

11th IMF Statistical Forum
**MEASURING MONEY IN THE
DIGITAL AGE**

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STATISTICS

New technologies for money & payments: Implications for banks

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History

The technology of money and payments

Operating money & payments system essentially an exercise in secure recordkeeping and messaging.

Technology: data storage, communications, security (e.g., cryptography). Change along each of these dimensions happening forever, sometimes with profound impact on the business of banking, central banking, and policy.

E.g., electronic revolution of 1960s-70s resulted in a massive migration away from paper-based recordkeeping to electronic recordkeeping.

- ▶ Spurred new legislation (Canada Payments Act, 1980) and creation of a new federal department (of Communications) in 1969;
- ▶ Bank of Canada granted oversight over LVTS and ACSS, with LVTS altering the operational conduct of monetary policy.

Historically, technological change largely complementary to business of banking. Not a major problem for central banks and regulators willing & able to adapt.

What is New Today?

Decentralized Autonomous Organization (DAO)

DAO – an organization governed autonomously by a set of rules encoded in an open-source computer program.

- ▶ No central authority (governance via established rules & consensus).
- ▶ Participation does not require permission or personal identification--either as consumers or as collaborators contributing to collective effort needed to maintain records. (e.g., miners in BTC).
- ▶ Fees and compensation in the form of tradeable native token serving as monetary instrument.

DAOs cannot be regulated directly (only indirect regulation possible).

- ▶ In addition to any intrinsic benefits that a DAO may confer, this property opens the door to regulatory arbitrage.
- ▶ Implications for central banks, private banks, and regulators?

Policy Implications

Floating Exchange Rate DAOs (e.g., Bitcoin)

Limits to Seigniorage

- ▶ Ability to bypass currency controls places more stringent limits on seigniorage.
- ▶ More of an issue for some EMEs.

Maturity Transformation

- ▶ Many foreign entities find it attractive to issue debt denominated in foreign currency (e.g., USD).
- ▶ Think of BTC as a foreign currency operated by a robot that will not open any emergency swap line.

Safe Assets (Flight-to-Safety Assets)

- ▶ In 2008, investors ran to UST → deflationary pressure (more fiscal space).
- ▶ Imagine BTC as a flight-to-safety asset → inflationary pressure (less fiscal space).

Fixed Exchange Rate DAOs

Presently, there are no “pure” DAO stablecoins. Maker DAO comes the closest. And the potential for a pure DAO stablecoin exists.

Related objects include domestic stablecoins that look like MMFs (e.g., USDC) and offshore currency boards w/ global payment rails (e.g., Tether).

Impossible or nearly-impossible to regulate stablecoins present a significant challenge for U.S. regulators and the Fed (emergency liquidity facilities).

What happens if one day a Tether-like object becomes a preferred payment vehicle for multinational firms along a network of global supply chains. And what happens if Tether is subject to a run?

Proactive strategy: CBDC issued by the Fed for multinationals that thwarts proliferation of offshore stablecoins (may also disintermediate domestic shadow banks).

Implications for Banks

Disintermediation and/or Lower Profit Margins?

Whether competitor is CBDC or DAO-based stablecoin, banks likely to feel impact.

Cost of funding likely to rise, pressure on profit margins, but not likely to impact lending activity. Financial stability concerns overblown. (Andolfatto, EJ 2021).

- ▶ E.g., elimination of banknotes in Canada (1935).

Disintermediation more likely to occur at wholesale level, e.g.,

- ▶ Branches of multinational firms making USD payments along global supply chain using CBDC or Tether;
- ▶ Corporate treasurers using wholesale CBDC instead of repo to manage cash.

Conclusion: Even if threat of a DAO-based stablecoin seems unlikely, policymakers should continue to ask these “what if” questions.

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