Stablecoin price dynamics under a peg-stabilising mechanism

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Summary

As an analogy for a currency board, this paper uses the theory of the quasi-bounded target-zone model based on the standard flexible-price monetary framework to study the peg-stabilising mechanism for stablecoin prices and associated dynamics. The solution to the model equation illustrates that the price is more stable in a narrower trading bandwidth and less sensitive to changes in the fundamental (demand for the stablecoin) with a stronger stabilising force in the fundamental dynamics, less ample stablecoin supply, and more anchored expectation of the price. The empirical results using Tether demonstrate that the model can describe its price dynamics. The mean reversion in the Tether price dynamics representing the stabilising force is positively related to market liquidity in the stablecoin market and volatility in the Bitcoin price, suggesting that the increased market liquidity and safe haven characteristic of Tether stabilise its price. The implications for prudential treatment of stablecoins, including trading bandwidths, market liquidity condition and the quality of backing reserves are discussed.