Stablecoins: Adoption and Fragility

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Abstract

Stablecoins are a new form of digital private money that promises a stable and secure way to park funds in the crypto universe. The dominant stablecoins are pegged one-to-one to the US dollar. Like banks or money market funds, stablecoin issuers face the risk of runs and coin holders are sensitive to adverse information about the quality of the issuer's reserves and exposures to custodial, operational, and technological risk. This paper develops a theoretical framework that allows to study the determinants of stablecoin adoption and fragility. It offers insights for the risk assessment and appropriate regulation of stablecoins, as well as new testable implications. Under the premise that stablecoins offer a benefit for certain use cases that differs across potential stablecoin holders, a wider adoption of stablecoins is associated with a destabilizing composition effect. Therefore, new adopters pose a negative externality on other coin holders. Positive network effects can counter this destabilizing composition effect. However, they can also give rise to a different negative externality if a wider adoption undermines the role of bank deposits as a means of payment. Both externalities promote excessive adoption. Factors that increase the issuer's revenue from fees and seigniorage improve stability, as do congestion effects that cause higher transaction costs during periods of crypto market turmoil. The existence of a stablecoin lending market tends to promote both stability and adoption, provided the benefits are not eroded by speculation. Finally, introducing a moral hazard problem offers insights for the management of reserves and for disclosure.

Keywords: Stablecoins, money, payments, financial stability, global games.

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