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Speculation or solution:

Can stablecoins play a role in the FX world?

Stablecoins have been around for more than a decade and are back in the spotlight. Real-world applications are increasingly coming online as barriers like fragmentation are overcome and sound regulatory frameworks are established. Can stablecoins also play a meaningful role in FX and settlement?

From Bitcoin to stablecoins

"So far, the broader markets for crypto assets and stablecoins have not moved out of their respective niches."

The universe of crypto assets, which started with Bitcoin in 2008, has expanded far beyond 10,000 crypto assets. However, most crypto assets have very little economic relevance and are very small in size. In fact, the top ten crypto assets represent around 90 percent of the overall market, whose total market capitalization stands at around USD3.8 trillion (August 2025). Market share remains concentrated, with approximately 65–70% coming from the two largest coins: Bitcoin and Ethereum.[1] While the crypto asset ecosystem has grown over the years, its market capitalization hovers at around three to four percent of the global gross domestic product.[2]

By design, most crypto assets do not have an issuer that could offer a degree of price stability, and this fuels their speculative dimension. Their smaller investor and liquidity base compared to traditional financial markets further amplifies their volatility, which historically ranges between 4 and 8 percent per day. For example, Bitcoin's volatility is around four times higher than that of gold.[3]

In order to curb the high volatility of crypto assets, stablecoins emerged in 2014 but only gained traction in 2019, broadly coinciding with Facebook's initiative for launching a global stablecoin ("Libra", which was rebranded to "Diem" in 2020 and *de facto* discontinued in 2022). Today, stablecoins account for less than ten percent of the total crypto asset market, with a market capitalization of around USD275 billion (August 2025). While there are roughly 170 different stablecoins in existence worldwide, around 85–90% of the market capitalization currently comes from two coins: Tether (USDT) and USD Coin (USDC).[4]

So far, the broader markets for crypto assets and stablecoins have not moved out of their respective niches. The reasons may range from a lack of strong use cases to the absence of sound regulatory and interoperability frameworks. Central bank sentiment around the creation of central bank digital currencies (CBDCs)[5] may also have played a role. CBDCs and most[6] stablecoins are fundamentally different from crypto assets, which often have no identifiable issuer.

According to a study from Citigroup,[7] stablecoins have the potential to reach a market capitalization of USD3.7 trillion by 2030, more than 15 times higher than today. Some commentators believe that recent developments, as further discussed below, will now boost stablecoins.

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[1] Source: www.statista.com
[2] Global GDP estimated at USD108 trillion as of December 2024, according to World GDP, Trading Economics (December 2024).
[3] Comparing Bitcoin and Gold, NYDIG (April 2025).
[4] Tether is the world's first stablecoin, issued by Tether Limited Inc. in 2014. USDC (USD Coin) was launched in 2018 by a joint venture between Circle and Coinbase, the latter taking over full governance in 2023. Both Tether and USDC are pegged to the USD.
[5] Central bank digital currency (CBDC) is a form of digital money, denominated in the national unit of account, which is a direct liability of the central bank. A number of retail CBDCs are already in existence (e.g., the Sand Dollar issued by the Central Bank of the Bahamas, eNaira issued by the Bank of Nigeria, and Jam-Dex issued by the Bank of Jamaica).
[6] Not all stablecoins have an identifiable issuer, but most prominent ones do (e.g., USDC is issued by Circle, USDT is issued by Tether, and Paxos USD is issued by Paxos). A number of decentralized stablecoins have no single identifiable issuer (e.g., DAI – issued by the MakerDAO protocol, governed by MKR token holders, GHO – issued by Aave DAU).
[7] https://www.pymnts.com/cryptocurrency/2025/citi-stablecoin-market-could-hit-3-7-trillion-by-2030/

Table 1: The four approaches to the stablecoin "stabilization" mechanisms

Stabilization mechanism	Description	Top stablecoin by market cap (% of total stablecoin market cap)[9]
(i) Off-chain fund-backed stablecoins	Secured by claims held by the stablecoin issuers outside the blockchain, mainly held in the form of funds in accounts of a central bank or commercial bank	Tether (USDT): USD164 billion (60%)
		USDC (USDC): USD65 billion (24%)
		Ethena (USDE): USD9.7 billion (3.5%)
(ii) Off-chain collateralized stablecoins	Backed by other traditional assets such as securities or commodities (e.g., precious metals) held by stablecoin issuers	PAX Gold (PAXG): USD0.9 billion (0.3%)
		Tether Gold (XAUT): USD0.8 billion (0.3%)
		Kinesis Gold (KAU): USD0.2 billion (<0.1%)
(iii) On-chain collateralized stablecoins	Backed by (overcollateralized) crypto assets held by decentralized protocols on a blockchain	DAI (DAI): USD3.7 billion (1.3%)
		Falcon USD (USDF): USD1.25 billion (0.4%)
		USDB (USDB): USD0.4 billion (<0.1%)
(iv) Algorithmic stablecoins[10]	Supported by mechanisms that automatically balance supply and demand based on a peg to a traditional currency, rather than rely on a risk mitigation based on collateral held off-chain or on-chain	USDD (USDD): USD0.5 billion (<0.1%)
		Celo Dollar (CUSD): USD0.03 billion (<0.1%)
		Hive Dollar (HBD): USD0.03 billion (<0.1%)

Stable by name, stable by nature?

In theory, stablecoins could minimize price fluctuations in a variety of ways. The underlying stabilization mechanics follow four main approaches[8] described in table 1.

The question is whether stablecoins live up to their name. Empirical evidence shows that the values of fund-backed and off-chain collateralized stablecoins hover relatively closely around the values of their reference assets. Their level of decentralization is comparably low because they have identifiable issuers and ties to real-world assets. Hence, they are not revolutionary by design. At the same time, anecdotal evidence suggests that price fluctuations can temporarily increase, for example, following doubts about the existence or mobility of underlying collateral.

On-chain collateralized and algorithmic stablecoins are more innovative concepts and bear higher volatility risks than the two other categories, as they rely on more volatile collateral (e.g., crypto assets, even with a high over-collateralization ratio serving as safety margin) or involve no collateral at all. Over the past years, there have been crashes of algorithmic stablecoins like TerraUSD (UST), which in turn also caused some turmoil in the stablecoin segment.

Today, fund-backed stablecoins represent approximately 95% of the total stablecoin market.[11] On-chain collateralized and algorithmic stablecoins together made up 10-15% of the stablecoin market during their peak in 2021, but after the UST collapse in 2022 their share shrank dramatically (to around 2% for on-chain collateralized stablecoins and to <0.1% for algorithmic stablecoins).[12] Meanwhile, off-chain collateralized stablecoins have grown in absolute terms, but remain <1% of the market.[13]

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[8] Bullmann, D., Klemm, J. & Pinna, A. (2019). In search for stability in crypto-assets: are stablecoins the solution?
[9] CoinGecko (August 2025).
[10] In an algorithmic stablecoin, so-called oracles monitor the coin prices on crypto exchanges. If the market price increases, specific programs underlying the stablecoin (so-called smart contracts) trigger the minting of new coins. Conversely, if the price falls, stablecoins are taken out of circulation. The coin supply is increased or decreased accordingly, in theory causing the price of an algorithmic stablecoin to move upwards or downwards, thus bringing it back to the peg.
[11] Stablecoin market cap surpasses as USDC dominance rises, Cointelegraph (January 2025).
[12] As of August 2025, against a total stablecoin market capitalization of USD275 billion, the market capitalization of off-chain fund-backed stablecoins stood at USD261 billion (95%), on-chain collateralized stablecoins at USD6.9billion (2%) and algorithmic stablecoins at USD0.6 billion (<0.1%). Coingecko (August 2025).
[13] Stablecoins still struggle to maintain peg during volatility periods, Crypto Briefing (September 2024).

Can stablecoins play a meaningful role in FX and settlement?

How are stablecoins used today?

Stablecoins were initially popularized as a tool for facilitating crypto asset trading by offering a stable alternative to highly volatile crypto assets. Stablecoins now account for 80% of trading volume on major crypto exchanges,[14] effectively replacing fiat currencies as the *de facto* base currency.[15] Stablecoins also serve as an on-ramp[16] to decentralized finance (DeFi) – financial services (such as lending and borrowing) that are executed on openly accessible blockchains. Stablecoins are essentially the "monetary base" of DeFi, serving as collateral, yield-bearing assets and payment tokens, among other functions.

Of the USD26.1 trillion global stablecoin transaction value in 2024, 92% (equivalent to USD24 trillion) involved crypto trading on centralized and decentralized crypto exchanges (88%) or on/off-ramping activity (4%).[17]

However, today, stablecoins serve an increasing range of real-world applications. For example, businesses are beginning to experiment with stablecoins in tokenized asset settlement. Wall Street firms use stablecoins to enable settlement of USD0.8 trillion in money-market funds (accounting for 3% of total stablecoin transactions in 2024).

Another 5% of stablecoin use cases are payments-related,[18] almost equally spread across three businesses:

- USD0.5 trillion of stablecoin transaction values in 2024 corresponded to peer-to-peer (P2P) transactions, whereby stablecoins enable retail users to send value across borders without the need for traditional banking infrastructure. For example, a USD200 remittance into Africa[19] via USDC/USDT incurs under 0.1% in fees versus approximately 8% through conventional channels.

- Business-to-customer (B2C) flows, such as retail spending, represent approximately USD0.4 trillion of the annual stablecoin transaction value.

- The same amount is allocated to business-to-business (B2B) flows, including stablecoin usage in treasury, FX and invoice settlement.

In emerging markets with more volatile currencies, off-chain USD-backed stablecoins tend to serve everyday payments and savings, filling gaps where inflation and limited banking access are the norm.[20] In Argentina, 60% of crypto users regularly convert pesos into stablecoins to hedge against depreciation,[21] and in Venezuela, where the bolivar is subject to capital controls and 193% annual inflation, individuals often hold USD-backed stablecoins for months at a time to preserve purchasing power.[22]

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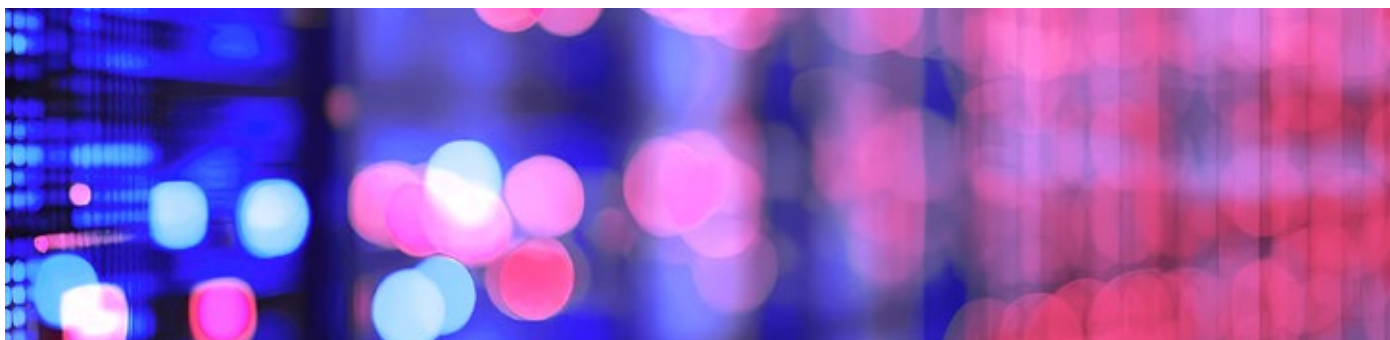
[14] Share of Trade Volume by Pair Denomination, The Block (February 2025).
[15] For example, stablecoins allow traders to exit volatile crypto positions without converting to fiat.
[16] On-ramping and off-ramping refers to the conversion between fiat to stablecoin and stablecoin to fiat, respectively. On- and off-ramping capabilities are offered by different providers, including crypto exchanges.
[17] Stablecoins: Five killer tests to gauge their potential, BCG (May 2025).
[18] Figure 1 illustrates step-by-step how cross-border payments using fiat commercial and central bank money differ from payments conducted via stablecoins.
[19] Remittance Prices Worldwide, The World Bank (September, 2024) – Remittance Prices Worldwide covers 367 country corridors, including 38 remittance sending countries and 105 receiving countries.
[20] State of Stablecoins: The shift towards institutional and global use, Bastion (May 2025).
[21] Cryptocurrency Ownership Data Report, TripleA (2024).
[22] Venezuela, the country where 193% inflation can be seen as good news, El Pais (January 2024).

Figures 1–3 explore how stablecoins can be used for payments today through a comparison of a traditional cross-border payment using fiat commercial and central bank money (figure 1) with a payment conducted via stablecoins (figure 2). Figure 2 demonstrates the frictionless nature of stablecoin payments, which may appear beneficial for less established corridors such as India to South Africa or Mexico to Eastern Europe, where multiple intermediaries typically add costs, delays and opacity.

Figure 3 illustrates the process wherein a merchant chooses to redeem stablecoins back into fiat currency. It shows that additional steps are required to update commercial and central bank money ledgers, which may reintroduce costs, delays and other frictions.

For example, while a native cross-border stablecoin transaction can cost as little as USD0.0001 on Aptos, USD0.0004 on Polygon, or around USD0.01 on Ethereum, off-ramp fees (such as those charged by crypto-enabled ATMs) can add up to 7% of the principal amount, significantly eroding any cost advantage.
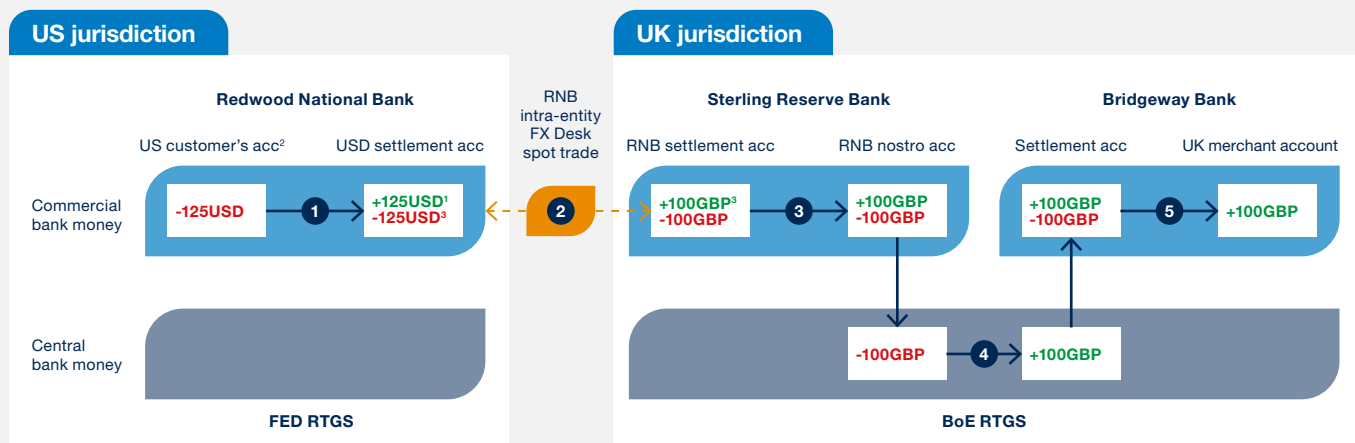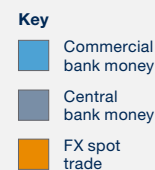
Figure 1 – Cross-border payment using two-tier fiat system

Figure 2 – Cross-border payment using stablecoins (no redemption)

Figure 3 – Cross-border payment using stablecoins (with redemption)

Figure 1: **Cross-border payment using two-tier fiat system**

1. The customer's Redwood National Bank account is debited USD125 (at the assumed FX rate), and Redwood National Bank's USD settlement account is credited by the same amount. As this is an internal transaction within Redwood National Bank, no update occurs on the FED RTGS in central bank money.

2. Redwood National Bank then performs an internal FX trade, converting the USD125 into GBP100. It is assumed that Redwood National Bank already holds the necessary GBP liquidity at its UK correspondent bank, Sterling Reserve Bank, since Redwood National Bank does not have direct access to the Bank of England (BoE) RTGS system.

3. Redwood National Bank instructs Sterling Reserve Bank to debit its GBP settlement account by GBP100. Sterling Reserve Bank first credits Redwood National Bank's nostro account by GBP100 and then debits it by the same amount, requesting a credit to the Bridgeway Bank's settlement account via local payment rails.

4. This commercial bank money transfer is also settled in central bank money via the BoE RTGS: Sterling Reserve Bank's RTGS account is debited GBP100, and Bridgeway Bank's RTGS account is credited GBP100.

5. Finally, Bridgeway Bank credits the UK merchant's account, completing the transaction.

This flow highlights the multiple intermediary steps, reliance on correspondent banking relationships, and use of both commercial and central bank money that characterize traditional cross-border payments. In less established corridors, such as India to South Africa or Mexico to Eastern Europe, the number of intermediaries can increase further, introducing additional cost, delay and opacity.

[1] This flow is illustrative and doesn't overlay additional processes such as interbank messaging (i.e. via SWIFT), KYC/AML processes, etc. The flow also assumes central bank money ledger updates occur on a one-to-one basis with each commercial bank money update, rather than the typical approach where central bank money payments reflect aggregated commercial bank money transactions.

[2] Acc = bank account.

[3] This figure illustrates a simplified version of sub-ledger movements. The USD125 debited from RNB's USD settlement account is ultimately credited to the sub-ledger of RNB's FX Desk within the bank, which is not represented in this illustrative figure for simplicity. As a result, the transaction in the USD jurisdiction concludes with RNB's FX desk holding a positive balance of USD125. By the same token, RNB's FX desk would also have an account at Sterling Reserve Bank in the UK, which would be debited by GBP100 in order to credit RNB's settlement account by GBP100.

Figure 2: Cross-border payment using stablecoins (no redemption)

This scenario illustrates[1] a cross-border payment where a US customer with an account at Redwood National Bank purchases GBP100 worth of bespoke leather goods from a UK merchant, but the payment is conducted using a stablecoin (USDA) **issued by the stablecoin issuer Alpha** on the Solana blockchain, instead of relying on correspondent banking and fiat settlement.

Key
- Solana blockchain
- Commercial bank money
- Central bank money

US jurisdiction

2c Issuer mints USDA upon receiving payment

Customer's digital wallet
+125USDA
-125USDA

1 Redwood National Bank
US customer's acc[2]
-125USD

2a Everest Capital
Settlement acc
+125USD
-125USD

Alpha's acc
+125USD

2b
-125USD → +125USD
FED RTGS

UK jurisdiction

3 125USDA is burned from customer's wallet and minted into the merchant's wallet

Merchant's digital wallet
+125USDA

4
NO CHANGE
As long as USDA is not redeemed

NO CHANGE
As long as USDA is not redeemed

1. The customer's account at Redwood National Bank is debited USD125.
2a. Redwood National Bank requests to transfer these funds to the stablecoin issuer's commercial bank account at Everest Capital.
2b. An update is performed on the FED RTGS to debit Redwood National Bank and credit the Everest Capital central bank account.
2c. Upon receiving the USD125 in fiat, the issuer mints 125USDA on-chain and transfers it to the customer's digital wallet.
3. The customer then transfers 125USDA directly to the UK merchant's wallet. The stablecoin is burned from the customer's wallet and minted into the merchant's wallet – again recorded on-chain, with no movement of fiat funds on UK commercial or central bank ledgers.
4. Since the UK merchant chooses to retain the USDA without redeeming it for GBP, no commercial bank or RTGS ledger in the UK is impacted. The funds that back USDA will remain in the issuer's account within Everest Capital in the US, irrespective of how or where the USDA changes hands.

As long as the stablecoin is not redeemed, central bank and commercial bank money **remain untouched** in both jurisdictions. This would require widespread trust in stablecoin infrastructure and regulatory clarity on digital asset settlement. This approach relies on the assumption that the merchant is willing to accept and hold USDA and that blockchain settlement is considered sufficient finality for the transaction.
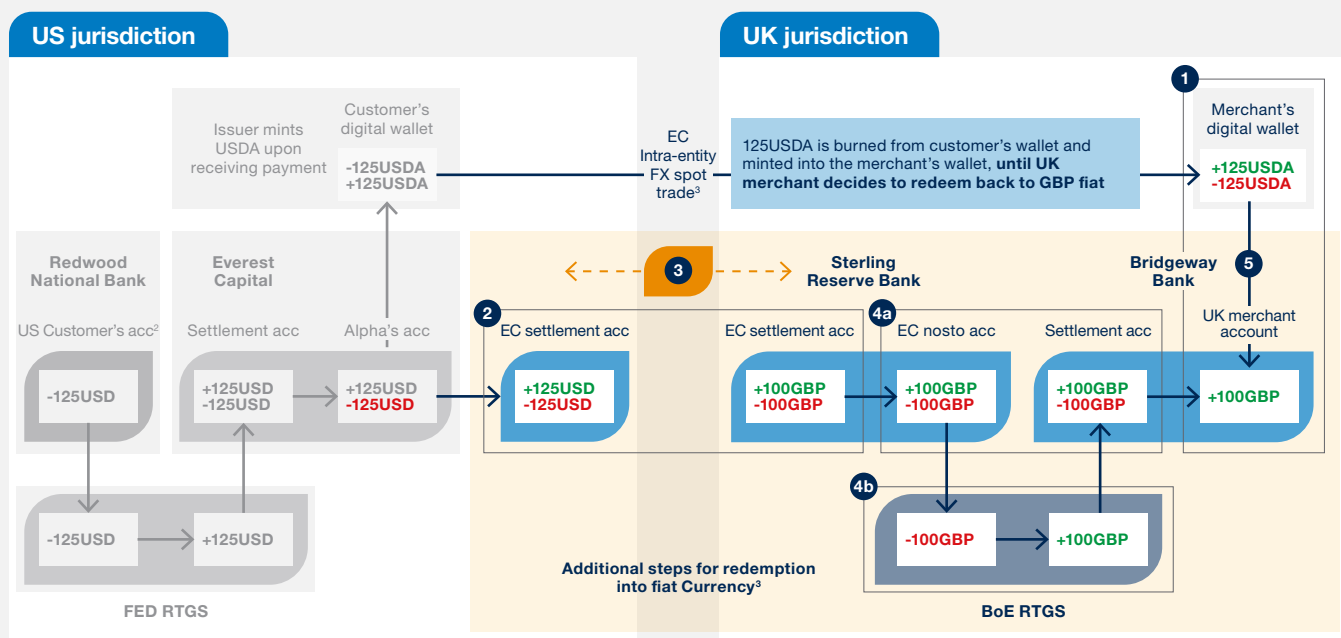
In more complex or less digitally integrated corridors – such as Mexico to Eastern Europe or India to South Africa – this blockchain-based stablecoin model could significantly reduce dependency on intermediary banks.

[1] This flow is illustrative and does not account for scenarios where stablecoin on-ramping takes place via a digital asset exchange.
[2] Acc = bank account.

Figure 3: Cross-border payment using stablecoins (with redemption)

For the same transaction as figure 2, this scenario illustrates[1] what happens if the UK merchant redeems the USDA for fiat GBP, which involves additional steps and reintroduces traditional frictions related to cost, speed and intermediation.

Key

- Solana blockchain
- Stablecoin redemption
- Commercial bank money
- Central bank money
- FX spot trade

US jurisdiction

Issuer mints USDA upon receiving payment

Customer's digital wallet
-125USDA
+125USDA

Redwood National Bank

US Customer's acc[2]
-125USD

Everest Capital

Settlement acc
+125USD
-125USD

Alpha's acc
+125USD
-125USD

-125USD → +125USD

FED RTGS

EC Intra-entity FX spot trade[3]

UK jurisdiction

125USDA is burned from customer's wallet and minted into the merchant's wallet, **until UK merchant decides to redeem back to GBP fiat**

Merchant's digital wallet
+125USDA
-125USDA

2 — EC settlement acc
+125USD
-125USD

Sterling Reserve Bank

EC settlement acc
+100GBP
-100GBP

4a — EC nostro acc
+100GBP
-100GBP

Bridgeway Bank

Settlement acc
+100GBP
-100GBP

UK merchant account
+100GBP

4b — -100GBP → +100GBP

Additional steps for redemption into fiat Currency[3]

BoE RTGS

In addition to the steps in scenario 2, redemption requires:

1. The 125USDA is burned from the merchant's wallet.
2. Everest Capital debits Alpha's bank account by USD125 and credits its own settlement account by the same amount.
3. Everest Capital then conducts an internal FX spot trade, converting USD125 into GBP100.
4a. Sterling Reserve Bank debits Everest Capital's GBP settlement account by GBP100, credits Everest Capital's UK nostro account by GBP100, and then debits it again by GBP100 to credit the receiving bank's (Bridgeway Bank) settlement account.
4b. The transaction is also settled in central bank money: Sterling Reserve Bank's RTGS account is debited GBP100, and Bridgeway Bank's RTGS account is credited the same amount.
5. Bridgeway Bank updates its commercial ledger by crediting the UK merchant's account with GBP100.

This model demonstrates that while stablecoins can reduce reliance on fiat payment rails during the initial leg of a cross-border payment, once redeemed, the process reintroduces additional steps involved in correspondent banking, FX execution and interbank settlement, thus limiting the end-to-end efficiency gains stablecoins might offer.

In more fragmented corridors – such as India to South Africa or Mexico to Eastern Europe – these redemption steps can add even more latency, cost and risk due to additional intermediaries, liquidity constraints and time zone mismatches.

[1] This flow is illustrative and does not account for scenarios where stablecoin on-ramping takes place via a digital asset exchange.
[2] Acc = bank account.
[3] It is assumed that Everest Capital already holds the required GBP liquidity in the UK via its correspondent bank, Sterling Reserve Bank, since Everest Capital does not have direct access to the UK's central bank settlement system.

A number of operational, technical and regulatory barriers impacting safety, treasury and efficiency have limited uptake in the wholesale market.

Is there a business case in wholesale FX?

Wholesale FX refers to the large-scale, institutional-level buying and selling of foreign currencies between banks, corporates, asset managers and other financial institutions to fund international operations, meet regulatory reserve requirements, hedge against foreign exchange exposure and relocate investments across global portfolios.

Given the large amounts at play in a highly interconnected market, safety, trust and efficiency are of vital importance in the FX ecosystem. CLSSettlement plays a central role in this market, providing payment-versus-payment (PvP) settlement for 18 of the world's most traded currencies[23] and settling an average daily value (ADV) of over USD7 trillion of payment instructions for more than 70 settlement members and over 38,000 indirect participants.[24] Through its vast network, CLSSettlement achieves liquidity optimization by multilaterally netting gross payments down by approximately 96%,[25] and further down to 99% on average with additional liquidity saving tools.

The "stablecoin sandwich" – wherein fiat is converted to a stablecoin, transferred on-chain across borders and then converted back into fiat – is sometimes mentioned as a potential model that could add value as a medium of exchange in the wholesale market. Proponents claim this would achieve faster settlement, improve transparency and reduce costs. In cross-border retail payments, this model is already increasingly used to transfer money between parties located in different jurisdictions, and Visa,[26] PayPal[27] and Ripple[28] have begun exploring the use of stablecoins for cross-border settlement.

However, a number operational, technical and regulatory barriers impacting safety, treasury and efficiency have limited the uptake of this model in the wholesale FX market:

- The "sandwich" model often relies on real-time instant gross settlement, which requires all involved counterparties to have on-demand liquidity and eliminates the ability to net any offsetting payments. This makes it less suited to the wholesale FX market, where netting efficiency is a significant benefit for the market.[29]

- FX settlement risk, which remains high on the agenda of joint public and private sector initiatives,[30] and related risks could still manifest at any stage of the stablecoin transaction. This may be due to potential counterparty failure at the point of on-ramping the stablecoin, vulnerabilities in wallet security that could lead to the on-chain stablecoin transaction being misdirected, or the risk of insufficient liquidity to convert stablecoins back to the desired fiat currency by the receiving institution. Figures 4 and 5 illustrate that in wholesale FX, settlement risk cannot be addressed by code alone, and dedicated settlement solutions are needed, especially to ensure "atomicity"[31] across blockchains.

- Converting between stablecoins and fiat (on/off-ramps) is still inefficient and patchy across jurisdictions,[32] requiring exchanges and bank transfers during business hours that are subject to compliance checks, leading to potential delays and fees[33] that reintroduce friction.

[23] CLSSettlement settles Australian dollar (AUD), Canadian dollar (CAD), Danish krone (DKK), Euro (EUR), Hong Kong dollar (HKD), Hungarian forint (HUF), Israeli shekel (ILS), Japanese yen (JPY), Korean won (KRW), Mexican peso (MXN), New Zealand dollar (NZD) Norwegian krone (NOK), Singapore dollar (SGD), South African rand (ZAR), Swedish krona (SEK), Swiss franc (CHF), UK pound sterling (GBP) and US dollar (USD).
[24] Indirect participants refer to financial institutions that do not have a direct membership in CLS, but still settle trades via CLSSettlement by relying on a direct participant (also known as a CLS settlement member).
[25] Netting services can be of a multilateral or bilateral nature. CLSSettlement combines FX settlement risk mitigation with multilateral netting, which is achieved by aggregating payment instructions to calculate each participant's net position across all counterparties and currencies. This results in a single net payment obligation per currency for each participant. Outside of CLSSettlement, in cases where multilateral netting is not possible and there is some degree of settlement risk, reducing payment obligations through bilateral netting can still help substantially reduce settlement risk.
[26] Visa's role in stablecoins, Visa Perspectives (May 2025).
[27] PayPal brings its stablecoin to stellar for cross-border remittances, Coindesk (June 2025).
[28] Stablecoin cross-border deals ramp up, FXCintelligence (May 2025).
[29] Reimagining same-day FX: Exploring the case for additional settlement cycles, CLS/FNA report (March 2025).
[30] FX settlement risk mitigation in (wholesale) cross-border payments, Cross-border Payments Interoperability and Extension Taskforce: Task Team 1 (March 2025).
[31] Key attributes of atomic settlement are simultaneity, whereby one leg of a transaction settles if and only if the other leg settles, and often instantaneous settlement; see Bullmann, D (2024) Atomic settlement: Counting down to zero, CLS opinion piece.
[32] Considerations for the use of stablecoin arrangements in cross-border payments, BIS (October 2023).
[33] On- and off-ramp charges vary by channel, fiat currency and geography: major exchanges typically levy 0.1–1%, specialized financial services providers charge 1–3%, and crypto-enabled ATMs as much as 7%. Additionally, while stablecoin transfers on blockchain networks occur in near real-time, off-ramping remains a challenge, due to the sometimes limited availability of local liquidity providers and sparse real-time payment infrastructure to pull stablecoin payments into the existing payments ecosystem. Stablecoins: Five killer tests to gauge their potential, BCG (May 2025).

- Blockchain and stablecoin networks are not inherently interoperable. Tokens issued on one chain may not be usable in another, leading to fragmented liquidity and requiring potentially risky cross-chain bridges that could be susceptible to cyberattacks and other issues.[34] This lack of interoperability, combined with network congestion on popular chains during peak hours and the risk of instability during periods of market stress, may undermine the adoption of stablecoin use cases in wholesale FX markets where trust, safety and resilience are paramount.

Stablecoins could also potentially serve as both a medium of exchange and a unit of account in wholesale FX markets. USD-backed stablecoins are already displacing comparatively small currencies in certain emerging market cross-border corridors such as Latin America, Sub-Saharan Africa and the Middle East. Stablecoins account for approximately 43% of the Sub-Saharan region's total transaction volume, largely driven by local currency devaluation.[35] Brazil's central bank reports that approximately 90% of crypto flows involve USD-backed stablecoins, used heavily for remittances and capital transfers.[36] In practical terms, this may reduce demand for certain currencies that might otherwise be traded in the wholesale FX markets, and lead to their substitution by USD-backed stablecoins.

However, stablecoins likely cannot disintermediate fiat currencies in the wholesale FX market until challenges are addressed. In particular, they are not yet widely accepted or universally recognized as cash equivalents under accounting standards.

Furthermore, according to the Bank for International Settlements (BIS), several practical considerations limit the viability of stablecoins as the backbone of monetary systems. Stablecoins lack elasticity[37] as they cannot dynamically expand liquidity or provide credit in response to shifting demand, unlike central bank and commercial bank money. This could make them particularly unsuitable for supporting payment flows during periods of stress or high transaction volumes. Widespread use of stablecoins backed by foreign assets, for example in the emerging market countries mentioned above, could cause monetary rigidity in these economies and thereby weaken local central banks' ability to manage liquidity, respond to shocks, or implement effective monetary policy.

These considerations could present a considerable barrier to the mainstream adoption of stablecoins by wholesale FX market participants in the short to medium term, while large-scale FX institutions are still optimized around existing fiat infrastructure that is regulated, integrated and familiar.

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34 Crypto mixers and cross-chain bridges: How hackers launder stolen assets, Cointelegraph (March 2025).
35 Stablecoins now account for approximately 43% of Sub-Saharan Africa transaction volume: Chainalysis (October 2024).
36 Stablecoins stoke volatility in Brazil capital flows, Reuters (May 2025).
37 The next-generation monetary and financial system, BIS Annual Economic Report (June 2024).

Figure 4 explores how wholesale FX payments using fiat commercial bank and central bank money take place today, both with and without PvP settlement mechanisms. Figure 5 explores a hypothetical FX transaction involving two separate stablecoins on two separate blockchains.

Figure 4 – FX using fiat (with and without PvP)

Figure 5 – FX using Stablecoins (without PvP)

Figure 4: **FX using fiat (with and without PvP)**

This figure illustrates[1] a wholesale FX transaction between two banks[3] – Redwood National Bank (RNB) and Bridgeway Bank (BB), in which RNB sells USD125 in exchange for GBP100. Unlike retail cross-border payments, this illustration assumes a bank-to-bank transaction typical of the wholesale FX market, where institutions regularly trade large volumes to manage liquidity, hedge risk, or fulfill client obligations.

Key
- PvP mechanism
- Commercial bank money
- Central bank money
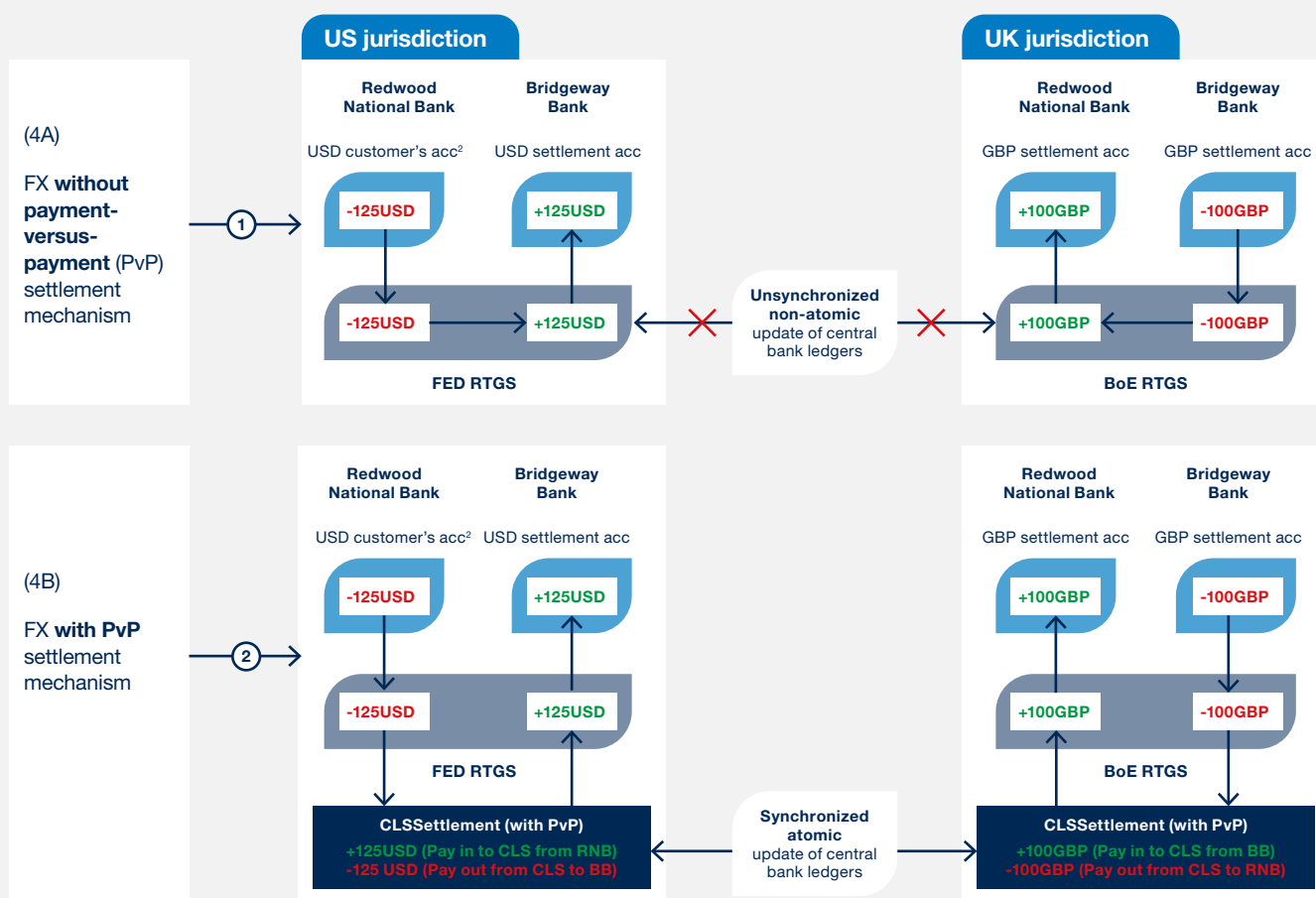
For both scenarios (4a and 4b), The settlement occurs as follows:
- Redwood National Bank is debited USD125, whilst Bridgeway is credited USD125
- Bridgeway is debited GBP100, whilst Redwood National Bank is credited GBP100
- These movements are reflected in both commercial bank ledgers and central bank RTGS systems.

1. Scenario 4A illustrates how the transaction is settled **without** a PvP mechanism, allowing both legs of the trade to settle independently of each other in the RTGS system, in an unsynchronized and non-atomic way.

2. Scenario 4B illustrates how the transaction is settled with a PvP mechanism, such as CLSSettlement. CLSSettlement ensures that it receives all required pay-ins before it enables synchronized atomic settlement with finality and irrevocability, and completes the pay-outs in the RTGS system. The PvP settlement mechanism introduced in 4B is designed to eliminate settlement risk. It acts as a critical risk mitigation tool underpinning the stability and efficiency of the global wholesale FX market.
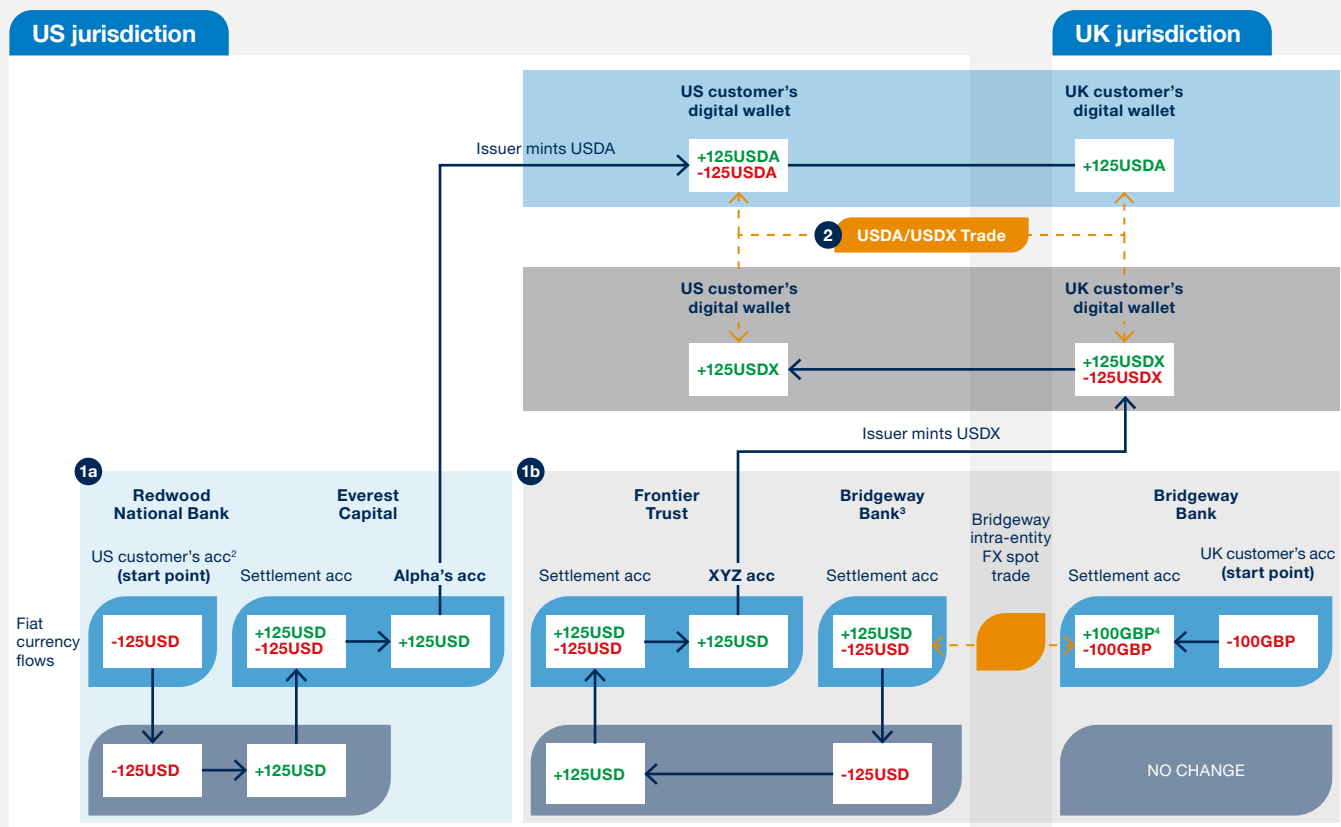
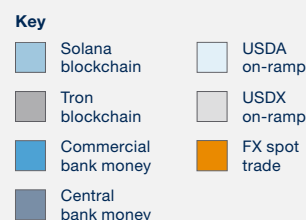[1] This illustrative flow demonstrates a simplified FX transaction settling on a gross basis and excludes any form of netting, which is a critical liquidity optimization mechanism in wholesale FX market.

[2] Acc = bank account.

[3] In this example, both Redwood National Bank and Bridgeway are assumed to be self-clearers, with direct access to both the Federal Reserve and the Bank of England RTGS systems.

Figure 5: FX using stablecoins (without PvP)

This figure illustrates[1] a peer-to-peer FX transaction in which a US customer of Redwood National Bank sells USD125 worth of stablecoin (USDA) and buys USD125 worth of stablecoin (USDX) from a UK customer of Bridgeway Bank. The FX transaction is conducted using two different stablecoins across two separate blockchains — Solana (for USDA) and Tron (for USDX) issued by stablecoin providers Alpha and XYZ respectively.

Key

- Solana blockchain
- Tron blockchain
- Commercial bank money
- Central bank money
- USDA on-ramp
- USDX on-ramp
- FX spot trade

US jurisdiction

UK jurisdiction

US customer's digital wallet
Issuer mints USDA
+125USDA
-125USDA

UK customer's digital wallet
+125USDA

2 USDA/USDX Trade

US customer's digital wallet
+125USDX

UK customer's digital wallet
+125USDX
-125USDX

Issuer mints USDX

1a
Redwood National Bank
US customer's acc[2] (start point)
-125USD

Everest Capital
Settlement acc
+125USD
-125USD

Alpha's acc
+125USD

Fiat currency flows

-125USD → +125USD

1b
Frontier Trust
Settlement acc
+125USD
-125USD

XYZ acc
+125USD

Bridgeway Bank[3]
Settlement acc
+125USD
-125USD

+125USD ← -125USD

Bridgeway intra-entity FX spot trade

Bridgeway Bank
Settlement acc
+100GBP[4]
-100GBP

UK customer's acc (start point)
-100GBP

NO CHANGE

The stablecoin FX transaction involves:

1a. The on-ramping of USDA by US customer and follows the same steps as described in figure 2.

1b. The on-ramping of USDX by UK customer and follows the same steps as described in figure 1, where the UK customer has to first execute a cross-border payment from the UK to the US resulting in prefunded digital wallet with US-backed USDX stablecoins.

2. To execute the FX transaction between two different stablecoins, the US customer's USDA is burned and minted at the UK customer's digital wallet, on the Solana blockchain. The UK customer's USDX is burned and minted at the US customer's digital wallet, on the Tron blockchain. Despite the FX occurring on-chain, this model does not use a PvP mechanism, meaning the two sides of the trade are not settled atomically.

This scenario highlights that PvP risk may still exist even when using tokenized money, particularly in the event of blockchain congestion, smart contract failures, or a delay in the second leg of the transfer, unless a coordinated settlement framework is in place. PvP orchestrators like CLS mitigate these risks by synchronizing payments across fiat central bank money. A similar utility would be required in a stablecoin-based environment to ensure atomicity, finality, and proper netting of obligations across chains.

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[1] This flow is illustrative and doesn't account for scenarios where stablecoin on-ramping takes place via a digital asset exchange.
[2] Acc = bank account.
[3] Assumes Bridgeway Bank has access to both the FED and BoE RTGS, without the need to use a correspondent bank.

What needs to happen before wide scale adoption?

Overcome fragmentation:

The approximately 170 stablecoins in existence rely on differing architectures, governance models and collateralization mechanisms. The blockchain networks that support these stablecoins are designed separately from one another, and achieving scale would require cross-chain interoperability.

The resulting fragmentation creates barriers for institutional adoption. To address this, initiatives are underway to make the on- and off-ramping between fiat and stablecoins more ubiquitous and to create standardized networks for exchanging and transferring stablecoins.[38]

Ensure sound regulation and solid oversight:

The global regulatory landscape for stablecoins is fragmented, with differing approaches across jurisdictions. For stablecoins to gain wider adoption and earn public trust, robust and coherent regulatory frameworks are essential. Against this backdrop, BIS stressed the need for tailored regulatory approaches that address the nature and specific features of stablecoins. Moreover, stablecoins raise challenges in enforcing regulations on anti-money laundering and combating the financing of terrorism that must be addressed.[39]

Jurisdictions such as the EU, Japan and Singapore have already established legal frameworks that cover stablecoins,[40] all of which require full 1:1 backing of stablecoins with low-risk and high-quality liquid assets or cash equivalents. The UK is in the process of integrating stablecoins into its financial regulatory framework,[41][42] and the US is proceeding with the creation of a comprehensive federal regulatory framework for stablecoins.[43] At the opposite end of the spectrum, China has effectively banned stablecoins as part of its broader prohibition on private cryptocurrency activity.[44]

A notable development is the regulatory focus on off-chain fund-backed stablecoins, which are increasingly being integrated into formal legal frameworks. Inversely, algorithmic stablecoins have been largely excluded or banned due to their inherent instability and past failures. For example, under the EU's Markets in Crypto-Assets Regulation (MiCA), stablecoins must maintain value through adequate reserves, disqualifying algorithmic models. Japan similarly treats such tokens as crypto assets rather than true stablecoins.

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38 UBYX aims to transform stablecoins from individual isolated digital assets into universally accepted, cash-equivalent instruments, operating under a common rulebook agreed by all participants. Circle Payments Network (CPN), a blockchain-based payments coordination protocol, aims to unify disparate payment networks and local currencies and enable 24/7 real-time settlement using stablecoins for mainstream and real-world use cases.

39 Aldasoro, I. et al (2025) Stablecoin growth – policy challenges and approaches, BIS bulletin No 108.

40 EU (Markets in Crypto Assets regulation adopted in 2023, stablecoin rules in force since June 2024), UAE (Payment Token Services Regulation that sets the rules for stablecoins came into effect in July 2024), Singapore (Regulatory framework for single-currency stablecoins finalized under the existing Payment Services act in 2023), and Japan (explicit legal framework covering stablecoins in force since June 2023).

41 The stable door is closing – the urgent issues facing UK's stablecoin sector, Travis Smith (April 2025).

42 UK government approach to tokenisation and regulation. HM Treasury speech by MP Tulip Siddiq (November 2024), covering proposals to introduce regulated activities for stablecoin issuance and safeguarding, ensuring the Financial Conduct Authority (FCA) can properly manage stablecoin risks (especially risks associated with the management of the backing asset). On the other hand, the UK does not intend to bring stablecoins into UK payments regulation at this stage, taking the view that such an approach would place a disproportionate level of regulatory burden on certain stablecoin activities. A question remains about how and if stablecoin payments will be regulated in the long run.

43 Different agencies oversee different aspects of stablecoin activity: the New York Department of Financial Services (NYDFS) supervises certain stablecoin issuers; the Federal Reserve and banking regulators supervise bank-issued stablecoins; the SEC and CFTC scrutinize stablecoins to assess whether they fall under securities or commodities laws; and the U.S. Treasury and FinCEN apply anti-money-laundering (AML) requirements. In early 2025, the GENIUS Act (Guiding and Ensuring National Innovation and Uniformity in Stablecoins Act) was introduced and passed in the Senate in June 2025 and in the House in July 2025. The GENIUS Act is expected to bring stablecoins closer to the standards applied to traditional financial products and provide the regulatory clarity and certainty that is one of the essential ingredients for the broader adoption of stablecoins use cases by the wholesale FX market and beyond.

44 China's Central Bank declares all cryptocurrency transactions illegal, Blockchain (October 2021).

Quo vadis stablecoins

The future trajectory of stablecoins – especially in the wholesale FX market – remains to be shaped by a complex interplay of regulatory, technological and geopolitical forces.

USD-pegged, fund-backed stablecoins will likely continue dominating the market for the foreseeable future. Coupled with maturing regulatory regimes in major jurisdictions, this could catalyze further growth in stablecoin usage. Yet, the scale of this expansion remains uncertain, and inherent features of stablecoins, such as the absence of elasticity, may hinder large-scale adoption. Moreover, the anticipated rollout of CBDCs in key markets, but also geopolitical developments and intensifying global fragmentation, may act as natural constraints both to USD-centric stablecoins and the broader stablecoin ecosystem.

Simultaneously, advancements in traditional payment and settlement systems, such as RTGS system upgrades and services like SWIFT GPI[45] are narrowing the gap. In certain respects, these legacy infrastructures may already offer comparable or superior solutions, especially in terms of scale, legal certainty and institutional trust. This convergence presents both a challenge and a reality check for stablecoin advocates, especially in wholesale financial applications.

As it stands, the stablecoin market remains relatively small compared to the USD7.5 trillion daily FX market.[46] This underscores the current asymmetry between perceived potential and actual impact. Moving forward, the extent to which stablecoins can meaningfully reshape the FX landscape will depend on how the regulatory environment evolves, how geopolitical alliances influence financial infrastructure and their interoperability, and how traditional systems continue to innovate.

While the trajectory of stablecoins seems skyward, their role in FX will depend not just on technological capabilities, but also on a complex interplay between policy, innovation and strategic global positioning.

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[45] Services like SWIFT GPI (Global Payments Innovation) are narrowing the gap between traditional cross-border payments and stablecoin-based transfers by significantly improving speed, transparency and traceability. SWIFT GPI enables real-time tracking of payments, end-to-end visibility, and faster settlement times compared to legacy correspondent banking models. For example, SWIFT reports that over 50% of GPI payments are credited to end beneficiaries within 30 minutes, with many processed in mere seconds. This enhanced traceability and speed reduce the relative advantage stablecoins have traditionally claimed, especially for corporate and interbank payments where transparency and compliance are critical.

[46] Triennial Central Bank Survey of FX and OTC Derivative Markets, BIS (April 2022).

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