

Banking in Bitcoin

About Me

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- Teach CSCE 489: Bitcoin Protocol
- Teach ACCT 489: Accounting for Digital Transactions
 - No-Code Bitcoin class
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Bitcoin has many innovations

- A distributed network of nodes
- An incentive system for miners to secure an immutable ledger
- Programmable (e.g. MultiSig)
- Scarce
- Censorship resistant
- Predictable and unchangeable issuance schedule

Sound Money

- Barter
- Gold and silver
- Extraction cost
- The edges of your quarter

The birth of fiat money

- Banks storing Gold
- Banks issuing Gold certificates
- Trading Gold certificates
- Banking Before the Civil War
- The Suffolk Bank in Boston
- The birth of the Federal Reserve
- The Gold standard

Money today

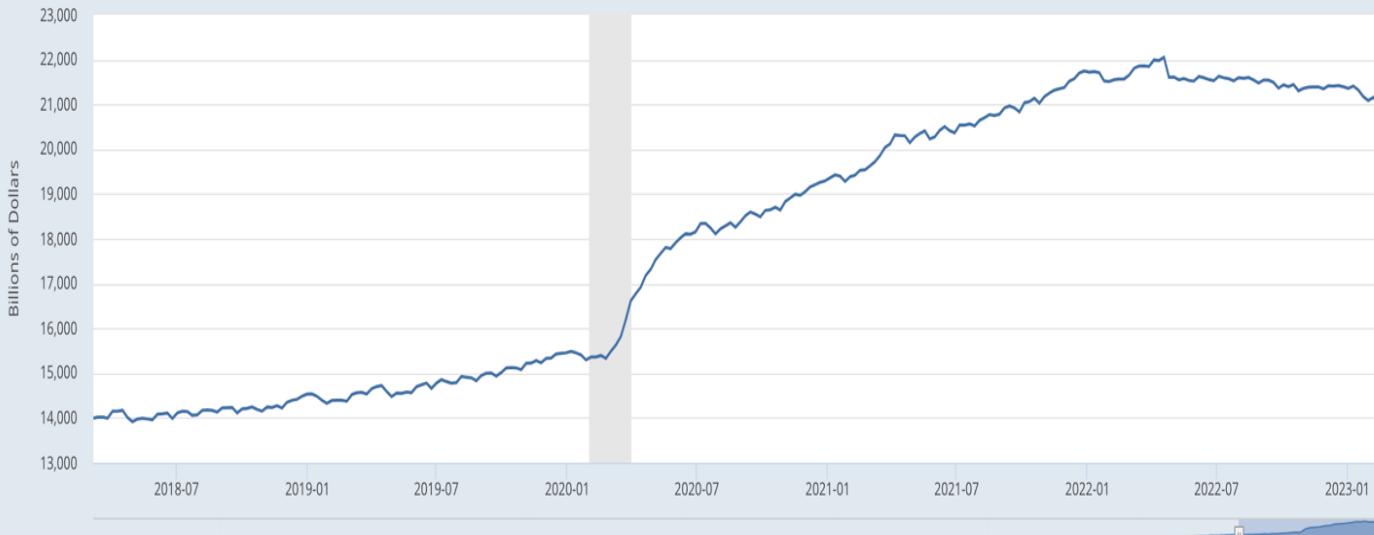
- Deeply integrated with banks
- Base money:
 - Currency plus bank reserves
 - Controlled by the Fed
- Broad money
 - Demand deposits, time deposits, CDs, etc
 - Set by banks
- The Fed makes base money, banks make broad money



Shaded areas indicate U.S. recessions.

Source: Board of Governors of the Federal Reserve System (US)

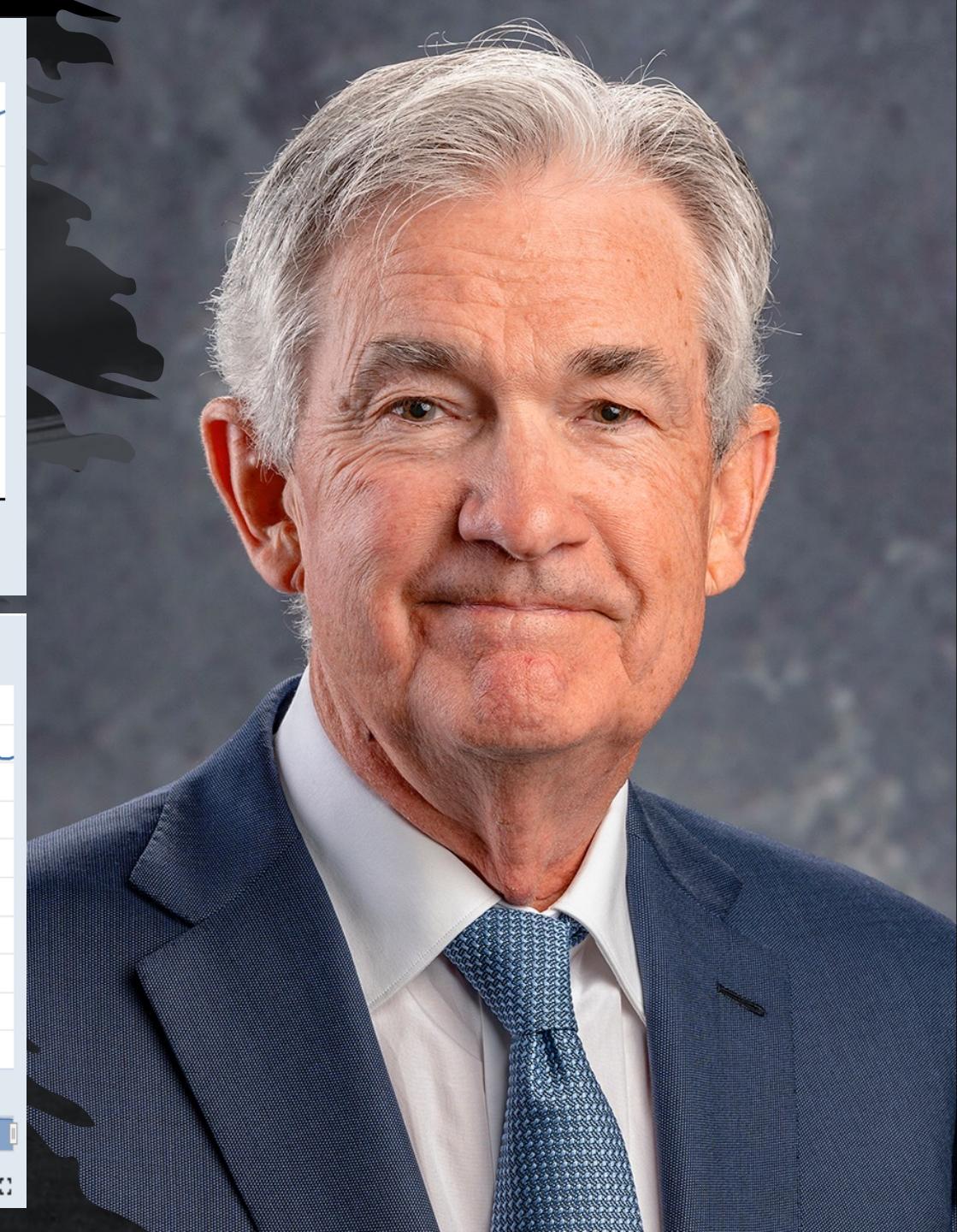
fred.stlouisfed.org



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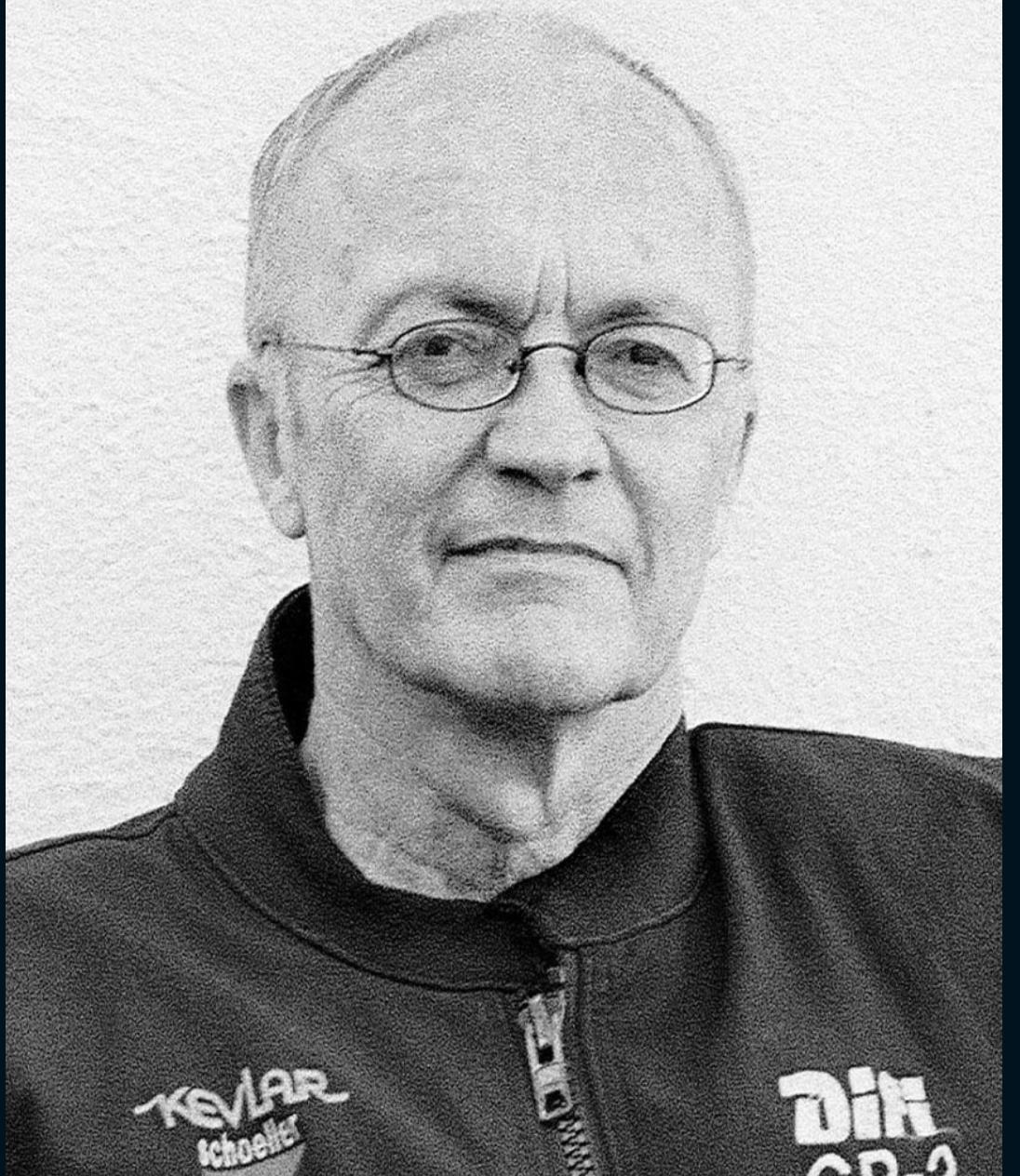


Breaking conventional wisdom

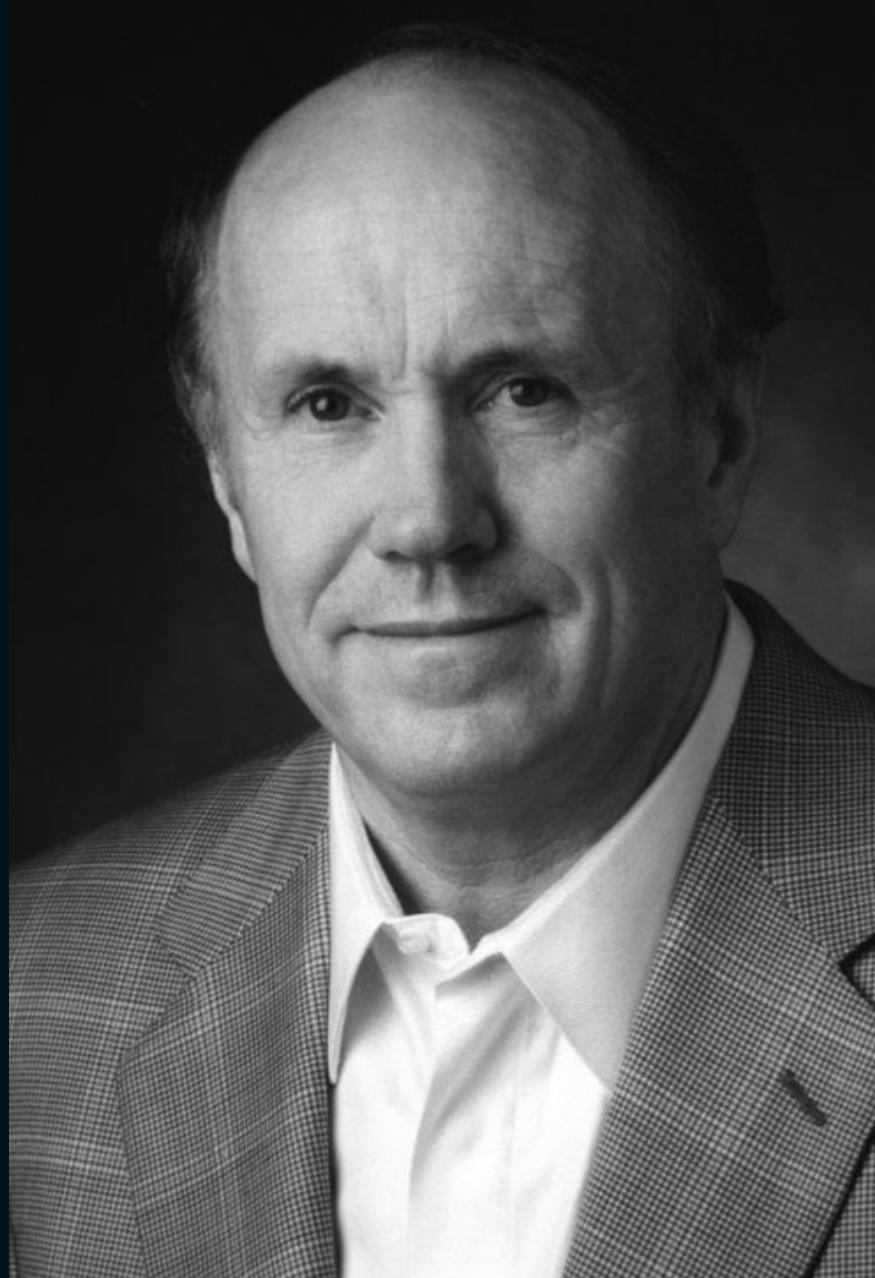
1. Only the Fed makes money
2. The Fed sets the interest rate
3. Money today is analog, not digital

The case against central banks

1. The Hayek critique:
 - Central banking is central planning
2. Inducing moral hazard
 - Bailouts, deposit insurance
3. Rules vs. Discretion



Finn Kydland



Ed Prescott

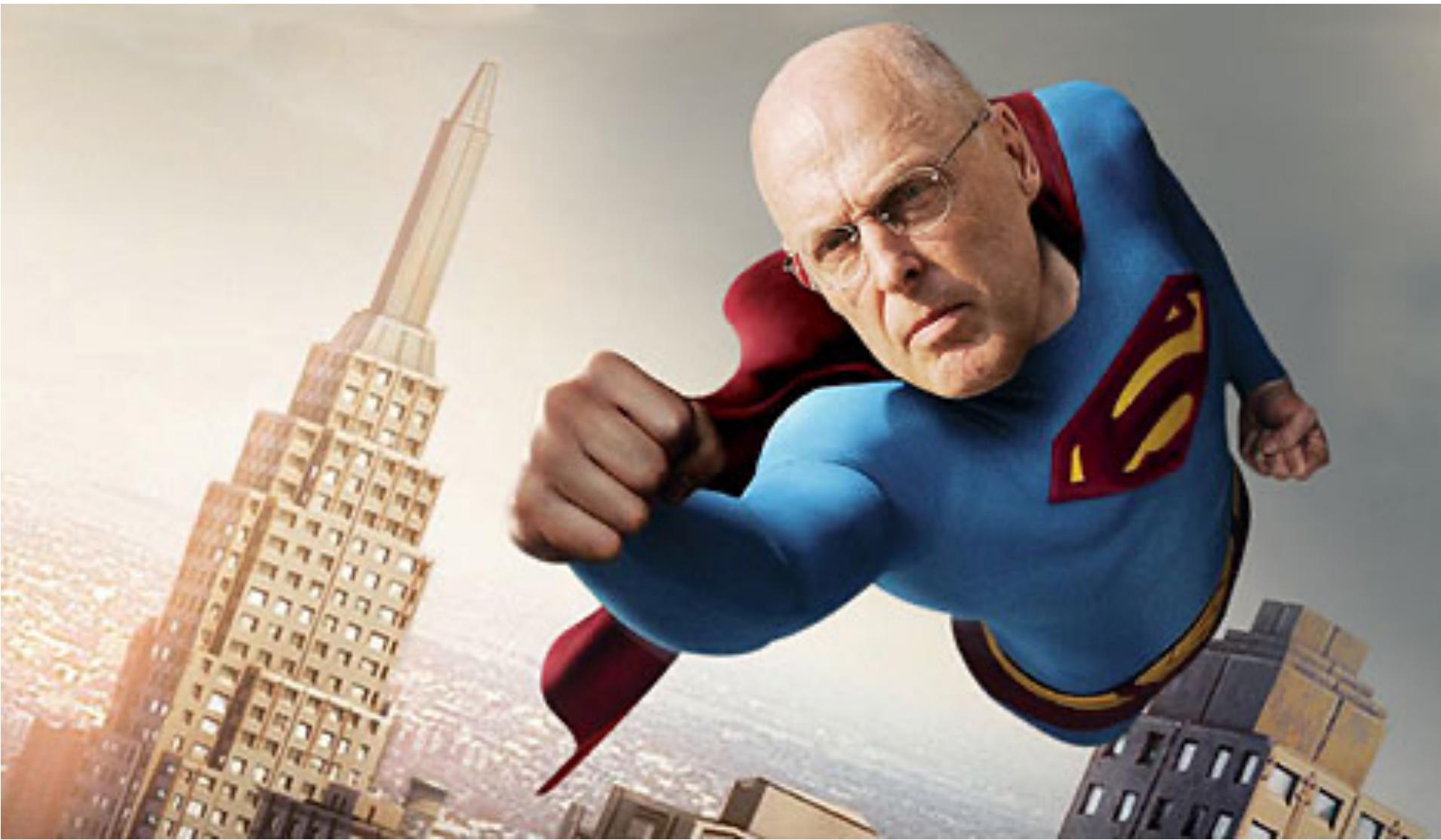
An aerial photograph of a residential neighborhood completely submerged in floodwater. The water covers every street and surrounds all houses, which are now islands. In the background, a large body of water, likely a river or lake, is visible. The scene is dark and somber, illustrating the severe impact of flooding on a community.

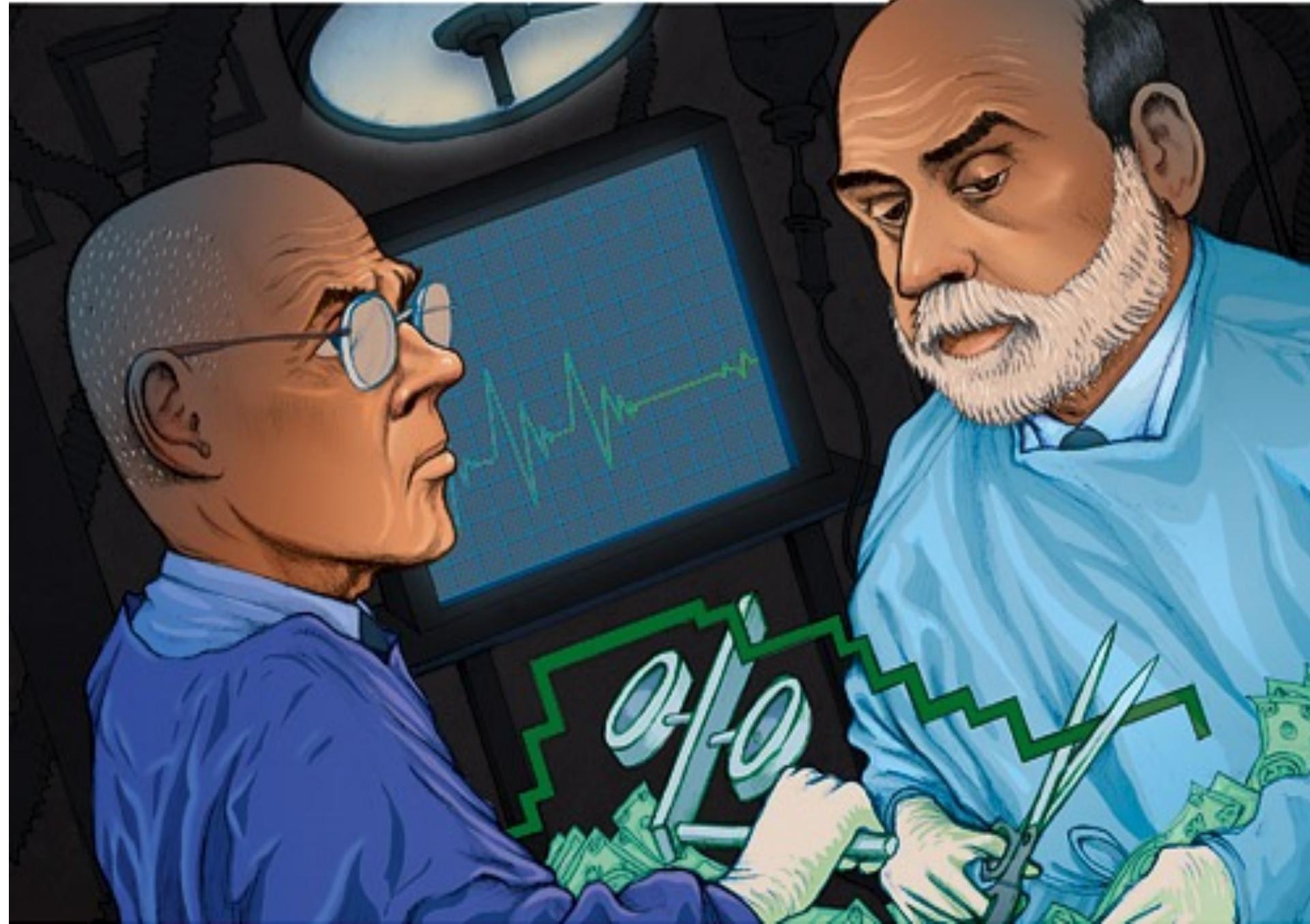
Building on a Floodplain





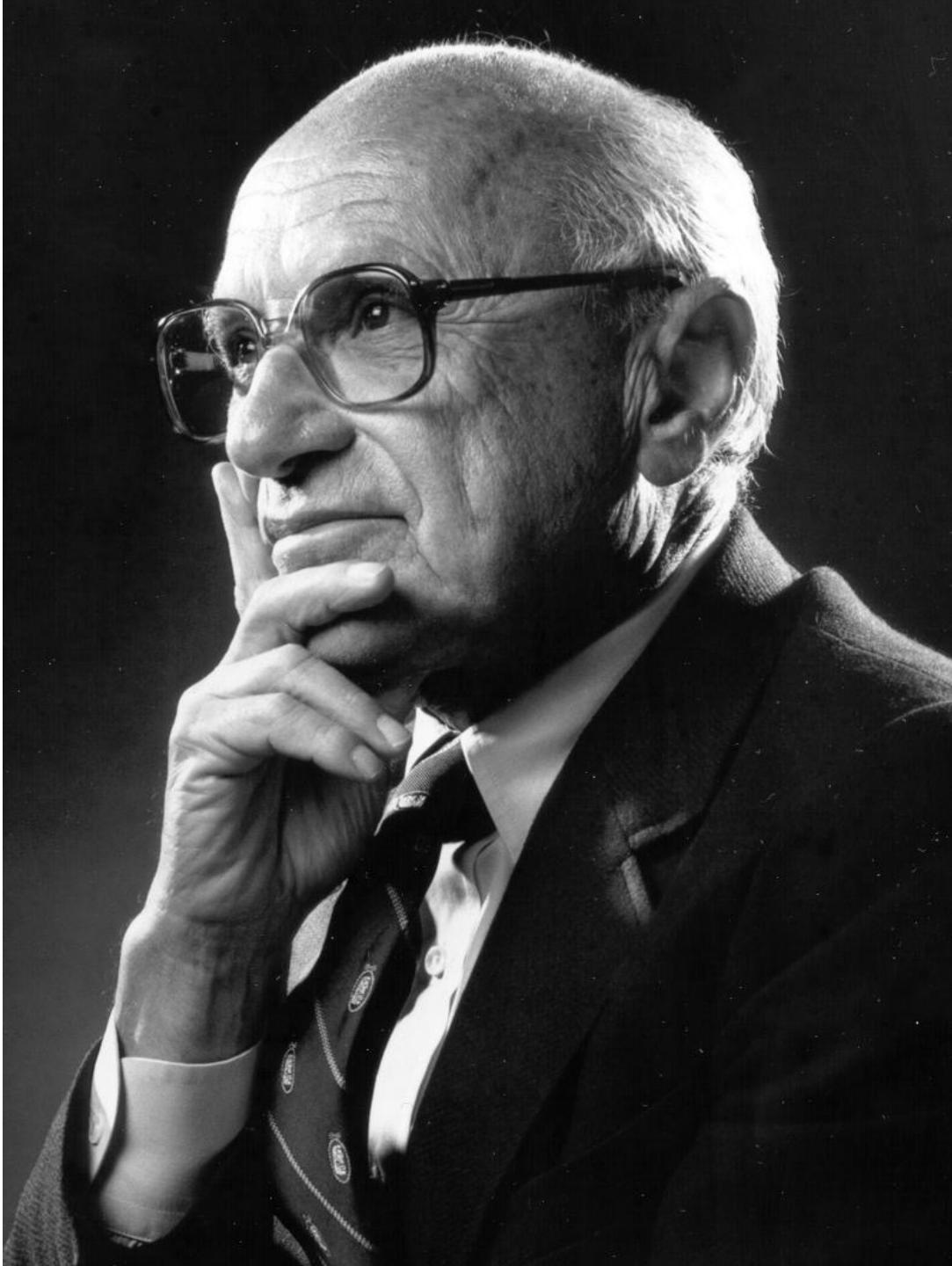






Enter Bitcoin

- The Bitcoin issuance schedule
 - Predictable
 - Unchangeable



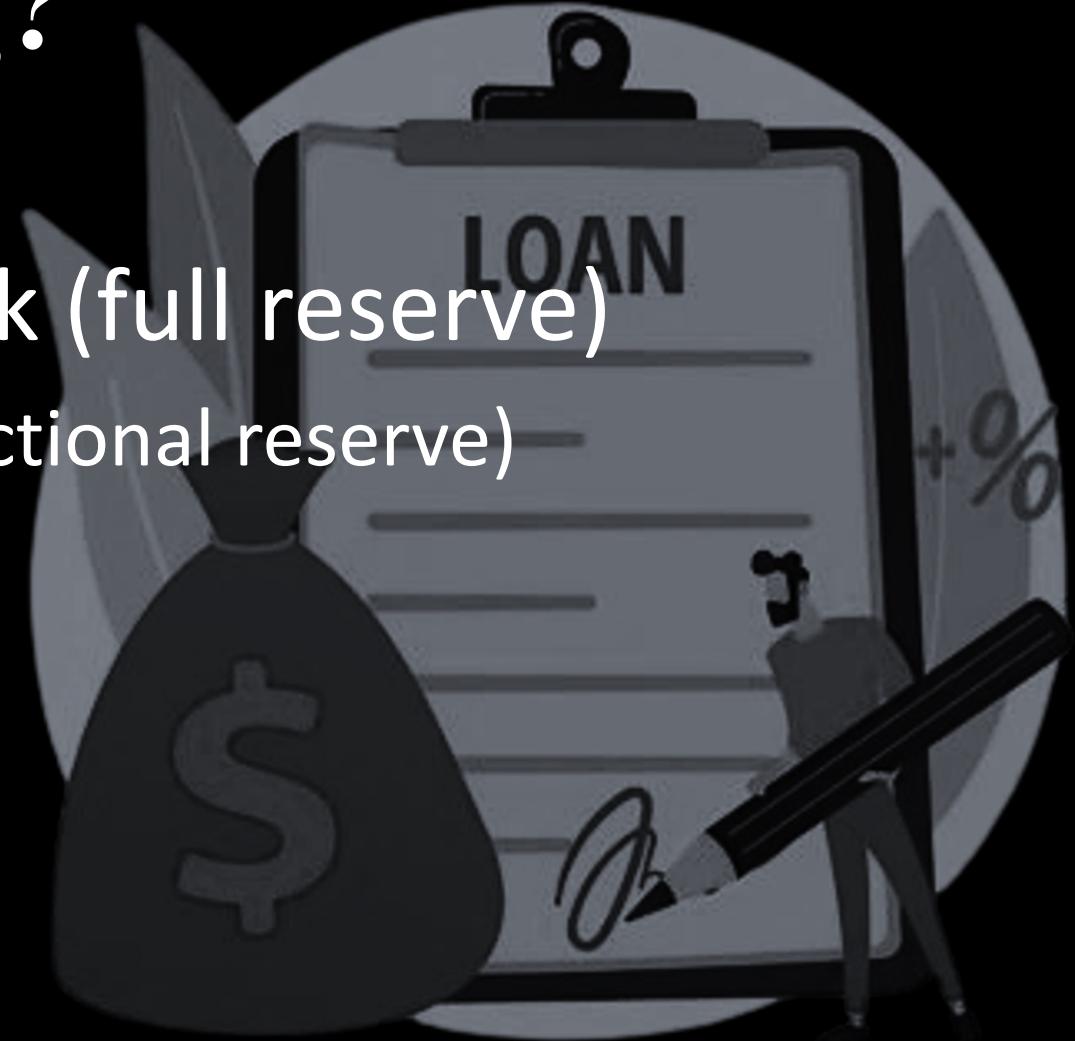
A new base layer



- Bank to bank settlement
- Secure, immutable, (slow)

What are we missing?

- Lending
- The original deposit bank (full reserve)
- The deposit lending bank (fractional reserve)
- Bitcoin: be your own bank.



Banking in Bitcoin

- Protocol issues base money (Bitcoin)
- Banks still exist on a Bitcoin standard.
- Take deposits in Bitcoin, lend in Bitcoin.
- Operate without a central bank
 - Suspended convertibility contracts
 - Competition between banks
 - Private Sector Innovation

BitBank

- Idea: Time Deposits
- Deposit Bitcoin for duration X at rate Y
- Penalty for early withdrawal
- Banks balance deposits/loans
- LOLR?
- Deposit Insurance?

Staying in Touch

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