Market Research Report

Nodiens

Which Stablecoins Move the Market? An Analysis of Volume Spillovers

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Index

Key Highlights

- **USDC is the dominant transmitter of trading activity,** accounting for **32.4%** of total volume spillovers across stablecoins.
- **USDT, despite being the largest stablecoin by circulation,** contributes a smaller share (**19.7%**) of spillovers than USDC, highlighting differences in how influence is transmitted across markets.
- **Together, USDC and USDT explain more than half (52%) of all spillovers,** underscoring their central role in shaping systemic stablecoin dynamics.
- A **mid-tier group** of stablecoins—**GUSD (12.1%)**, **USDJ (11.3%)**, and **DAI (11.1%)**—provides meaningful but more moderate contributions to cross-market activity.
- **Peripheral stablecoins** such as **FRAX (6.7%)**, **USDD (5.3%)**, and **TUSD (1.4%)** show limited influence, with minimal spillover effects on the broader ecosystem.
- The results reveal a **hierarchical spillover structure**: a concentrated core dominated by USDC and USDT, a mid-tier of secondary influencers, and a periphery with marginal impact.
- Monitoring the **trading volumes of USDC and USDT** is particularly important for understanding systemic risk and liquidity dynamics in the stablecoin market.

Introduction

Stablecoin markets have become a central conduit for crypto liquidity, raising an important question: do surges in the trading activity of one stablecoin spill over into the broader ecosystem? Addressing this question requires a framework capable of capturing how trading activity in one market transmits to others.

In this study, we focus on **volume spillovers**, which we define as systematic and predictive relationships in which past changes in the trading volume of one asset help to explain subsequent changes in the trading volume of another. Although most market microstructure and connectedness studies concentrate on price or volatility linkages [1, 2], a smaller but growing body of research has begun to examine volume and liquidity spillovers. For example, [3] and [4] document volume-driven spillover effects across equity and cryptocurrency markets, while [5] highlights the role of trading volume as an endogenous channel for information transmission. Building on these insights, our analysis investigates **system-wide volume spillovers among major stablecoins**, offering new evidence on how trading activity propagates within this critical segment of the digital asset ecosystem.

The objectives of this research are threefold. First, we **quantify system-wide volume spillovers** among major stablecoins using a transparent regression framework and conservative statistical filtering. Second, we **rank stablecoins by their normalized spillover shares** to identify which assets are the primary transmitters of trading activity to the rest of the market. Third, we **provide decision-ready evidence**—tables and charts—that can be monitored over time, offering a practical lens on how stablecoin activity propagates through the broader crypto liquidity network.

Methodology and Data

This study employs a regression-based framework to detect and quantify system-wide volume spillovers among stablecoins. The analysis proceeds in several steps, beginning with data transformation, followed by regression estimation, aggregation, and normalization.

We first transform raw daily trading volumes into a log scale in order to stabilize variance and reduce the impact of extreme observations. The transformation log(1+V) is applied to each stablecoin's volume series, where V denotes the raw daily volume. We then compute first differences of the logged series to obtain daily changes in log-volume, defined as

$$\mathrm{dlogV}_i(t) = \log(1+V_i(t)) - \log(1+V_i(t-1)),$$

where i indexes each stablecoin. This measure captures scale-adjusted changes in trading activity and provides a consistent basis for cross-asset comparison.

The central step of the methodology involves estimating a system of regressions, one for each stablecoin in the sample. For a given target coin B, its daily change in log-volume is modeled as a function of lagged changes in the log-volumes of all other stablecoins:

$$\mathrm{dlogV}_B(t) = \alpha + \sum_{A \neq B} \sum_{\ell=1}^{L} \beta_{A,\ell} dlogV_A(t-\ell) + \varepsilon_t .$$

Here, $\mathrm{dlogV}_B(t)$ is the dependent variable, $\mathrm{dlogV}_A(t-\ell)$ represents the lagged changes in other stablecoins' volumes, $\beta_{A,\ell}$ captures the directional influence from stablecoin A to B at lag ℓ, and εt is the error term. The number of lags L is set to three (days), reflecting short-term predictive horizons relevant to daily trading patterns.

The regressions are estimated using ordinary least squares (OLS), and for each predictor coefficient $\beta A,\ell$ we record its magnitude and statistical significance p. Only coefficients with a p-value below 0.05 are retained, ensuring that the spillovers we measure are statistically reliable. To quantify the aggregate influence of each origin stablecoin, we sum the absolute values of its significant coefficients across all targets and lags:

$$\text{Total Spillover}_A = \sum_{B \neq A} \sum_{\ell=1}^{L} \left|\beta_{A \to B,\ell}\right|.$$

This aggregation produces a single measure of system-wide spillover strength for each stablecoin, reflecting how strongly its past trading activity predicts changes in the volumes of others. Because coefficients may be positive or negative depending on whether they amplify or dampen trading in other coins, the absolute value is used to capture overall influence without cancellation.

Finally, to enable direct comparison across assets, we normalize the aggregated spillovers into percentage shares:

$$\text{Share}_A = \frac{Total\ Spillover_A}{\sum_j Total\ Spillover_j} \times 100.$$

The resulting shares indicate each stablecoin's relative contribution to the system-wide network of volume spillovers. This methodology combines the interpretability of regression coefficients with a network-oriented aggregation, allowing us to move from individual predictive effects to a system-wide measure of influence. It provides a rigorous yet transparent framework for identifying which stablecoins are the primary transmitters of trading activity across the broader market.

This study uses daily trading volume data from the **Nodiens Financial Index**, covering the period **January 2023 to December 2024**. Two metrics are employed:

- **CEX Volume (24h):** aggregated trading volume across centralized exchanges (CEX),
- **DEX Volume (24h):** aggregated trading volume across decentralized exchanges (DEX).

The dataset encompasses **eight major stablecoins**: **USDT, USDC, DAI, TUSD, GUSD, FRAX, USDD, and USDJ.** For each asset, we aggregate daily trading volumes from both CEX and DEX venues to obtain total daily volumes. Table 1 presents the descriptive statistics that provide context for interpreting the spillover results, as larger and more liquid assets are more likely to exert system-wide influence.

Stablecoin	Launch Date	Type	Market Cap (USD bn)	Mean Daily Volume (USD mn)
USDT	October 2014	Fiat-collateralized	168.31	4258.4
USDC	September 2018	Fiat-collateralized	72.66	294.1
DAI	December 2017	Crypto-collateralized	5.36	14.4
TUSD	March 2018	Fiat-collateralized	0.49	1.8
USDD	May 2022	Algorithmic	0.47	15.1
FRAX	December 2020	Hybrid (partly fiatcollateralized, partly algorithmic)	0.08	15.6
GUSD	September 2018	Fiat-collateralized	0.05	1.2
USDJ	April 2020	Crypto-collateralized	0.01	1.1

Table 1. Market Capitalization and Mean Daily Trading Volumes (CEX and DEX) of Stablecoins. Reported market capitalization corresponds to the September 1, 2025 snapshot, while daily trading volumes are calculated as mean values over the period January 2023 to December 2024 from tracked CEX and DEX trading pairs by Nodiens.

Key Findings

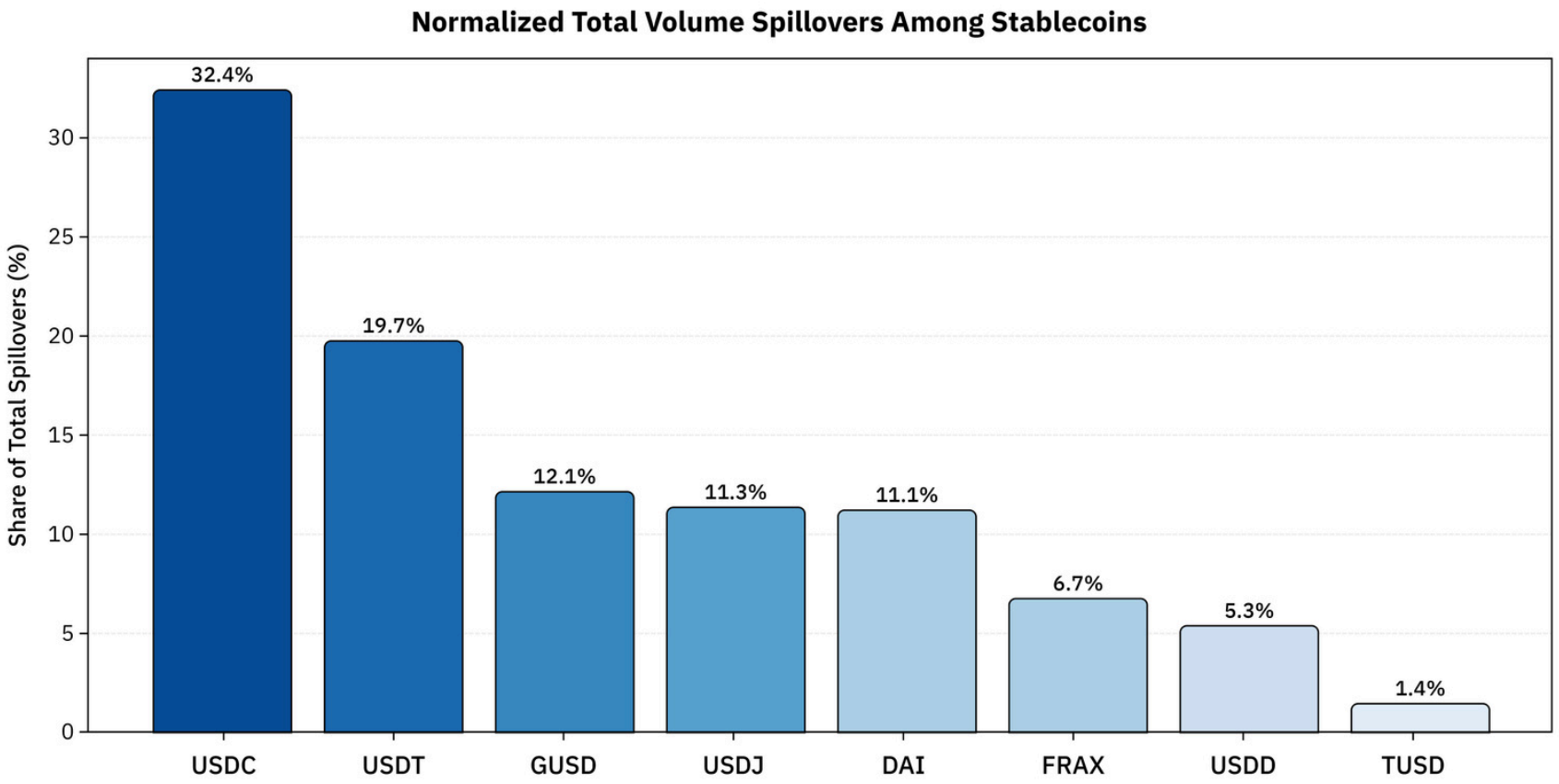

Figure 1. Normalized Total Volume Spillovers among Stablecoins (absolute coefficients, p < 0.05), January 2023–December 2024. The chart shows each stablecoin's share of system-wide spillovers, providing a direct measure of its relative importance as a transmitter of trading activity.

The analysis of normalized total spillovers highlights a clear concentration of influence among stablecoins. **USDC emerges as the single most influential asset**, accounting for **32.4%** of all significant spillovers. This indicates that fluctuations in USDC's trading volume are strongly predictive of subsequent activity across the broader stablecoin ecosystem.

The second-largest contributor is **USDT**, with a **19.7%** share of spillovers. Despite being the largest stablecoin by circulation and trading activity in absolute terms, USDT's influence on cross-market volume dynamics is more limited than that of USDC. This suggests that while USDT remains a critical global trading vehicle, its spillover effects are more distributed and less dominant. Taken together, however, USDC and USDT account for more than 50% of all measured spillovers, indicating that systemic dynamics in the stablecoin market are highly concentrated in these two assets.

A mid-tier group of stablecoins—**GUSD (12.1%)**, **USDJ (11.3%)**, and **DAI (11.1%)**—also register meaningful spillover effects. Although individually less dominant than USDC or USDT, their combined contributions reflect a secondary layer of influence within the system.

By contrast, **FRAX (6.7%)**, **USDD (5.3%)**, and **TUSD (1.4%)** show comparatively minor system-wide influence. Their spillover shares suggest that shocks in their trading volumes are less likely to propagate broadly, and their roles remain peripheral in the network of stablecoin liquidity transmission.

Overall, these results point to a **hierarchical spillover structure:** a highly concentrated core dominated by USDC and USDT, a middle layer of moderate influencers, and a periphery of assets with marginal spillover effects. This structure implies that monitoring trading activity in the largest stablecoins is crucial for understanding systemic dynamics in stablecoin markets.

Conclusion

These results have clear implications for market participants. For **investors and risk managers**, identifying USDC and USDT as the primary sources of spillovers highlights where systemic shocks are most likely to originate, allowing for more informed monitoring of liquidity risks. For **traders**, understanding which stablecoins drive cross-market activity can improve strategies for anticipating volume shifts and adjusting positions across assets. For **researchers and policymakers**, the spillover hierarchy provides a framework for studying market stability, regulatory focus, and the potential contagion channels within the broader digital asset ecosystem. By quantifying and ranking spillover influence, this study offers a practical tool for navigating the increasingly interconnected stablecoin landscape.

References

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