Why a Central Bank Digital Currency Makes Cash Even More Important!

BY

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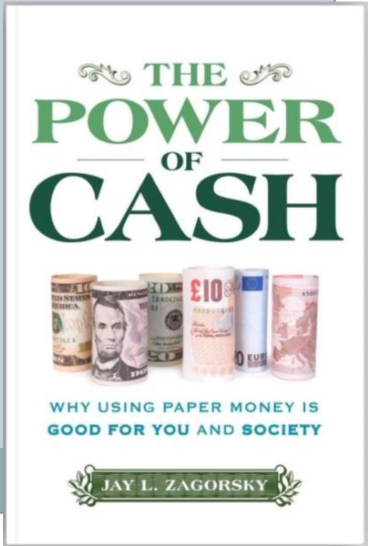
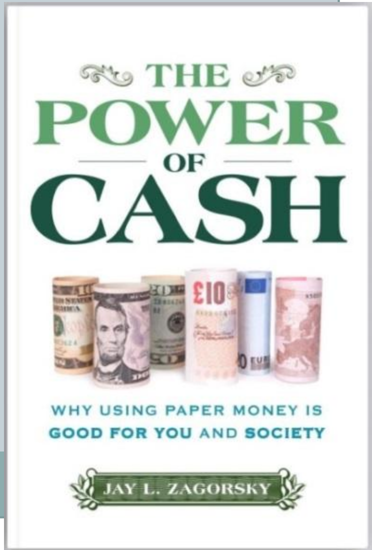


Quick Background

- Professor is a cash advocate -- Trying to get world to use more paper money.
  - Another goal is to get CIT industry to have offensive mindset (let's boost cash usage).

- I wrote book "The Power of Cash" to explain why paper money is needed.
  - Summary at www.thepowerofcash.com



Overview

- Many countries are introducing or investigating Central Bank Digital Currencies (CBDC).
  - *Definition*: CBDC are digital versions of a country's currency. It is legal tender, issued and regulated by the country's central bank.
- Does this mean the end of paper money? No!
  - But since CBDC make cash <u>even more necessary</u> for individuals and societal resilience, even though central bank's do not understand this.

Analogy

- If electronic money is the highway, then paper money is the sidewalk. People need to walk on separate paths beside busy roads.
  - No matter how fast cars (or electronic payments) move there is a need for transportation (walking / cash) that is low cost, available to all.
- CBDC are like new sports car on highways; able to go from zero to very fast instantly. Problem is fast sports cars cause accidents, which shut highways down.
  - Having alternative method of transportation like walking or biking (and alternative payments), keeps society moving while wreckage is cleared.

7 CDBC Problems That Are Fixed by Paper Money

1. LITERACY & DISABILITY
2. TRACKING & DEBANKING
3. DIGITAL BANK RUNS
4. EXTRA TAXATION
5. CONNECTIVITY PROBLEMS
6. BOOSTING ILLEGAL ACTIVITIES
7. QUANTUM COMPUTING & AI RISKS

1: Literacy & Disability

- Using CBDC & Mobile Payments needs literacy
  - Understand numbers, read words, & use computer. UNESCO estimates one-eight of adult population is ***not*** literate.
  - Paper money needs no literacy since it is often color coded, uses different images and bigger sizes represent larger amounts.
- Some people with disabilities have difficulty using mobile payments.
  - Tremors or inability to use hands.
  - Memory problems, mental health issues.

2: Gov. Tracking & Debanking

- CBDC allow governments to:

1. Permanently track each person’s purchases.
2. Shut off wallets of citizens it does not like.
3. Prevent payments to groups it wants to silence.
   - If all governments are benign and run by honest people then concerns are meaningless. Unfortunately, world has many ruthless dictators and power-hungry politicians.

- If governments cannot always be trusted -- then cash is a simple way of ensuring tracking, debanking and payment shutdowns cannot happen!

3: CBDC Make Bank Collapses More Likely

- CDBC makes *digital bank runs* more likely.
  - Any hint a bank is in difficulty then depositors will move funds from that bank to CBDC wallet as protection.
  - CBDC provide instant, no cost protection for depositors. This protection boosts chance banks in trouble collapse.

- Central Bank can prevent digital bank runs by:
  - Giving CDBC negative interest rate -- Cash pays zero rate.
  - Set limit on CDBC wallet size – Cash has no limit.
  - Set limits on number and size of transfers in or out of wallet -- Cash gets around transfer limits.

4: Ability to Levy E-Money Tax

The Parliament of Ghana has passed the Electronic Transfer Levy Act, 2022 (Act 1075) for the imposition of an electronic transfer levy (E-levy) of 1.5% on electronic transfers. The passage of Act 1075 brings into effect the Government of Ghana's proposal to introduce a levy on electronic payments as part of measures to enhance revenue mobilization announced in the 2022 budget statement.

- When government controls everyone's wallets it can implement transfer or spending tax.
- Every time you move money gov. takes a percentage!
  - Ghana had E-levy from 2022 to 2025
  - Nigeria has Electronic Money Transfer Levy (EMTL).
- Dream scenario for politicians & macroeconomists who believe negative interest rates eliminate recessions.
  - You cannot use or move money without being taxed!
  - In Nigeria if my wife gives me money, I give some to you and you spend it, then money taxed 3 times.
  - No transfer tax with cash.

5: Connectivity & Power Problems

- Not all people can access mobile network.
  - In Ghana ½ of rural areas don't have reliable mobile service.

Infrastructure Limitations

Rural Ghana still faces significant connectivity challenges, with the Ghana Statistical Service reporting that only 48% of rural areas have reliable mobile network coverage (GSS, 2022). Power supply remains inconsistent, with frequent outages disrupting service

- Not all places have access to steady power.
  - Avg. customer in Delhi, India without power 3 hours a month.
  - In Jamaica 88% of businesses report experiencing power outage. On avg. 3 per month!
  - South Africa average outage lasts 2 hours and about 8 month.
- Cash works with or without power or mobile service!

6: CBDCs Will Boost Illegal Activities

- CBDC allow large sums of money to move instantly.
- If a CBDC wallet is hacked or stolen, then entire account value (or linked multiple accounts) at risk.
  - While cash is stolen, people don't keep all their cash in 1 wallet.
- US Government states:

> Central bank digital currencies (CBDCs) have the potential to be misused in criminal activities, much like traditional fiat currencies and digital currencies such as cryptocurrencies. Here are some ways in which CBDCs could potentially be used in criminal activity:

  - There is no reason to say "have the potential." CBDC **will be** used in criminal activity, like in Brazil.
- Brazil building CBDC called Drex, based on payment system Pix. Pix has facilitated billions stolen!

The PIX Paradox: How Brazil's Payment Innovation Became a $2.7 Billion Fraud Magnet

Hackers Grab $130M Using Brazil's Real-Time Payment System

7: Quantum Computing - AI Risk

A bad actor could use quantum computers to intercept a CBDC system's networked communication to impersonate individuals and steal financial assets. Broadly, there are three types of quantum attack methods:

- Many CBDCs are being protected using cryptography. Crypto currency only works with strong encryption safeguards.
- Quantum computing makes all digital currencies including CDBC at risk for new kinds of attacks.

Quantum computers are deemed a threat to CBDC systems because they can break in-motion encryption standards, such as RSA and elliptic-curve cryptography (ECC), which are universally used in financial systems.

- AI can find CBDC software weaknesses
  - Andrew Bailey, Governor of the Bank of England, has specifically pointed out danger of AI model called Mythos.

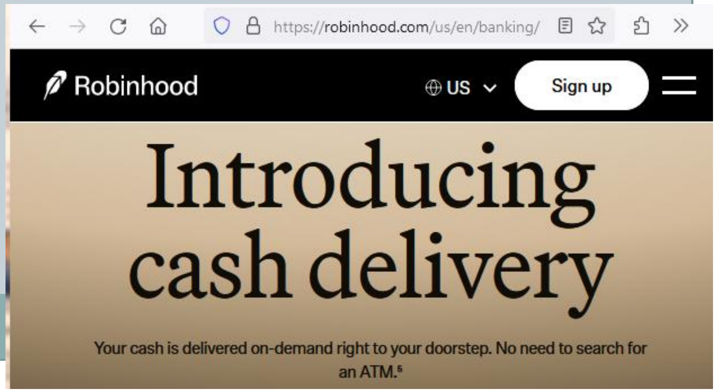
Recommendations

- Many people in cash industry deal directly with Central Bankers. When a Central Banker starts talking up wonders of CDBC, point out problems.
  - No one really knows CDBC impact.
  - Some research suggests it could destroy bank profits and lead to more financial instability. Other research says it will not.
- Given uncertainty, best course of action is to ensure a strong financial foundation, based on paper money, exists while a new house (CBDC) is built on top.

If CBDC go off the rails, cash protects society!

7 Ways to Boost Cash Usage

1) Educate your workforce to be cash evangelists!
   - Provide them with copies of my book
2) Convince everyone to use cash at least once a week.
3) Promote Global Cash Day -- 12th of March.
4) Provide tools and lessons for teachers.
5) Get influencers on board.
6) Provide “cash welcome here” stickers.
7) CIT think about home delivery.



Conclusion

- Cash becomes even more vital in CBDC's era.
  - Jamaica's CBDC has tag line "No Cash – No Problem"
- Cash advocacy organizations, cash handling businesses, and bankers need to convince public and themselves introduction of digital cash, means true tagline is "**<u>No Cash – Big Problem!</u>**"

Questions?

Email me (zagorsky@bu.edu) or Connect on LinkedIn