. The scenarios considered in this paper suggest that euro stablecoins could reach significant scale, including extensive circulation outside the euro area, without generating structural effects that would be materially more problematic than those associated with foreign stablecoins already accessible to European users. At the same time, successful euro stablecoins could strengthen the international role of the euro, generate seigniorage and related economic benefits within Europe, and help ensure that European firms and consumers participate fully in innovation in digital payments and tokenised finance.

From a global perspective, a question of consistency arises. Europe's reluctance to accept the dollarisation of its economy through the circulation of USD stablecoins must be assessed alongside its possible aspiration to benefit from a widespread international use of euro-denominated stablecoins abroad. European values emphasise mutual benefit and international

cooperation, grounded in the conviction that such cooperation ultimately yields benefits for all parties. From this perspective, Europe may legitimately seek to promote the international use of euro stablecoins, while at the same time considering which regulatory parameters are necessary to ensure that such use is beneficial to all jurisdictions involved. The objective should be to foster an ecosystem in which the global circulation of euro stablecoins neither becomes a zero-sum game based on the redistribution of seigniorage income, nor facilitates illegal activities in other jurisdictions.

From a European perspective, the preferred approach is a regulatory framework that combines strong user protection with sufficient flexibility to allow euro stablecoins to become competitive. This is clearly preferable to a framework that unintentionally relegates Europe to a passive consumer of foreign stablecoins. In this regard, certain aspects of the current framework, such as the prohibition of remuneration and the prescriptive requirement that significant e-money tokens hold a large share of their reserves as bank deposits, warrant reconsideration. Adjustments that preserve prudential safeguards while improving operational efficiency and economic attractiveness could materially enhance the prospects for a viable euro stablecoin market. More broadly, the paper suggests that stablecoins should be viewed as part of the continuing evolution in the architecture of money and financial intermediation. Like earlier innovations such as money market funds, electronic payments, and wholesale funding markets, they reallocate liquidity creation and transform existing institutional arrangements rather than overturning the fundamental economic functions of money. Their ultimate significance will depend on whether they deliver genuine efficiency gains and whether public authorities provide an appropriate regulatory environment.

The ultimate usefulness of stablecoins for society remains uncertain. Critics typically raise three principal objections. First, they argue that much of the legal use of stablecoins outside the sphere of crypto-asset speculation (which itself may not enhance societal welfare) reflects regulatory arbitrage rather than genuine technological efficiency. This applies, for example, to claims that stablecoins offer superior solutions for cross-border payments. Second, critics emphasise the undisputedly extensive use of stablecoins for illicit payments of various kinds, including tax evasion, circumvention of capital controls, money laundering, terrorist financing, ransomware attacks, etc. (e.g. Chainalysis, 2026). Third, critics argue that the broader concepts of decentralised finance (DeFi) and distributed ledger technologies (DLT) on which they are based are intellectually intriguing but of limited practical relevance. In real-world financial systems, the rule of law rather than the rule of code, together with accountability and robust governance arrangements, must ultimately prevail. At the same time, centralised ledger systems continue to demonstrate superior efficiency. From this perspective, programmable multi-asset platforms, combined with legally robust forms of tokenisation, may indeed improve financial efficiency by replacing a fragmented landscape of partially interoperable ledgers. However, they need not rely on the principles or technologies associated with DeFi. Accordingly, privately issued forms of money operating on these platforms, for example, liabilities of narrowly structured balance-sheet vehicles, might not appropriately be described as "stablecoins," unless the concept of stablecoins is broadened and conceptually detached from its current association with DLT-based architectures.

Most experts, as well as European legislators, take a more favourable view. They see well-regulated stablecoins, together with the DLT infrastructures that record their ownership and facilitate their transfer, as a promising financial innovation that primarily requires an appropriate

regulatory framework to realise its potential safely. Proceeding from this premise, the scenario analysis developed in this paper suggests that, even under relatively optimistic growth assumptions, stablecoins, whether denominated in US dollars or in euro, are unlikely to disrupt the European financial system. Their effects on banks, securities markets, and central bank balance sheets appear overall moderate when considered against the scale and adaptive capacity of the European financial system. More generally, the analysis identifies no compelling reason why Europe should not seek to strengthen the role of euro-denominated stablecoins within the evolving global monetary landscape.

Literature

Adrian, T. et al. (2025), "Understanding stablecoins", IMF Monetary and Capital Markets Department.

Aerts, S., Lambert, C. and Reinhold, E. (2025), "Stablecoins on the rise: still small in the euro area, but spillover risks loom", *ECB Financial Stability Review*, November.

Ahmed, R. and Rebucci, A. (2024), "Dollar reserves and US yields: identifying the price impact of official flows", *Journal of International Economics*, Vol. 152, 103974.

Ahmed, R. and Aldasoro, I. (2025), "Stablecoins and safe asset prices", BIS Working Paper, No. 1270.

Ahmed, R., Aldasoro, I. and Duley, C. (2024), "Public information and stablecoin runs", BIS Working Paper, No. 1164.

Aldasoro, I., Aquilina, M., Lewrick, U. and Lim, S.H. (2025a), "Stablecoin growth – policy challenges and approaches", BIS Bulletin No 108.

Aldasoro, I., Beltrán, P. and Grinberg, F. (2026), "Stablecoin flows and spillovers to FX markets", BIS Working Paper, No. 1340.

Aldasoro, I., Cornelli, G., Ferrari Minesso, M., Gambacorta, L. and Habib, M.M. (2025b), "Stablecoins, money market funds and monetary policy", *Economics Letters*, Vol. 247, 112203.

Altavilla, C. et al. (2026), "Stablecoins and monetary policy transmission", ECB Working Paper, No. 3199.

Anadu, K. et al. (2025), "Runs and flights to safety: are stablecoins the new money market funds?", Working Paper.

Ante, L., Saggu, A. and Fiedler, I. (2025), "The stablecoin discount: evidence of Tether's US Treasury bill market share in lowering yields", Working Paper.

Azzimonti, M. and Quadrini, V. (2025), "Digital economy, stablecoins and the global financial system", NBER Working Paper, No. 34066.

Bank Policy Institute (2025), "A closer look: stablecoins' effects on bank deposits", BPI Staff Note.

Barthélemy, J., Gardin, P. and Nguyen, B. (2026), "Stablecoins and short-term funding markets", *Journal of International Money and Finance*, Vol. 161, 103469.

Basel Committee on Banking Supervision (2024), "Novel risks, mitigants and uncertainties with permissionless distributed ledger technologies", Working Paper, No. 44.

Bidder, R. (2025), "Singleness of money: towards a nuanced debate", in Niepelt, D. (ed.), *Frontiers of digital finance*, CEPR.

Bindseil, U. and Senner, R. (2023), "Destabilisation of bank deposits across destinations: assessment and policy implications", ECB Working Paper, No. 2887.

Bindseil, U., Coste, C.-E. and Pantelopoulos, G. (2024), "Digital money and finance: a critical review of terminology", ECB Working Paper, No. 3022.

Bindseil, U. (2025), "Regulatory responses to the financial stability implications of stablecoins", SAFE Working Paper, No. 470.

Bindseil, U. and Voloder, E. (2026), "Reforming MiCAR for euro stablecoins", SSRN Working Paper.

Bossone, B. (2025), "Stablecoins and the double standard of money", *LSE Business Review Blog*, 27 November.

Borensztein, E. et al. (2004), “Sovereign debt structure for crisis prevention”, IMF.

Born, A. et al. (2026), “Euro stablecoins and their potential effect on sovereign bond markets”, *ECB Macroprudential Bulletin*, No. 33.

Brainard, W.C. and Tobin, J. (1968), “Pitfalls in financial model building”, *American Economic Review*, Vol. 58, No. 2.

Budish, E. (2025), “Trust at scale: the economic limits of cryptocurrencies and blockchains”, *Quarterly Journal of Economics*, Vol. 140, No. 1, pp. 1–62.

Budish, E. and Sunderam, A. (2026), “Blockchain technology for traditional finance”, Working Paper.

Carapella, F. et al. (2026), “Structural weaknesses in the stablecoin ecosystem”, Working Paper.

Cecchetti, S.G. and Schoenholtz, K.L. (2025), “Are stablecoins really the future of payments?”, in Niepelt, D. (ed.), *Frontiers of digital finance*, CEPR.

Cerutti, E. et al. (2026), “Stablecoin shocks and Treasury markets”, Working Paper.

Chainalysis (2026), *Crypto crime report 2026*, Chainalysis.

Cheng, G. and Finesi, S. (2026), “Europe in the global stablecoin debate: risks and opportunities”, ESM Discussion Paper, No. 27.

Circle (2026), “What is USDC?”: https://www.usdc.com/learn/what-is-usdc.

Citi (2025), *Stablecoins 2030: Web3 to Wall Street*, https://www.citigroup.com/global/insights/stablecoins-2030.

Coinbase (2022), “Stablecoins”, Coinbase Institute White Paper.

Committee on Payments and Market Infrastructures (2023), “Considerations for the use of stablecoin arrangements in cross-border payments”, CPMI.

Committee on Payments and Market Infrastructures (2024), “Tokenisation in the context of money and other assets”, CPMI.

Coste, C.-E. (2024), “Toss a stablecoin to your banker: stablecoins’ impact on banks’ balance sheets and prudential ratios”, ECB Occasional Paper, No. 353.

Coste, C.-E. and Pantelopoulos, G. (2025), “Central bank money as a catalyst for fungibility: the case of stablecoins”, ECB Working Paper, No. 3111.

D’Avernas, A. and Vandeweyer, Q. (2024), “Treasury bill shortages and the pricing of short-term assets”, *Journal of Finance*, Vol. 79, No. 6, pp. 4083–4141.

Digital Euro Association (2025), “Stablecoins and financial sovereignty”, DEA Report.

Doerr, S., Eren, E. and Malamud, S. (2023), “Money market funds and the pricing of near-money assets”, BIS Working Paper No 1096.

ECB Crypto-Asset Task Force (2020), “Stablecoins: implications for monetary policy, financial stability, market infrastructure and payments, and banking supervision in the euro area”, ECB Occasional Paper, No. 247.

European Banking Authority (2024), “Report on tokenised deposits”.

European Central Bank (2025), “Non-paper on EU and third country stablecoin multi-issuance”.

European Central Bank (2026), *Financial Stability Review*, May.

European Commission (2026), “Targeted consultation on the review of MiCAR”.

European Systemic Risk Board (2025a), *Crypto-assets and decentralised finance: risks and policy responses*.

European Systemic Risk Board (2025b), "Recommendation on third-country multi-issuer stablecoin schemes".

Errico, L. et al. (2014), "Mapping the shadow banking system through a global flow of funds analysis", IMF Working Paper WP/14/10.

Farrell, John (2026), "The stablecoin debate's unexamined assumption - Why most payments don't need a blockchain — and what the emerging regulatory architecture reveals", unpublished memo.

Financial Action Task Force (2026), "Targeted Report on Stablecoins and Unhosted Wallets Peer-to-Peer Transactions".

Financial Stability Board (2020), "Recommendations for the regulation, supervision and oversight of global stablecoin arrangements – executive summary".

Financial Stability Board (2023), "Crypto-assets and global stablecoins: Regulatory and Supervisory Issues".

Financial Stability Board (2024), "Cross-border regulatory and Supervisory issues of global stablecoin arrangements in EMDEs".

Garratt, R. and Shin, H.S. (2023), "Stablecoins versus tokenised deposits: Implications for the singleness of money", BIS Bulletin, No. 73.

Gersbach, H. et al. (2026), "Stablecoin regulation and financial stability", Working Paper.

Goel, T., Lewrick, U. and Agarwal, I. (2025), "Making stablecoins stable(r): Can regulation help?", Working Paper.

Gorton, G. and Zhang, J. (2023), "Taming wildcat stablecoins", *University of Chicago Law Review*, Vol. 90:909.

Graf von Luckner, C. et al. (2024), "Crypto as a marketplace for capital flight", IMF Working Paper 24/133.

Gross, M. and Senner, R. (2026), "From par to pressure: liquidity, redemptions and fire sales", IMF Working Paper. No. 2026/005

International Monetary Fund, (2025), "How Stablecoins Can Improve Payments and Global Finance." IMF Blog.

Judson, R. (2024), "Demand for US banknotes at home and abroad", International Finance Discussion Papers 1387. Washington: Board of Governors of the Federal Reserve System

Kendrick, J. and Jha, M. (2025), "Stablecoins – implications for emerging markets", Standard Chartered Global Research.

Kim, S.R. (2025a), "How the cryptocurrency market is connected to the financial market", Working Paper.

Kim, S.R. (2025b), "Macro-financial impact of stablecoin demand for Treasuries", Working Paper.

Lalouette, L. et al. (2021), "Foreign demand for euro banknotes", ECB Occasional Paper, No. 253.

Liao, G.Y. and Caramichael, J. (2022), "Stablecoins: growth potential and impact on banking", International Finance Discussion Papers No. 1334. Board of Governors of the Federal Reserve System.

Liao, G.Y. et al. (2024), “Token capital adequacy framework”, Working Paper.

Ma, Y., Zeng, Y. and Zhang, A.L. (2025), “Stablecoin runs and the centralisation of arbitrage”, NBER Working Paper, No. 33882.

Malekan, O. (2026), “The limits of permissioned blockchains”, Working Paper.

Monerium (2026), “EURe MiCA white paper”.

Panetta, F. (2020), “The two sides of the (stable)coin”, ECB speech. at the European Central Bank, Frankfurt am Main, November 4, 2020.

Rabi Sankar, T. (2025), “Stablecoins – do they have a role in the financial system?”, Keynote Address, Mumbai December 1, 2025.

Reed Stark, J. (2026), “Blockchain’s failed promises”, Working Paper.

Reichlin, L., Sangers, B. and Zettelmeyer, J. (2026), “A new strategy to contain stablecoin risks in the European Union”, Bruegel Policy Brief 09/2026.

Rey, H. (2025), “Stablecoins and the international monetary system”, Working Paper.

SG Forge (2023), “EUR CoinVertible (EURCV) stablecoin white paper”.

Shin, H.S. (2025), “The next-generation monetary and financial system”, Chapter 3 BIS Annual Economic Report.

Stein, J.C. and Wallen, J. (2025), “The imperfect intermediation of money-like assets”, *Journal of Finance* 80 (6): 3185–3221.

Tether (2014), “Tether: fiat currencies on the Bitcoin blockchain”, White paper.

TRM Labs (2025), “Crypto adoption and stablecoin usage report”

United States Council of Economic Advisers (2026), “Stablecoins and bank lending: a re-assessment”, CEA Report.

United States Department of the Treasury (2021), “Report on stablecoins”.

Zhang, N. and Zhao, X. (2018), “Measuring global flow of funds: A Case Study on China, Japan and the United States”, IARIW Conference Paper.

Annex 1: Further flow-of-funds analysis

A. Symmetric three-country model

In section 4, we presented a three-country flow-of-funds model in which only stablecoins issued in country A circulated globally, while stablecoins issued in country B circulated only in countries B and C. We can also consider the flows of funds if countries A and B are symmetric in terms of mutual use of stablecoins, i.e. if households and NBFIs in country A also invest in stablecoins issued in country B. There is no need to replicate country C in this case, as it remains unchanged. Relative to the previous case, we therefore need to add the amount of stablecoins issued in B and held in A, which we denote SC_{BA}.

Figure A1-1: Flows of funds from stablecoin creation: three-country case in which A- and B-stablecoins circulate globally and C is a pure user country (country C as in figure 4-3).

Country A (in currency A)	
Households and NBFIs	
Sight deposits $-\beta\ (SC_{AA}+SC_{BA})$. Stablecoin A SC_{AA} Stablecoin B SC_{BA} Banknotes $-\ \mu\ (SC_{AA}+SC_{BA})$ Bonds $-(1-\mu-\beta)(SC_{AA}+SC_{BA})$	Other net liabilities
Stablecoin issuer	
Deposits with banks $\alpha\ (SC_{AA}+SC_{AB}+SC_{AC})$ Deposits with CB $\delta\ (SC_{AA}+SC_{AB}+SC_{AC})$ Bonds $(1-\alpha-\delta)(SC_{AA}+SC_{AB}+SC_{AC})$	STC issued $SC_{AA}+SC_{AB}+SC_{AC}$
Commercial Banks	
Bonds $-(1-\alpha-\delta)(SC_{AA}+SC_{AB}+SC_{AC})+(1-\mu-\beta)(SC_{AA}+SC_{BA})$ Claims Banks in B $SC_{AB}\ -SC_{BA}$ Claims Banks in C SC_{AC}	Sight deposits $-\beta\ (SC_{AA}+SC_{BA})$ SC issuer dep. $\alpha\ (SC_{AA}+SC_{AB}+SC_{AC})$ CB credit $-\ \mu(SC_{AA}+SC_{BA})+\ \delta(SC_{AA}+SC_{AB}+SC_{AC})$
Central Bank	
Credit to banks $-\ \mu(SC_{AA}+SC_{BA})\ +\ \delta\ (SC_{AA}+SC_{AB}+SC_{AC})$	Banknotes issued $-\ \mu(SC_{AA}+SC_{BA})$ Stablecoin issuer deposits $\delta\ (SC_{AA}+SC_{AB}+SC_{AC})$
Country B (in currency B; exchange rate 1:1)	
Households and NBFIs	
Sight deposits $-\beta^*\ (SC_{AB.}\ +SC_{BB})$ A-SCs SC_{AB} B-SCs SC_{BB} Banknotes $-\ \mu^*(SC_{AB.}\ +SC_{BB})$ Bonds $-\ (1-\mu^*-\beta^*)(SC_{AB.}\ +SC_{BB})$	Other net liabilities
Stablecoin issuer	
Deposits with banks $\alpha\ *\ (SC_{BA}+SC_{BB}+SC_{BC})$ Deposits with CB $\delta^*\ (SC_{BA}+SC_{BB}+SC_{BC})$ Bonds $(1-\alpha^*-\delta^*)($ $SC_{BA}+SC_{BB}+SC_{BC})$	SC issued $SC_{BA}+SC_{BB}+SC_{BC}$
Commercial Banks	

Bonds $(1-\mu^*-\beta^*)(SC_{AB.}+SC_{BB})-(1-\alpha^*-\delta^*)(SC_{BA}+SC_{BB}+SC_{BC})$ C-country banks SC_{BC}	Sight deposits $-\beta^*(SC_{AB}+SC_{BB})$ SC issuer deposits $\alpha^*(SC_{BA}+SC_{BB}+SC_{BC})$ CB credit $-\mu^*(SC_{AB.}+SC_{BB})+\delta^*(SC_{BB}+SC_{BC})$ A-country banks $SC_{AB}-SC_{BA}$
Central Bank	
Credit to banks $-\mu^*(SC_{AB.}+SC_{BB})+\delta^*(SC_{BA}+SC_{BB}+SC_{BC})$	Banknotes issued $-\mu^*(SC_{AB.}+SC_{BB})$ SC deposits. $\delta^*(SC_{BA}+SC_{BB}+SC_{BC})$

A) Bitcoin (and other unbacked crypto-assets)

The largest use case for stablecoins still appears to be as a means of payment in 24/7 crypto-assets trading, primarily for buying and selling Bitcoin. Unbacked crypto-assets, despite recent valuation losses, still have a market capitalisation of more than $2 trillion - around seven times larger than that of stablecoins. It is therefore plausible that significant structural flows from Bitcoin to stablecoins could materialise. However, as long as these transactions take place within a country and within the household/NBFI sector, they remain invisible in our sectoral accounts. Flows of funds between Bitcoin and stablecoins do not, in themselves, cause the total value of either to increase or decrease.

It is important to distinguish between two issues. Let $\mathbf{BTC_A}$ be the value of Bitcoin circulating in country A, and $\mathbf{BTC_B}$ be the value of Bitcoin circulating in country B. First, if many investors wish to exit Bitcoin and instead hold stablecoins, this will reduce the price of Bitcoin, leading to a contraction in the net wealth of Bitcoin holders. In the simple two-country model below, this is captured by $qBTC_A$ and $qBTC_B$, where, in the case of a value increase (decrease) in Bitcoin, **q** is positive (negative).[46] Second, flows become relevant if we observe that one country develops a relative preference for Bitcoin over time, while another favours stablecoins. In such a case, cross-border flows of stablecoins may emerge, with Bitcoin flowing in the opposite direction. This is illustrated by the flow **w** in the figure below. These flows matter for estimating the stocks of stablecoins held across countries. In our empirical flow-of-funds model, however, we abstract from these effects for the sake of simplicity, particularly because such cross-country flows are difficult to predict.

Figure A1-2: Two-country model to illustrate flows from unbacked crypto-assets into and out of stablecoins

Country A (in currency A)	
Households and NBFIs	
Financial assets $-SC_{AA}$ Stablecoin $SC_{AA}+w$ Bitcoin $(1+q)BTC_A-w$	Net wealth $qBTC_A$
Country B (in currency B; exchange rate 1:1)	
Households and NBFIs	
Financial assets $-SC_{AB}$ A-Stablecoin $SC_{AB}-w$ Bitcoin $(1+q)BTC_B+w$	Net wealth $qBTC_B$

[46] Bitcoin mining could also be added here.

B) Substituting foreign assets with foreign stablecoins

If, for example, USD-denominated stablecoins become widely used in Argentina, the accumulation of such positions can also occur through the exchange of USD cash, USD deposits, or USD-denominated securities into USD stablecoins (i.e. not only through the conversion of domestic currency assets). This implies that no cross-border capital flow is generated that would need to be intermediated by the banking sector, as households and NBFIs are simply reallocating their existing foreign assets. As a result, there is less downward pressure on the exchange rate, leading to different macroeconomic effects overall.

Households and NBFIs in Argentina may hold USD assets either directly in the United States or, in the case of deposits with Argentine banks, indirectly, assuming that these banks maintain corresponding deposits (or liquid USD securities) in the United States. For simplicity, we assume below that USD asset holdings of Argentine households and NBFIs are held directly with US counterparties. This is illustrated in the two-country model of Figure A1-3.

We assume that households in Country B (say, Argentina) split their sourcing of USD stablecoins into domestic and foreign assets at a ratio (b, 1-b) with b in [0,1]. The parameter b could either reflect the proportional composition of domestic and USD-denominated financial assets, or the sourcing from USD assets may be assumed to be disproportionate, reflecting their closer substitutability (or the opposite). One could also assume different b*, μ* for domestic and foreign assets, although this is not done in the figure below.

Figure A1-3: Flows of funds from stablecoin creation, two-country case with B-country households holding A-country stablecoins and in which the funding of A-country stablecoins by B-households partially relies on previous foreign asset holdings.

Country A (in currency A)	
Commercial Banks	
Bonds $(\alpha+\delta-\mu-\beta)\ SC_{AA} - (1-\alpha-\delta)\ SC_{AB} + (1-b)(1-\mu^*-\beta^*)\ SC_{AB}$ Claims Banks in B $b\ SC_{AB}$	Sight deposits $-\beta\ SC_{AA} - (1-b)\ \beta^*\ SC_{AB}$ SC issuer deposits $\alpha\ (SC_{AA} + SC_{AB})$ CB credit $(\delta-\mu)SC_{AA} + \delta SC_{AB} - (1-b)\ \mu^* SC_{AB}$
Central Bank	
Credit to banks $(\delta-\mu)SC_{AA} + \delta(SC_{AB} + SC_{AB}) - (1-b)\ \mu^*\ SC_{AB}$	Banknotes issued $-\ \mu\ SC_{AA} - (1-b)\ \mu^*\ SC_{AB}$ SC issuer deposits $\delta\ (SC_{AA} + SC_{AB})$
Country B (in currency B; exchange rate 1:1)	
Households and NBFIs	
Sight deposits $-b\beta^*\ SC_{AB}$ Banknotes $-\ b\mu^*\ SC_{AB}$ Bonds $-\ b(1-\mu^*-\beta^*)\ SC_{AB}$ A-Sight deposits $-\ (1-b)\ \beta^*\ SC_{AB}$ A -Banknotes $-\ (1-b)\ \mu^*\ SC_{AB}$ A-Bonds $-\ (1-b)(1-\mu^*-\beta^*)\ SC_{AB}$ A-Stablecoin SC_{AB}	Other net liabilities
Commercial Banks	
Bonds $b(1-\mu^*-\beta^*)\ SC_{AB}$	Sight deposits $-b\beta^*\ SC_{AB}$ A-country banks $b\ SC_{AB}$ Central bank credit $-b\mu^* SC_{AB}$
Central Bank	
Credit to banks $-b\mu^*\ SC_{AB}$	Banknotes issued $-\ b\mu^* SC_{AB}$

C) Eligible vs. non-eligible securities

Stablecoins can only invest in high-quality, short-term debt instruments. As a result, flows from securities into stablecoins, and back from stablecoins into securities, even if equal in size, are not neutral. Someone must hold a larger share of the securities that are not eligible as stablecoin reserves. One possibility is that households and NBFIs absorb these securities themselves. As they increase their holdings of stablecoins, they should, if maintaining an unchanged overall tolerance for market and liquidity risk, be willing to let their remaining securities portfolios become less liquid, more exposed to credit risk and have longer maturity bonds than beforehand. Indeed, if stablecoin technology enhances the overall liquidity transformation capacity of the financial system[47], these investors may effectively face lower liquidity risk than before, even with a higher share of less liquid assets. Alternatively, banks may need to accommodate a shift in their securities portfolios toward a less favourable composition, with greater duration and liquidity risk. In this case, relative financial asset prices would be expected to adjust to compensate banks for being pushed out of their preferred habitat (which may include having to take other costly balance sheet measures to preserve their compliance with capital and liquidity regulation). Overall, the first scenario (in which investors absorb the riskier security mix and banks do not need to) appears economically more plausible. We illustrate both cases below. We start with the less plausible scenario in which households sell proportionally both type of bonds. The factor v in [0,1] would

[47] Stablecoins contribute to liquidity transformation, since they transform a portfolio or relatively liquid assets (including liquid securities) into something with absolute liquidity – money. If they have value added and contribute something valuable, they must add to the total capacity of the financial system to improve liquidity transformation. Otherwise, they would seem to be redundant in some sense.

be proportional to the share of securities eligible as a stablecoin reserve in the entire holdings of household/NBFI securities. Banks need to compensate by accepting the higher share of non-SC eligible bonds.

Figure A1-4: Differentiating between stablecoin reserve eligible and non-eligible securities: the case of proportional sales by households and NBFIs

Households and NBFIs			
Sight deposits	-β SC	Other net liabilities	
Stablecoin	SC		
Banknotes	- μ SC		
Bonds SC eligible	– v(1-μ-β) SC		
Bonds SC non-eligible	– (1-v)(1-μ-β) SC		
Stablecoin issuer			
Deposits with banks	α SC	STC issued	SC
Deposits with CB	δ SC		
Bonds SC eligible	(1-α-δ) SC		
Commercial Banks			
Bonds SC eligible	(α + δ - vμ - vβ) SC	Sight deposits	-β SC
Bonds SC non eligible	(1-v)(1-μ-β)	Stablecoin deposits	α SC
SC		Central bank credit	(δ - μ) SC
Central Bank			
Credit to banks	(δ-μ)SC	Banknotes issued	- μ SC
		Stablecoin deposits	δ SC

The economically more plausible scenario is that households sell only bonds that stablecoin issuers can purchase, since even in this case, they enhance the overall liquidity of their portfolios and reduce aggregate market and credit risk, reflecting the additional liquidity transformation capacity introduced by stablecoins.

Figure A1-5: Differentiating between stablecoin reserve eligible and non-eligible securities

Households and NBFIs			
Sight deposits	-β SC	Other net liabilities	
Stablecoin	SC		
Banknotes	- μ SC		
Bonds SC eligible	– (1-μ-β) SC		
Bonds SC non-eligible	(unchanged)		
Stablecoin issuer			
Deposits with banks	α SC	STC issued	SC
Deposits with CB	δ SC		
Bonds SC eligible	(1-α-δ) SC		
Commercial Banks			
Bonds SC eligible	(α + δ - μ - β) SC	Sight deposits	-β SC
Bonds SC non eligible	(unchanged)	Stablecoin deposits	α SC
		Central bank credit	(δ - μ) SC
Central Bank			
Credit to banks	(δ-μ)SC	Banknotes issued	- μ SC
		Stablecoin deposits	δ SC

European Stability Mechanism

6a Circuit de la Foire Internationale
L-1347 Luxembourg

Tel: +352 260 292 0

www.esm.europa.eu

info@esm.europa.eu

©European Stability Mechanism 2025

Publications Office
of the European Union