IAQF Student Competition 2026

Cross-Currency Dynamics in Cryptocurrencies under Stablecoin Regulation

In 2025, the United States enacted what many observers have called a watershed moment in digital asset policy, the *Guiding and Establishing National Innovation for U.S. Stablecoins Act*, widely known as the GENIUS Act. For the first time, dollar-pegged stablecoins such as USDC and USDT were brought into a clear federal regulatory framework, requiring strict reserve backing, transparency, and oversight by banking regulators. This legislation aims to transform stablecoins from experimental tokens into trusted infrastructure for payments, liquidity, and settlement in financial markets.

Alongside this legislative shift, industry momentum is building around institutional adoption of stablecoin rails, with major payment networks such as Visa launching USDC settlement offerings that integrate stablecoins into traditional treasury and settlement systems. Meanwhile, a wave of new crypto bills in 2026 promises further regulatory clarity around market structure and digital asset use.

This real-world regulatory shift is relevant not only for payments and institutional infrastructure, but also for market microstructure and cross-currency trading in cryptocurrency spot markets. Unlike traditional foreign exchange (FX) markets, cryptocurrency markets embed multiple fiat and quasi-fiat quote currencies, USD, USDT, USDC, EUR, JPY, KRW and others, in a fragmented network of exchanges that operate 24/7. Stablecoins in particular play a central role as intermediate liquidity conduits between assets, functioning as a kind of digital short-term funding currency. But because these instruments are not yet universally regulated or redeemable in the same way as traditional currency, cross-currency price relationships can deviate from classic parity conditions and create economic phenomena that are both persistent and exploitable.

In this context, understanding cross-currency dynamics – how the same base asset (e.g., BTC) trades against different quote currencies and how stablecoin funding risks and liquidity conditions affect those relationships – is of both academic and practical importance. For institutional market participants, asset custodians, and treasury desks considering using regulated stablecoins, the mechanics of cross-currency basis, liquidity fragmentation, and funding cost will determine execution quality, hedging effectiveness, and operational risk. For regulators and policymakers, these dynamics inform questions about systemic risk, arbitrage efficiency, and the resilience of stablecoin-anchored markets under stress.

Project Framework

Your team will investigate the cross-currency structure of spot cryptocurrency markets, focusing on how stablecoins and regulatory developments shape the pricing and liquidity relationships between markets quoting the same underlying asset in different currencies.

Specifically, you will:

1. Choose a base asset:
   • Bitcoin (BTC) *or* Ethereum (ETH)
2. Choose at least two quote currencies:
   e.g., USD vs USDT, USDT vs USDC, USD vs EUR
3. Collect high-frequency market data for each chosen trading pair across at least two centralized exchanges (one of which must be Binance or Coinbase) over the same time period.
4. Analyze the cross-currency price relationships and liquidity conditions, and interpret your findings in light of the new stablecoin regulatory environment in the U.S. and its implications for market participants.
5. You will analyze a 21-day window of high-frequency data, the period March 1, 2023 through March 21, 2023 (UTC). This window includes a major stablecoin stress event associated with the temporary de-pegging of USDC following the Silicon Valley Bank failure, and provides a natural laboratory for studying cross-currency dynamics, liquidity fragmentation, and stablecoin funding risk.

Questions to Consider

1. Cross-Currency Basis
   How does the price of BTC/USDT compare to BTC/USD over time? Do we observe persistent differences once transaction costs are considered, and what drives those differences?
2. Stablecoin Dynamics
   How do premium/discount patterns in stablecoin quoted markets (e.g., USDT vs USDC) vary across exchanges and regimes? How might forthcoming U.S. regulation affect confidence in these instruments?
3. Liquidity & Fragmentation
   Does liquidity differ systematically across quote currencies? How do order book depth, spread, and volatility vary between BTC quoted in USD versus stablecoins?
4. Regulatory Overlay
   Tie your empirical findings to the broader policy context:
   • Why might regulated stablecoins alter cross-currency trading patterns?
   • What implications does the GENIUS Act (and stablecoin settlement adoption by payment systems) have for the structure and efficiency of these markets?

Data Sources

To support your analysis, you will need to collect candle data for each trading pair and exchange in your study window.

Recommended public APIs / platforms:

- Exchange APIs: Binance, Coinbase, Kraken, Bybit
- Data aggregators: CryptoCompare, Coin Metrics
- On-chain explorers for stablecoin metrics

(You may also use academic/licensed data sources such as Kaiko or Amberdata if available through your institution.)

Deliverables

You will produce a 10-page paper that includes:

- Financial context and motivation (including regulatory background)
- Data description and methodology
- Empirical results on cross-currency pricing and liquidity
- Discussion of how stablecoin regulation and market structure affect observed patterns
- Conclusions and implications for trading, risk management, and policy

You **must** also provide **reproducible code** for data processing and analysis, with clear instructions.