Assessing the impact of stablecoins on exchange rate volatility for emerging market economies and policy implications

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Abstract

Stablecoins have seen increasing adoption worldwide, including in emerging market economies (EMEs), where financial systems are often less developed and more vulnerable to external shocks. This note documents that, given the prevalence of US dollar-pegged stablecoins, stablecoin transactions vis-à-vis EME currencies are associated with higher exchange rate volatility. Furthermore, instability in stablecoin prices could induce exchange rate volatility in EME currencies that are more exposed to stablecoins. The note then examines how robust regulatory frameworks can help mitigate such instability. A robust regulatory framework not only promotes price stability of stablecoins, but it also helps dampen the exchange rate volatility associated with stablecoin transactions. Recognising the importance of such frameworks, Hong Kong, as an international finance centre, is among the first jurisdictions to introduce a stablecoin regulatory regime, adopting a prudent approach to uphold the credibility of stablecoins issued in Hong Kong.

1. Introduction

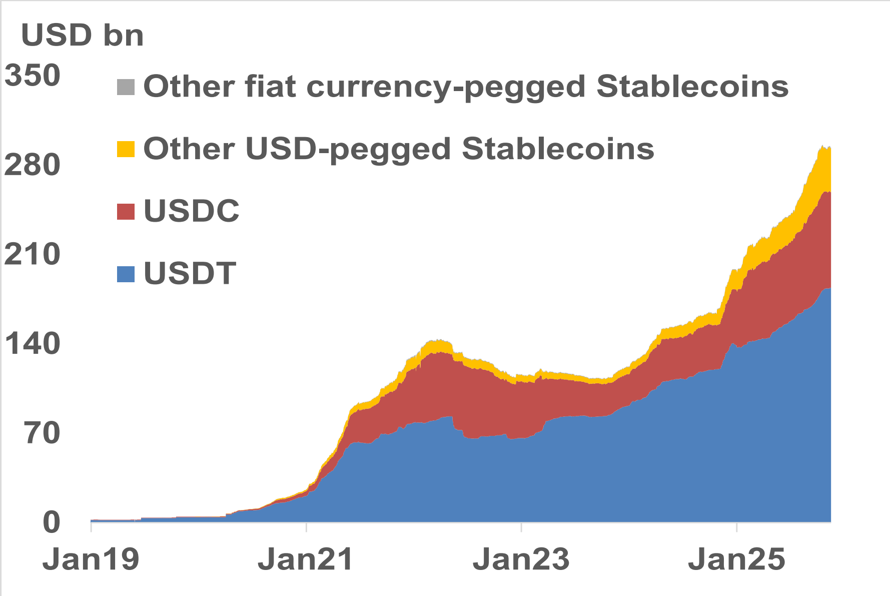
Stablecoins are cryptocurrencies designed to maintain a stable value.[1] They offer a new way to transfer money across borders for payments and investment, including cryptoassets. The market of stablecoins has grown rapidly in recent years (Graph 1). One important feature of this market is the prevalence of stablecoins pegged to the US dollar (referred to as "USD stablecoins" hereafter), which account for approximately 99% of stablecoin market capitalisation. This segment is dominated by USD Tether (USDT) and USD Coin (USDC), representing around 60% and 25%, respectively, of total stablecoin market capitalisation in November 2025.

Some cryptocurrency exchanges allow users to buy and sell stablecoins using fiat currencies other than USD. As buyers do not require prior conversion to USD, this market feature is particularly attractive to investors in emerging market economies (EMEs), given their less developed domestic financial markets and constraints on

[1] Throughout this note, "stablecoins" refers specifically to those whose values are pegged to a fiat currency ("fiat currency-pegged stablecoins"). According to CoinGecko (https://www.coingecko.com/en/categories/stablecoins), these account for over 97% of total market capitalisation of all stablecoins as of 19 November 2025, with the remainder consisting of stablecoins whose values are linked to other assets (such as cryptocurrencies or commodities).

accessing foreign assets. As a result, transaction flows between EME currencies and stablecoins have been substantial.

The market capitalisation of stablecoins Graph 1



"Stablecoins" in this chart refers to stablecoins that are pegged to a fiat currency ("fiat currency-pegged stablecoins"; see footnote 1 of this note)." USDC" refers to USD Coin, and "USDT" refers to USD Tether.

Source: CoinGecko.

The increase in flows from EMEs to USD stablecoins could have important implications for exchange rate volatility in EMEs, as such flows ultimately involve conversions between EME currencies and the USD in the foreign exchange (FX) market to complete the transactions. Consequently, increased FX activity in EME currencies arising from flows driven by stablecoins can lead to greater volatility in these currencies.

To broaden our understanding on this issue, the first part of this note provides an overview of stablecoin transactions vis-à-vis EME currencies and illustrates their potential linkages with the exchange rate volatility. We then present anecdotal evidence and empirical results, which suggest that EME currencies tend to be more volatile when flows of stablecoin transactions vis-à-vis these currencies increase. Furthermore, instability in stablecoin prices could induce greater exchange rate volatility in EME currencies that are more exposed to stablecoins. The increasing adoption of stablecoins in EMEs could result in a significant channel through which exchange rate volatility could be affected. This would warrant policy measures to reduce the price instability of stablecoins, which could also dampen the impact on exchange rate volatility.

To this end, the second part of this note reviews and discusses how robust regulatory frameworks can enhance the stability of stablecoins. Specifically, our findings suggest that capital buffer and cash holding requirements would be effective in limiting run risks of stablecoins amid market turbulence. We also find that the requirement for timely stablecoin redemption accelerates price convergence to the peg. Taken together, these measures can help reduce the risks of stablecoin runs and de-pegging, thereby mitigating potential spillover effects, including those on the FX market.

This note is structured as follows. The next section provides an overview of stablecoin transactions vis-à-vis EME currencies and illustrates their potential linkages with exchange rate volatility. Section 3 discusses how ongoing regulatory implementation in stablecoins would help improve the stability of stablecoins. Section 4 concludes.

2. Stablecoin transaction flows vis-à-vis EME currencies and their linkages with exchange rate volatility

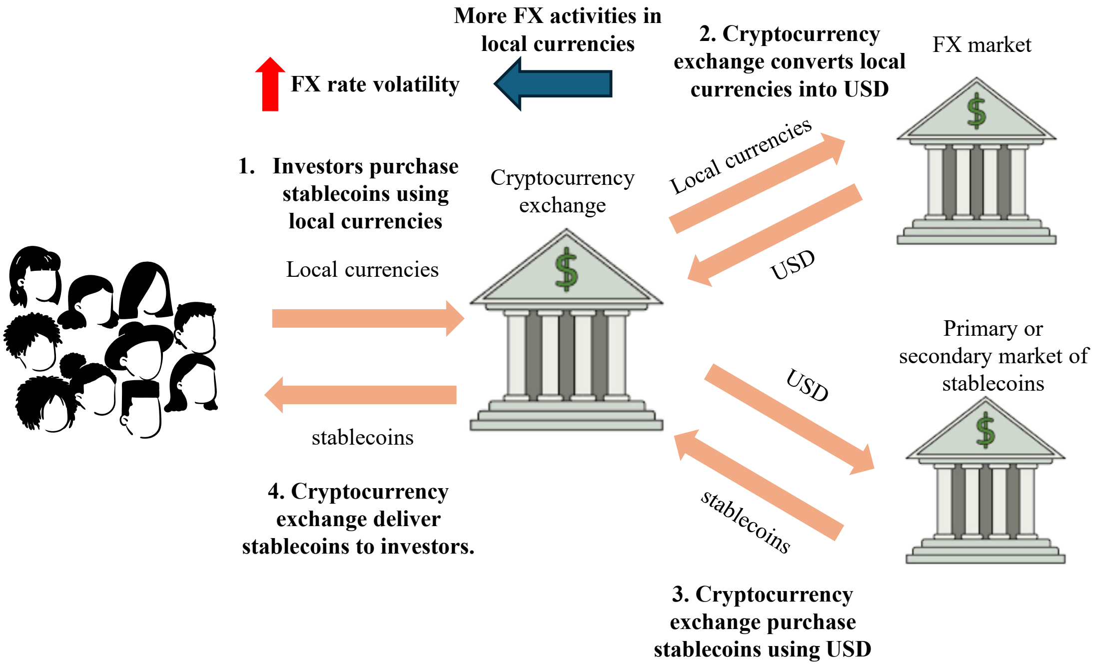
Graph 2 provides a schematic overview of how the purchase of USD stablecoins using non-USD fiat currencies can induce exchange rate volatility. By the same token, sales of USD stablecoins can also induce exchange rate volatility. Permitting direct purchases by EME currencies enables investors in EMEs to obtain USD stablecoins without the intermediate step of converting their funds into USD in the FX market. Operationally, FX conversion is facilitated by local cryptocurrency exchanges or market makers, which quote stablecoin prices in the local currency and accept settlement in that currency. To complete these transactions, cryptocurrency exchanges or market makers need to acquire the corresponding stablecoins for delivery to clients, necessitating the conversion of local-currency payments into USD.[2]

Under this arrangement, a greater volume of stablecoin transactions vis-à-vis EME currencies would lead to increased conversion activities in the FX market, potentially inducing volatility in these currencies. In addition to using local currencies directly for stablecoin transactions, EME residents may also acquire them using USD obtained by first converting their local currencies in the FX market. While such transactions can likewise affect exchange rate volatility, they are not captured in our study because of data limitations.

2 Crypto exchanges / market-makers that accept EME currencies obtain the USDT required to complete transactions from either the primary market (where the USDT issuer accepts only USD for new issuances) or the secondary market (mostly likely the USDT/USD market, given the much deeper USDT market in USD). In both cases, the crypto exchanges / market-makers require the proceeds of EME currencies to be converted into the USD to purchase USDT to deliver to their clients.

Illustration of transactions between USD stablecoins and non-USD local currencies

Graph 2



The level of stablecoins activity in EME currencies could be influenced by a number of factors. For instance, Auer et al (2025) find that higher inflation and greater bilateral exchange rate volatility tend to increase the flow of cross-border stablecoins; they also find that cross-border remittance cost is an important driver for greater stablecoin usage in EMEs.[3]

Apart from the above, the stability of stablecoins may also influence stablecoin transaction flows vis-à-vis EME currencies. A distinguishing feature of stablecoins, compared with other cryptocurrencies, is their commitment to exchange for fiat currencies at a predetermined fixed price (the peg). While the market price of a stablecoin may deviate from its peg due to changes in market demand and supply, such deviations are generally corrected through an arbitrage mechanism, keeping them minimal.[4]

However, in some circumstances this mechanism may fail to operate effectively. Although stablecoin prices usually remain close to their peg, significant deviations can arise – for instance, during periods of instability in the broader cryptocurrency

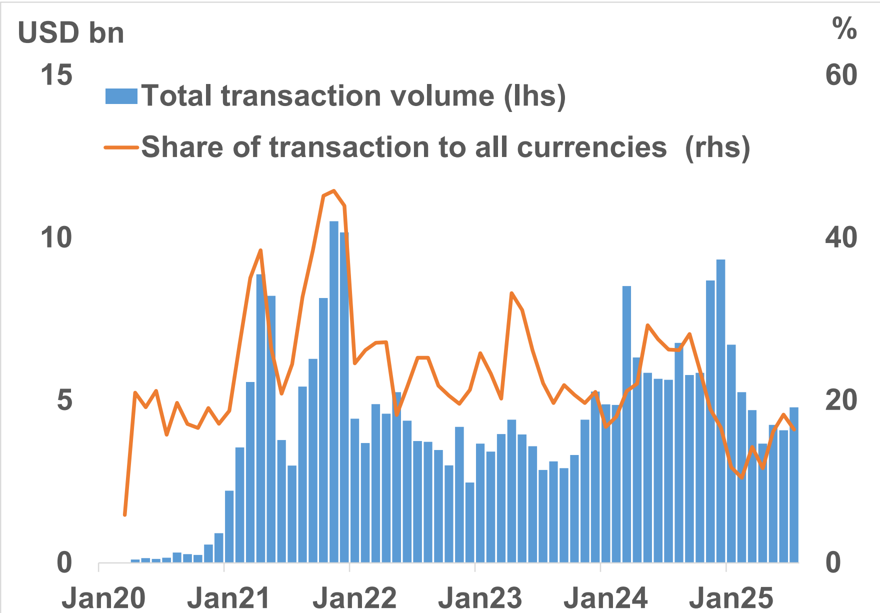
3 R Auer, U Lewrick and J Paulick, "DeFiying gravity? An empirical analysis of cross-border Bitcoin, Ether and stablecoin flows", *BIS Working Papers*, no 1265, May 2025.

4 When a stablecoin's market price is above its peg, arbitrageurs mint new coins from the issuer at the peg value and sell them on the market for a profit. This increases the market supply of stablecoins and pushes the price down towards the peg. When the market price is below the peg, arbitrageurs purchase coins on the market and redeem them at the peg. This reduces the market supply and helps lift the price back towards the peg.

market.[5] In such cases, stablecoin instability, reflected in a substantial price deviation from the peg, can spur greater activity in stablecoins, including transactions involving EME currencies. This, in turn, may contribute to volatility in EME currencies, as discussed above.

To provide an overview of stablecoin flows vis-à-vis EME currencies, Graph 3 presents monthly transaction volume data for USDT vis-à-vis 12 EME currencies,[6] sourced from CryptoCompare. This platform aggregates cryptocurrency transactions vis-à-vis different fiat currencies, as reported by different crypto exchanges.[7] Graph 3 shows that USDT transaction flows vis-à-vis the sampled EME currencies account for a notable share of around 20% of the total USDT transaction flows vis-à-vis all reported fiat currencies.

USDT transaction flows vis-à-vis 12 emerging market economy currencies — Graph 3



This chart depicts the total monthly USD Tether transaction flows vis-à-vis sampled emerging market economy currencies as reported by source, presented in total volume (USD billions) and share of all reported currencies. The currencies included are Argentine peso, Brazilian real, Colombian peso, Indonesian rupiah, Nigerian naira, Polish zloty, Romanian leu, Russian rouble, South African rand, Thai baht, Turkish lira and Ukrainian hryvnia.

Source: CryptoCompare.

5 For example, during the US banking turmoil in March 2023, the price of USDC fell below USD 0.90, because a large amount of its cash reserves was held at Silicon Valley Bank. Similarly, the collapse of Terra (UST) in May 2022 triggered widespread sell-offs across the crypto market, and the price of USDT dropped to USD 0.95.

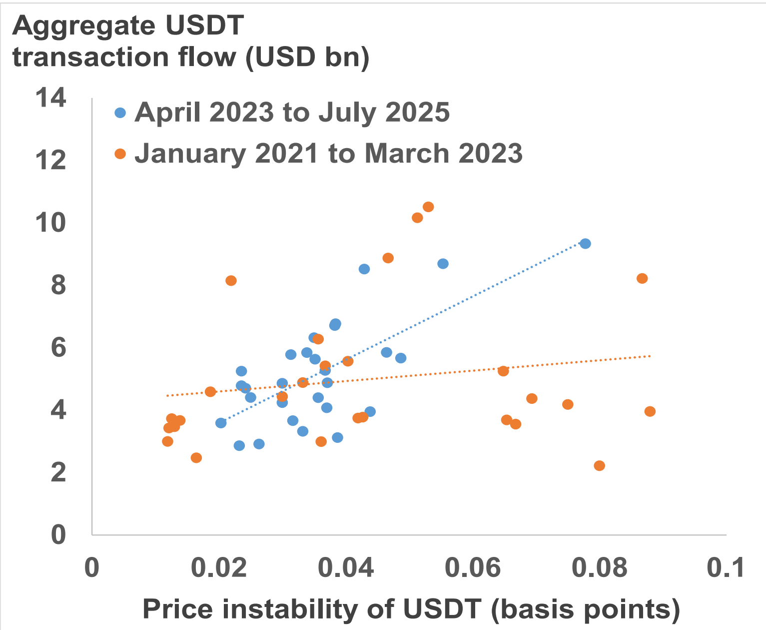
6 The currencies were Argentine peso, Brazilian real, Colombian peso, Indonesian rupiah, Nigerian naira, Polish zloty, Romanian leu, Russian rouble, South African rand, Thai baht, Turkish lira and Ukrainian hryvnia.

7 CryptoCompare collects data from over 300 cryptocurrency exchanges worldwide (as of November 2025), compiling daily transaction volumes against different fiat currencies for various cryptocurrencies (including stablecoins).

Anecdotal evidence supports the argument that price instability of stablecoins would drive stronger flows of EME currencies, particularly in more recent periods. Graph 4 presents a scatter plot showing aggregate monthly USDT transaction flows vis-à-vis sampled EME currencies against the monthly average of the daily absolute deviation of USDT price from its peg value (ie price instability of USDT) since 2021. Observations before 2021 were discarded due to much smaller transaction flows (see Graph 3). To assess whether the relationship has evolved over time, we split the observation period further into two halves, as indicated in Graph 4.

Graph 4 shows that in the earlier periods, when USDT's price was more volatile, the relationship between price instability and aggregate transaction flows was positive but weak (orange dots, with a correlation coefficient of 0.18). In the latter period, the relationship strengthened markedly (blue dots, with a correlation coefficient of 0.7), evident at both lower and higher levels of price instability. While Graph 4 supports the existence of a positive relationship between price instability of stablecoins and their transaction flows vis-à-vis sampled EME currencies, it cannot provide insights into the causality, which will be examined later.

Scatter plot of the price instability of USDT and aggregate USDT transaction flows vis-à-vis sampled emerging market economy currencies — Graph 4



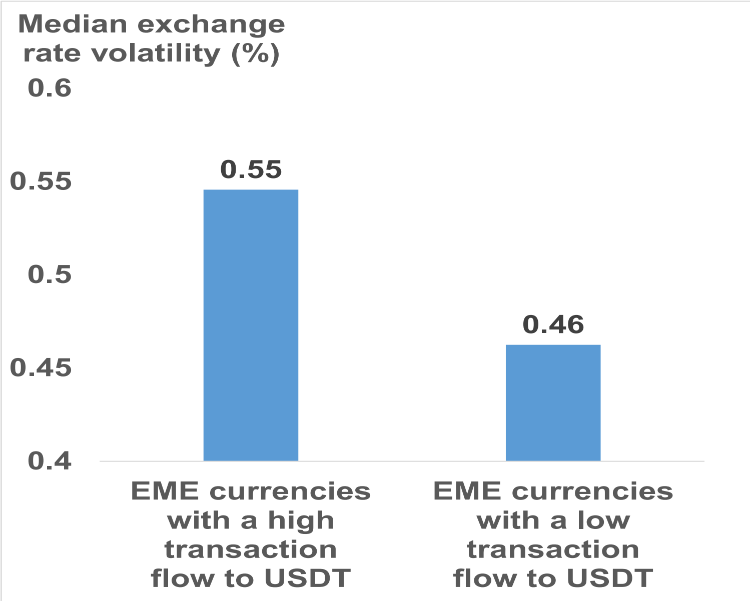
This graph plots aggregate monthly USDT transaction flows vis-à-vis sampled EME currencies (see Graph 3) against the price instability of USDT since 2021, split into two halves.

Sources: CoinGecko; CryptoCompare.

We further provide evidence that the level of stablecoin transactions vis-à-vis EME currencies may play a role in driving the respective exchange rate volatility. Graph 5 compares the median monthly exchange rate volatility (measured as the standard deviation of daily FX returns) for sampled EME currencies, grouped by their cumulative historical average transaction flows to USDT (from the start of the sample period up to $t-1$) when USDT significantly deviates from its peg value (ie 1 USD).

For a given month, USDT is considered to significantly deviate from its peg value when the average daily absolute deviation from the peg exceeds the sample median (which is about 0.04 basis points). During these periods, EME currencies with high historical average transaction flows to USDT (ie larger than the sample median) tend to show greater exchange rate volatility than those with lower flows.

Exchange rate volatility of emerging market economy currencies when USDT significantly deviates from its peg value (ie 1 USD) Graph 5



This chart depicts the median value of sampled emerging market economy (EME) currencies' monthly exchange rate volatility by their cumulative historical average transaction flows to USDT, when USDT significantly deviates from its peg value. EME currencies with a high (low) transaction flow to USDT are defined as those whose cumulative historical average USDT transaction flows are larger (smaller) than sample median. The currencies included in the sample are Argentine peso, Brazilian real, Colombian peso, Indonesian rupiah, Nigerian naira, Polish zloty, Romanian leu, Russian rouble, South African rand, Thai baht, Turkish lira and Ukrainian hryvnia.

Source: CryptoCompare; Bloomberg.

We further conduct panel regression analyses to test whether the observed patterns persist, after accounting for other drivers of exchange rate volatility and addressing potential endogeneity issues. The estimation is conducted using monthly observations from February 2021 to December 2024.[8]

$$FX\ vol_{i,t} = \beta_{USDT} USDT\_flow_{i,t-1}^{detrended} + \beta_{BTC} BTC\_flow_{i,t-1}^{detrended} + \sum_{k=1}^{m} \beta_k Control_{i,t} + FE_t + FE_{i,q} + \epsilon_{i,t} \quad (1)$$

Equation (1) presents our baseline panel regression model, which examines the relationship between exchange rate volatility and stablecoin transaction flows vis-à-vis the sampled EME currencies. The dependent variable, $FX\ vol_{i,t}$, measures monthly

[8] As shown in Graph 3, aggregate USDT transaction flows vis-à-vis sampled EME currencies were very small prior to 2021. In addition, we used Bai-Perron's (1998) structural break test to examine the time series of the deviation of USDT price from its peg and found a structural break between January and February 2021. To reduce the undue influence of these observations, our empirical analysis uses observations starting from February 2021. Details of Bai-Perron's (1998) structural break test can be referred to J Bai and P Perron, "Estimating and Testing Linear Models with Multiple Structural Changes", *Econometrica*, Vol 66, No 1 (January 1998), 47-78.

realised exchange rate volatility for currency i in month t. It is calculated as the standard deviation of daily FX rate returns during the month, capturing the degree of short-term fluctuations in the FX market.

The key explanatory variable is $USDT\_flow_{i,t-1}^{detrended}$, representing the lagged and de-trended USDT transaction flows vis-à-vis currency i, measured in billions of USD. This variable serves as a proxy for the level of stablecoin transaction activity and is our focus of interest. We lag the transaction flows by one month to mitigate potential endogeneity, as it could be argued that higher exchange rate volatility could itself induce more stablecoin transaction flows.[9] In addition, we de-trend the lagged flows by subtracting their 12-month trailing average from the observed flows. The primary aim of this de-trending is to avoid potential non-stationarity issues. The resulting measure captures short-term deviations in USDT flows for each currency relative to its longer-term trend, allowing us to assess how these fluctuations are associated with exchange rate volatility.

In addition to USDT flows, the baseline model also includes Bitcoin transaction flows vis-à-vis currency i ($BTC\_flow_{i,t-1}^{detrended}$) to control for broader cryptocurrency transactions vis-à-vis EME currencies, which may also influence FX activity. Like $USDT\_flow_{i,t-1}^{detrended}$, $BTC\_flow_{i,t-1}^{detrended}$ is lagged by one period and de-trended. Equation (1) also incorporates month-fixed effects (FE_t) to capture common time-varying influences (eg global financial and crypto market conditions); currency–quarter fixed effects ($FE_{i,q}$) for slow-moving currency-specific factors (eg macro-economic fundamental, financial market development); and a set of monthly currency-specific controls ($Control_{i,t}$) of exchange rate volatility that are not accounted for by the month-fixed and currency-quarter-fixed effects but may still affect exchange rate volatility.[10]

Column (1) of Table A.1 in Annex 1 presents the estimation results for Equation (1), showing that the estimated coefficient on $USDT\_flow_{i,t-1}^{detrended}$ is positive and statistically significant (0.13). This suggests that stablecoin transaction flows vis-à-vis EME currencies are one significant driver of the exchange rate volatility. To gauge the economic significance, we first separate the EME currencies into two groups: high- and low-flow groups. The former includes EME currencies whose average flow to USDT is larger than the median over the full sample, while the latter contains the remaining EME currencies. We then assume an increase in the USDT transaction flows by one standard deviation based on the historical distribution of each currency, and we further estimate the impact on the exchange rate volatility for each currency based on the estimation result in Column (1) of Table A.1. We found that for the high-flow group, the median impact on the exchange rate volatility is around 3.6% of their historical volatility, which is much larger than that of the low-flow group (ie 0.35% of the historical volatility).

We then examine whether stablecoin market conditions, specifically the price instability of USDT, could also induce exchange rate volatility. USDT price instability can trigger arbitrage, portfolio adjustments or hedging activity, leading to increased

9 Auer et al (2025).

10 These include inflation differential with the US, capital flows proxied by equity market fund flows, the currency's bid-ask spread, and FX market intervention by the authorities.

stablecoin flows and potentially greater exchange rate volatility. We conjecture that this impact is stronger for currencies with historically higher USDT activity.

$$FX\ vol_{i,t} = \beta_{USDT} USDT\_flow_{i,t-1}^{detrended} + \beta_{dev} USDT\_deviation_t + \beta_{devexp} USDT\_deviation_t * ExpCur_{i,t} + \beta_{exp} ExpCur_{i,t} + \beta_{BTC} BTC\_flow_{i,t-1}^{detrended} + \sum_{k=1}^{m} \beta_k Control_{i,t} + \sum_{z=1}^{n} \beta_z Month_t + FE_{i,q} + \epsilon_{i,t} \quad (2)$$

To test the above conjecture, we extend the baseline model to include $USDT\_deviation_t$, which measures the price instability of USDT, in Equation (2). This variable is defined as the monthly average of the daily absolute deviation of USDT's price from its peg.[11] We also include a dummy variable, $ExpCur_{i,t}$, to classify a group of EME currencies that are more exposed to USDT in a given month. $ExpCur_{i,t}$ is defined as one if in month t, a currency's cumulative historical average USDT transaction flows (from the start of the sample period up to $t-1$) exceed the median of all sampled currencies, and zero otherwise. We include an interaction term between $USDT\_deviation_t$ and $ExpCur_{i,t}$ to test the hypothesis that during periods of price instability of USDT, those EME currencies that are more exposed to USDT tend to have stronger impacts on their exchange rate volatility. We expect a positive β_{devexp}.

Column (2) of Table A.1 reports the estimation results of Equation (2). As expected, the estimated β_{devexp} is positive and statistically significant (3.55), supporting the hypothesis that during periods of price instability of USDT, EME currencies that are more exposed to USDT tend to have stronger sensitivity of exchange rate volatility to the price instability of USDT. This positive empirical relationship remains statistically significant when accounting for the total effect (ie. the sum of the estimated β_{devexp} and β_{dev}, 3.56). However, the estimation result for currencies that are less exposed to the USDT, which is reflected by the coefficient estimate of β_{dev}, is found to be statistically insignificant. Finally, the estimation results for both Equation 1 and 2 remain largely similar when lagged exchange rate volatility is included as an additional control variable, as reported in Columns (3) and (4) of Table A.1, respectively.

To summarise, results of our empirical analysis suggest that the volatility of EME currencies tends to be higher when flows of stablecoin transactions vis-à-vis these currencies increase. Furthermore, instability in stablecoin prices could induce exchange rate volatility in EME currencies that are more exposed to stablecoins. As stablecoin adoption continues to grow in EMEs, a significant channel could emerge through which exchange rate volatility could be affected. This calls for policy measures to reduce the price instability of stablecoins, which could help dampen the impact of the growth of stablecoin adoption on exchange rate volatility.

[11] One modification from Equation (1) is the treatment of factors that are common across currencies. More specifically, instead of applying month-fixed effects (FE_t), we include $Month_t$, which is a set of monthly common factors including log changes in the USD Index (control for USD condition); log changes in the VIX Index (control for global market volatility); and Bitcoin return volatility (control for cryptocurrency market volatility). This change is necessary because $USDT\_deviation_t$ is common across currencies and would be fully absorbed by month-fixed effects if they were retained.

3. How regulations on stablecoins can improve their stability

The de-pegging and runs on stablecoins have been demonstrated to amplify exchange rate volatility in EMEs, underscoring the importance of a comprehensive and robust regulatory regime to bolster financial resilience. In this regard, an increasing number of jurisdictions have enacted dedicated regulatory frameworks or specific provisions applicable to authorised virtual assets in recent years.[12] These regimes to varying degrees conform to the Financial Stability Board's (FSB's) international standards for stablecoin oversight,[13] requiring stablecoin issuers to (i) uphold sufficient capital buffers; (ii) adopt prudent reserve management practices (eg minimum cash holdings); and/or (iii) extend redemption rights from a restricted group of authorised counterparties[14] to all stablecoin holders, with redemption requests fulfilled promptly.

Drawing on a novel and granular dataset that primarily captures the capital buffers, reserve compositions and net flows of the world's major fiat-referenced stablecoins[15] from January 2021 to September 2025, our preliminary empirical results reveal how these provisions address distinct vulnerabilities.

First, we conduct a panel regression to examine whether a higher level of capital buffers or a larger share of cash as reserve assets disclosed by a stablecoin will mitigate the negative impact of adverse market shocks on its net flows:

$$\begin{aligned} Flow_{i,t+1} = {} & \beta_1 \times MOVE_t + \beta_2 \times MOVE_t \times Cash_{i,t} + \beta_3 \times Cash_{i,t} + \\ & \beta_4 \times MOVE_t \times CAR_{i,t} + \beta_5 \times CAR_{i,t} + \\ & \beta_6 \times MOVE_t \times UST_{i,t} + \beta_7 \times UST_{i,t} + \\ & \beta_8 \times MOVE_t \times Other_{i,t} + \beta_9 \times Other_{i,t} + \\ & Control_{i,t} + Coin_i + \varepsilon_{i,t}\ , \end{aligned} \quad (3)$$

where $Flow_{i,t+1}$ denotes the net daily flow of stablecoin i on day $t+1$ as the share of its market capitalisation at the end of day t; $Cash_{i,t}$ denotes its share of reserve assets in cash or bank deposits in its latest public attestation report; $UST_{i,t}$ denotes the share in US Treasury (UST) spot holdings, UST-collateralised repos, and UST-focused money market funds; $Other_{i,t}$ denotes the share in other assets, such as non-UST sovereign bonds, corporate bonds, metals and cryptos; and $CAR_{i,t}$ denotes its capital position.[16] Meanwhile, $MOVE_t$ proxies for adverse market conditions using the Merrill Lynch Option Volatility Estimate (MOVE) Index on day t; the vector $Control_{i,t}$ denotes a set of both stablecoin-specific and market-wide controls; and $Coin_i$ denotes the stablecoin fixed effects.

[12] See Financial Stability Board, *Thematic review on FSB global regulatory framework for crypto-asset activities: Peer review report*, October 2025.

[13] See Financial Stability Board, *FSB global regulatory framework for crypto-asset activities: Umbrella public note to accompany final framework*, July 2023.

[14] See Y Ma, Y Zeng and A L Zhang, "Stablecoin runs and the centralization of arbitrage", *NBER Working Papers*, no 33882, May 2025.

[15] These include 17 stablecoins whose combined assets comprise about 99% of the market total.

[16] The capital position of a stablecoin is defined as the sum of any excess capital reported in the most recent public attestation report and the minimum regulatory capital required of the stablecoin issuer.

In this equation, the coefficients of interest are β_2 and β_4, which quantify the marginal impact of each percentage point change in disclosed cash ratios and capital ratios on net flows, respectively. If higher disclosed cash reserves and capital buffers mitigate outflows from stablecoins, we expect both β_2 and β_4 to be significantly positive.

Table A.2 in Annex 2 presents the results for Equation (3). Specifically, the estimated β_2 and β_4 are both positive and statistically significant, confirming that higher levels of cash holdings and capital buffers are effective in mitigating outflows from stablecoins in stressed periods.

Second, we conduct a panel regression to study whether the enhanced accessibility and promptness in redemption mechanisms in response to price discounts can accelerate price convergence to the peg:

$$Flow_{i,t+1} = \delta_1 \times PD^{+}_{i,t} + \delta_2 \times PD^{+}_{i,t} \times MMFL_{i,t} + \delta_3 \times PD^{-}_{i,t} + \delta_4 \times PD^{-}_{i,t} \times MMFL_{i,t} + Control_{i,t} + Coin_i + \varepsilon_{i,t}\ , \quad (4)$$

where $PD^{+}_{i,t}$ denotes the positive end-of-day price deviation of stablecoin i on day t, or is set to zero if the deviation is negative; $PD^{-}_{i,t}$ indicates the negative end-of-day price deviations of stablecoin i on day t, or is set to zero if the deviation is positive; and $MMFL_{i,t}$ is set at 1 if stablecoin i on day t is legally obliged to settle redemption requests from all stablecoin holders within a prescribed window, typically a few business days in our sample. Meanwhile, $Flow_{i,t+1}$, $Control_{i,t}$ and $Coin_i$ are defined as in Equation (3).

In this equation, the coefficient of interest is δ_4. A significantly positive δ_4 suggests that a more accessible and faster redemption mechanism can encourage stablecoin redemptions in response to price discounts, thereby accelerating price convergence to the peg from below. To isolate the causal effect of the redemption mechanism per se, we constructed two matched samples in which the treated and controlled stablecoins are comparable along all major observable dimensions except for the redemption mechanism.

Table A.3 in Annex 2 presents the results for Equation (4). Specifically, the estimated δ_4 are positive and statistically significant in both matched samples, confirming that the enhanced accessibility and promptness in redemption mechanisms encourage stablecoin redemptions in response to price discounts, thereby accelerating price convergence to the peg and strengthening peg stability. Taken together, these measures effectively mitigate run and de-pegging risks, thereby alleviating the potential for stablecoin-driven exchange rate volatility in EMEs.

As an international financial centre, Hong Kong stands among the first jurisdictions to introduce a stablecoin regulatory regime. The Hong Kong Monetary Authority (HKMA) has actively engaged in the FSB's initiatives to delineate international standards for stablecoin oversight. In harmony with such standards, Hong Kong's Stablecoins Ordinance, effective from 1 August 2025, imposes a suite of requirements. For instance, each licensed stablecoin issuer must maintain paid-up share capital of at least HK $25 million, or more as required by the HKMA. The stablecoin must be fully backed by assets of high quality and liquidity with minimal investment risks, such as cash and bank deposits. The issuer must also grant each stablecoin holder the right to redeem at par value. Unless otherwise approved, valid redemption requests must be processed within one business day.[17] These stipulations provide robust protections against the aforementioned financial stability risks posed by stablecoins. To uphold the credibility of stablecoins in Hong Kong, the HKMA will adopt a prudent approach and apply a reasonably high bar in evaluating stablecoin licence applications.

4. Conclusion

Stablecoins – cryptocurrencies designed to maintain a stable value – are increasingly adopted worldwide, including in EMEs where financial systems are often less developed and more vulnerable to external shocks. With the prevalence of stablecoins linked to the USD, flows between EME currencies and stablecoins involve conversions between EME currencies and the USD in the FX market to complete the transaction. The increased FX activity could lead to greater volatility in these currencies.

Using data on transaction flows of USDT (the largest USD stablecoin) vis-à-vis 12 EME currencies, this study finds that larger flows are associated with higher exchange rate volatility. Furthermore, instability in stablecoin prices could induce exchange rate volatility in EME currencies that are more exposed to stablecoins. As stablecoin adoption continues to grow in EMEs, a significant channel could emerge through which exchange rate volatility could be affected. This warrants policy measures to reduce the price instability of stablecoins, which could also dampen the impact on exchange rate volatility.

In this regard, our preliminary empirical findings indicate that a holistic and well-calibrated stablecoin regime can effectively strengthen peg stability and mitigate run risks for stablecoins. By enhancing capital adequacy and reserve liquidity, this regime could alleviate the potential for stablecoin-driven exchange rate volatility in EMEs. Recognising the importance of such regimes, Hong Kong, as an international finance centre, stands among the first jurisdictions to introduce a stablecoin regulatory framework in alignment with the international standards delineated by the FSB. Going forward, the HKMA will adopt a prudent approach in its assessment of stablecoin licence applications, with a view to promoting the credibility of stablecoins issued in Hong Kong.

17 For details, please refer to Hong Kong e-legislation, *Cap. 656 Stablecoins Ordinance*; and HKMA, *Stablecoins Ordinance: Guideline on Supervision of Licensed Stablecoin Issuers*, August 2025.

Annex 1

Table A.1: Estimated relationships between exchange rate volatility, USDT transaction flows and price instability of USDT

	$FX\ vol_{i,t}$			
	(1)	(2)	(3)	(4)
$USDT\_flows_{i,t-1}^{detrended}$ (β_{USDT})	**0.13*** **	**0.09*** **	**0.20*** **	**0.14*** **
$USDT\_deviation_t$ (β_{dev})		0.01		0.28
$USDT\_deviation_t * ExpCur_{i,t}$ (β_{devexp})		**3.55***		**3.21***
$ExpCur_{i,t}$ (β_{exp})		0.01		0.01
$FX\ vol_{i,t-1}$			**-0.17** **	-0.17
$BTC\_flows_{i,t-1}^{detrended}$ (β_{BTC})	0.08	0.09	0.10	0.12
Monthly currency controls ($Control_{i,t}$)	Yes	Yes	Yes	Yes
Monthly controls ($Month_t$)	No	Yes	No	Yes
Month-fixed effects (FE_t)	Yes	No	Yes	No
Currency-quarter fixed effects ($FE_{i,q}$)	Yes	Yes	Yes	Yes
Number of observations	494	472	494	472
Number of currencies	12	12	12	12
$USDT\_deviation_t + USDT\_deviation_t * ExpCur_{i,t}$ ($\beta_{dev} + \beta_{devexp}$)		**3.56***		**3.49***

Columns (1) and (2) report the estimation results for Equations (1) and (2), respectively. In all columns, $FX\ vol_{i,t}$ is the exchange rate volatility of currency i in month t. $USDT\_flow_{i,t-1}^{detrended}$ and $BTC\_flows_{i,t-1}^{detrended}$ are the detrended USDT and bitcoin transaction flows vis-à-vis currency i respectively. In Column 2, $USDT\_deviation_t$ measures the price instability of USDT, while $ExpCur_{i,t}$ is a dummy variable indicating whether a currency is exposed to USDT in a given month t. Columns (3) and (4) report the estimation results for Equations (1) and (2), respectively, with lagged exchange rate volatility included as an additional control. ***, ** and * indicate that the estimated coefficient is statistically significant at the 1%, 5% and 10% levels, respectively.

Annex 2

Table A.2: Estimated impacts on net daily flows of stablecoins from higher cash holdings and capital buffers[i]

	(1) $Flow_{i,t+1}$
$MOVE_t(\beta_1)$	-0.21**
$MOVE_t \times Cash_{i,t}(\beta_2)$	0.003**
$MOVE_t \times CAR_{i,t}(\beta_4)$	0.05**
$Control_{i,t}$	Yes
$Coin_i$	Yes
Stablecoins	Full sample[ii]
Period	1 January 2021 – 30 September 2025
Observations	9,595

[i] ***, **, and * denote a 1%, 5% and 10% level of statistical significance, respectively.

[ii] The full sample includes USDT, USDC, FDUSD, PYUSD, RLUSD, USDG, USDL, USDP, GUSD, EURC, XUSD, XSGD, EUROe, ZUSD, EURØP, GYEN and BUSD.

Table A.3: Estimated impacts on net daily flows of stablecoins from enhanced redemption mechanism[i]

	(1) $Flow_{i,t+1}$	(1) $Flow_{i,t+1}$
$PD_{i,t}^{-} \times MMFL_{i,t}(\delta_4)$	1.96**	10.6**
$Control_{i,t}$	Yes	Yes
$Coin_i$	Yes	Yes
Stablecoins	USDP, USDL, USDG[ii]	PYUSD, USDC[iii]
Period	1 January 2021 – 30 September 2025	
Observations	1,215	1,448

[i] ***, ** and * denote a 1%, 5% and 10% level of statistical significance, respectively.

[ii] USDP, USDL and USDG are Paxos-issued and USD-referenced, and have similar market capitalisation and reserve mix, except that USDP and USDL are subject to an enhanced redemption mechanism while USDG is not.

[iii] The issuers of PYUSD and USDC are US-listed firms of similar size. They rank second and third among USD-referenced stablecoins in size with similar reserve mix, except that PYUSD is subject to an enhanced redemption mechanism while USDC is not.