Comments on “The Implications of Digital Currencies for Monetary Policy and the International Monetary System”

Andrew K. Rose
Berkeley-Haas, ABFER, CEPR and NBER
Much that is good, little that is not

... and some that is irrelevant (to the topic)

Agree wholeheartedly with the main conclusion:
• No immediate effects on monetary policy and/or international monetary system
  • Exception: loosening of capital controls

Disagree (mildly) about long-run
• Uncertainty overstated

Caveat: hard to have clarity in slides!
What I like most

Digital Currency has *Potential* for Increase in Capital Mobility
- Lowered costs of currency substitution
- Could have worked harder on implications (e.g., through Mundell’s Trilemma)
- More importantly: how important is this effect?
  - Crypto currencies are small compared to current capital flows
  - Currency substitutes already exist (foreign currencies), as Engel points out
    - Most foreign currencies inconvertible/small and hence irrelevant ... just like most cryptocurrencies
    - Introduction of a cryptocurrency similar to entry of a new country with its own currency
      - How much of an effect have South Sudan, Kosovo, and Montenegro had on capital mobility?
      - How different are cryptocurrencies?
  - Seems reasonable that the choice between fixing and monetary sovereignty will slowly become sharper
    - But little GDP in countries that fix ... so little relevance
Worth remembering

• Most Money is *already* digital/electronic
  • Most of American M2, half of M1 *de jure*, more in practice ($100 bills are US)
  • Credit cards, reserves, …
  • Substitution of cash with electronic money … not a big thing historically
    • Money has evolved continuously for decades (gold … notes … cheques … credit cards …)
    • My FX acquisition; direct → traveler’s checks → credit cards → ATM card → Apple Pay
      • Recent transition from “no cash trip” to “no credit card trip”

• But these technologies have not compromised effectiveness of monetary policy!
Size: How big is cryptocurrency?

Small

• All (>2000) cryptocurrencies at market value (Oct 11, 2018): $202b
  • About half in Bitcoin (and 35 variants)
  • 10% in Ethereum (and 24 variants)
• Very small compared to relevant benchmarks
  • <4% of daily FX turnover, capital flows (BIS: $5.1t, April 2016)
  • Stock of notes and coins (transactions)
    • <13% of US Federal Reserve currency ($1.6t in circulation, Sept 2018)
    • <2% of Worldwide currency ($8t)
Compared to money (M1)?

*Crypto insignificant*

- To repeat: All (>2000) cryptocurrencies ≈ $202b
- US M1 currently $3.7t (18x)
  - M2 $14.2t (70x)
  - Crypto currently around size of Danish M1 (26th largest national money supply)
- Denmark interesting for gauging currency substitution effect
  - July 2012, short interest rates: Euro (.5%); Norway (2.2%); Sweden (1.1%)
  - But Denmark still introduced negative nominal interest rates without problems!
  - So currency substitution effects likely small

- These are stocks. But even smaller in flow/transaction terms (crypto transactions primitive)
How money is crypto?

• Need clear taxonomy on different types of digital currencies
  • Engel: private vs central bank cryptocurrencies

• Private cryptocurrency *isn’t currently money*
  • Doesn’t satisfy any roles:
    1. Medium of exchange
    2. Unit of account
    3. Store of value

• Unlike currencies, even of inflationary developing countries!
Difficult to see how crypto could, in principle, evolve into money

• Could private, digital, crypto (enabling peer-to-peer transactions) eventually become money?

• Far from it now!
  • Money is a social institution
  • Historically, currencies are successful with stable value and large user network
  • Crypto WAY short of that now, for intrinsic reasons
    • Volatility stems from inelastic supply (also unstable demand)
    • This instability precludes use as either unit of account or store of value
    • High transactions costs also limit network size, use as medium of exchange
    • Private crypto has no extrinsic backing or possibility of coercion
  • So currently a speculative asset (not money) and will remain so
Which leads to inelastic supply of crypto

• Little direct confrontation of issue posed in title
  • Part of Bitcoin idea was to limit inflation via formulaic growth
  • Preclusion of discretionary policy might be inseparable from idea of crypto currencies
    • Inelastic supply big part of appeal to libertarians
    • Built into Bitcoin
      • Potentially modifiable with widespread consensus
      • Not part of all cryptocurrencies (*many* Bitcoin splinters ... Basis ...)
      • But most cryptos are failures
Discretionary monetary policy key to titular issue!

• Could decentralized (private) cryptocurrencies be designed with monetary policies that include feedback or even discretion?
  • Need to if want to substitute for Central Bank roles:
    1. Avoid inflation/deflation (“Cross of Crypto”)
    2. Provide counter-cyclic monetary policy
    3. Act as lender of last resort in crises, support financial stability
  • A future of algorithmic central banking?
Can we write complete rules for monetary policy?

Could we eliminate all discretion? (Would we?)

• If so, can write central bank reaction function into mining rules
• But if we could, why do we still have central bankers?
• Knightian uncertainty: we’re a long way from this knowledge!
  • Hard to believe we will ever be there
But even ignoring all this ...

• Why should any form of money matter, even in principle?
  • Indeed, why should the stock of money matter?
  • Central banks use prices/interest rates, not money supplies/growth

• Highly relevant in this context because cash does create effective lower bound on nominal interest rates
  • So digital currency facilitates negative nominal interest rates, more counter-cyclic monetary policy
  • Can reduce exchange rate/currency war issues associated with ZLB/ELB (Caballero, Farhi and Gourinchas)
  • More analysis here warranted
Which leads to central bank digital currency

Modern Central Bank could issue e-currency

• *Not* (private) cryptocurrency, merely another digital form of money
• *Could* lower costs, increase access to money
• But without offering anonymity of private cryptocurrency
Most issues are micro, not macro

• Technical problems in providing fast transactions, prevent hacking
• Do central banks want money launderers and bad consumers to deposit directly, encouraging illicit behavior?
• How much does digital money *per se* facilitate settlement, esp. international?
• Does central bank have an obligation to provide public with access to risk-free central bank money like currency *if latter fails market test*?
But some are ...

Suppose anyone could deposit directly with central bank

• Small Pro: (even) easier to have negative interest rates
  • Easier to handle business cycles, avoid de/inflation with time-varying/low real rates
  • But ... doesn’t require central bank deposits for all: just less cash, more commercial bank digital money (Rogoff)

• Big Con: bad for commercial banks
  • Central Bank Digital Currency: totally safe
  • So raises risk and spreads for commercial banks, reduces private credit, monitoring
  • Commercial banks already squawking about negative nominal interest rates

• Agree with Engel: tradeoff likely to seem bad for society
But even if central bank Issues digital money

• Central bank still controls central bank deposits
  • No obvious negative effect on ability to conduct monetary policy
  • Keeps ability to control monetary policy for cyclic, counter-in/deflationary reasons
  • Seigniorage retained (small)
Will central banks ever surrender monopoly on money creation?

• If central bank is NOT monopoly supplier of reserves, it loses its ability to control interest rates and carry out monetary policy
  • If central bank does not control unit of account, its monetary policy becomes irrelevant (think of dollarized economies)
  • Seems unlikely for almost any central bank (Venezuela)

• Society wouldn’t *allow* central banks to lose power
  • Social contract: central bank power and independence to create stable money in return for trust-generating accountability
    • Checks and balances required for durable institutions like money
Conclusion

• Seems like private cryptocurrency may *eventually* facilitate some transactions
  • Will enhance capital mobility *a little*
    • *A little* more pressure on fixers
  • Unlikely to change monetary policy

• An analogy
  • Transition from paper airline tickets to electronic tickets
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