Potential threats to financial stability from digital assets
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1. Framing the issue
2. OFR activities to date
3. Guidance and input
Potential threats to financial stability from digital assets

1. Framing the issue
   – definitions and taxonomy
   – high-level findings
   – leading cases

2. OFR activities to date

3. Guidance and input
Potential threats to financial stability from digital assets
... and from digital finance more broadly

• Digital asset: a representation of value that is stored and transferred digitally, using cryptography and distributed ledger technology (DLT) or similar
  — broad definition; includes many different use cases
  — focus on those related to payments and financial services

• Digital finance: platforms and protocols through which digital assets are stored, traded, and transferred
• Digital assets:
  - Crypto assets
  - Payment tokens
  - Utility tokens
  - Investment tokens
  - Stablecoins: Backed by non-crypto assets
  - CBDC: Issued by central bank
  - Investment tokens: Not backed (algorithmic)

• Digital finance:
  - Centralized: exchanges, custodians, ETFs, etc.
  - Decentralized: decentralized trading protocols; DeFi
Despite the novelty and rapid innovation in digital assets, many of the financial stability risks they raise are familiar:
- new ways of performing a given economic function bring many of the same risks as traditional arrangements.

These risks may be heightened in the new environments.

These risks are currently more difficult to measure and monitor:
- reporting and supervisory arrangements for traditional arrangements were developed over time.

In addition, some novel risks do arise:
- potential shifts in structure of the monetary/financial system.
Leading cases

- **Digital assets:**
  - Crypto assets
  - Payment tokens
  - Utility tokens
  - Investment tokens
  - Stablecoins
    - Backed by non-crypto assets
    - Backed by crypto assets
    - Not backed (algorithmic)
  - CBDC
    - Issued by central bank

- **Digital finance:**
  - Centralized: exchanges, custodians, ETFs, etc.
  - Decentralized: decentralized trading protocols; **DeFi**
(i) Unbacked crypto assets

• One view of unbacked crypto assets: similar to commodities
  – “outside” asset; not a liability of any individual or institution
  – somewhat like gold, oil (and perhaps real estate)

• Financial stability risks could come through familiar channels:
  – direct holdings of financial institutions and individuals
    (which may be leveraged)
  – derivatives contracts
  – indirect exposures via counterparties

• Particular concern: risks to systemic institutions

• Evaluate financial stability risks by monitoring these exposures
New challenges:

• Obtaining and evaluating the most relevant data
  – rapid growth in adoption, offshore and unregulated venues
  – leverage and exposures may “hide in the shadows” (as usual)

• Crypto assets likely bring additional risks
  – price volatility may be much higher (esp. extreme outcomes)
  – heightened cybersecurity, operational, and regulatory risks
  – novelty of assets/venues: evaluating risks may be difficult for participants
(ii) Stablecoins

- Stablecoins backed by non-crypto assets:
  - aim to offer redemption of coins at or near par
  - while holding assets with some risk, imperfect liquidity

- Resemble prime money market mutual funds in key respects

- Familiar risk: runs by investors out of the fund/coin
  - issue arose for prime institutional MMFs in 2008 and 2020
  - creates spillover effects for commercial paper, other short-term funding markets

- Becoming significant in size
  - market cap. of Tether: $82 billion, USD Coin: $51 billion
New challenges:

- Stablecoin asset holdings are much more opaque than for MMFs
  - and, in some cases, the subject of controversy
  - MMFs have a developed regulatory framework with mandated disclosure of assets
    - allows OFR to create the MMF monitor, for example
- Stablecoins are a primary focus of regulators’ attention
  - report by President’s Working Group and others in November
- OFR will continue to monitor developments in this area
Central bank digital currencies (CBDC) are still largely in the discussion/early pilot phase
- discussion papers issued by Fed, ECB, Bank of England, etc.
- the form a US or Euro CBDC would take is still very uncertain

Would raise (at least) two types of financial stability risk
- If bank depositors shift funds into CBDC in normal times,
  - how will banks respond? by taking more risk?
- shifting to CBDC might be particularly attractive to depositors in periods of financial stress
  - would CBDC make banks more susceptible to runs?
New challenges:

- Risks here are more novel; perhaps more difficult to evaluate
  - CBDC does not have clear analog in current arrangements
  - somewhat like government money market mutual funds?
    - but easy to use in transactions; could be more popular

- Can look for similar arrangements in other countries
  - Bahama’s Sand Dollar is operational, and China’s DCEP has been in advanced pilots
  - but they operate in very different financial systems
    - DCEP competes with Alipay and WeChat pay more than with bank deposits, for example
• Relevant theoretical frameworks and historical debates do exist

• Fundamental issue: use of public vs. privately-created money
  – long-running historical debates about the appropriate role of the public sector in creating money
  – modern incarnation: should the need for tokenized money be met by stablecoins or CBDC?

• CBDC may also be similar to a narrow-banking arrangement
  – a bank that issues deposits while holding 100% cash reserves is like a “synthetic CBDC” (IMF)
  – many historical proposals for narrow banks to promote financial stability
• Broadly speaking, DeFi aims to replace traditional intermediaries with automated protocols
  – includes market making, collateralized lending, and more
  – new terminology: liquidity pools, wrapped assets, staking
  – but aiming to solve traditional economic problems

• Result: many of the risks that arise with DeFi are familiar
  – but may be exacerbated (ex: higher leverage)

• Area of rapid (and interesting) innovation
  – potential to enhance efficiency in some areas
New challenges:

• Current regulatory and supervisory framework is designed for existing arrangements and institutions
  – reporting standards and data collection
  – capital, liquidity, and risk management standards
    • banks and other regulated institutions provide shock absorbers in the financial system
  – activities without these safeguards bring heightened risk

• Identifying emerging risks in this fast-changing landscape
Potential threats to financial stability from digital assets

1. Framing the issue

2. OFR activities to date
   – market monitoring
   – long-term research projects

3. Guidance and input
   – four questions
• OFR is integrating digital assets into its established monitoring processes

• Internal working group on Crypto/Digital Assets
  – regularly review market developments
  – discuss recent outside research on digital assets
  – looking into accounting treatment of digital assets, etc.

• 2021 Annual Report to Congress included:
  – digital assets as part of evaluation of market risk
  – discussion box on risks related to stablecoins and CBDC
(ii) Long-term research projects

“Making Money” by Sharon Ross (with Gary Gorton & Chase Ross)

- Emphasize that successful forms of money are accepted at par
  - people do not investigate its value (“no questions asked”)
- Develop a model of how private assets can attain this status
  - a combination of technology, reputation of the issuer
- Use the model to compare the development of:
  - banknotes in the pre-Civil War period
  - modern stablecoins
- Analysis emphasizes the difficulty of “making” money
“Should Central Banks Issue Digital Currency?” by Todd Keister (with Daniel Sanches) forthcoming in the *Review of Economic Studies*

- Analyzes macroeconomic effects of a CBDC that competes with cash and/or bank deposits as a medium of exchange
- A CBDC that competes with deposits will raise bank funding costs
  - lower bank deposits, bank-funded investment
- But may nevertheless be desirable
  - increases total supply of liquid assets in the economy
  - important that CB not make CBDC *too* attractive (could require fees/negative interest rates)
“CBDC: Stability and Information” by Todd Keister (with Cyril Monnet)

- Develops a model of runs into CBDC
- Captures the commonly-expressed concern
  - all else equal, the ability to hold CBDC makes uninsured depositors more likely to run on their bank
- However, shows there are countervailing forces
- Most notably: observing flows into CBDC may help regulators identify problem areas in real time
  - result: faster policy reaction that improves financial stability
Outline

Potential threats to financial stability from digital assets

1. Framing the issue
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3. Guidance and input
   – four questions
Questions

1. On the conceptual frameworks:
   – what type risks might be overlooked by these analogies to existing arrangements?
   – what blind spots could arise when thinking about digital assets in these (traditional) ways?

2. How is innovation in digital assets pressuring traditional financial institutions to respond?
   – what indirect risks may arise as traditional institutions try to compete with fintech firms and others?
   – where are these indirect risks most likely to arise?
3. Data and reliability:
   – how are traditional institutions evaluating value/risks?
   – what sources are they looking at for data on market activity, and how do they evaluate what data is reliable?

4. Market monitoring: where to look?
   – are traditional institutions more likely to engage with digital assets directly or through intermediaries/custodians?
   – are there certain intermediaries that are widely used?
   – are firms using or accepting digital assets directly as collateral?
Thank you