MONEY CREATION AND ITS IMPACTS

Understanding the Fuel that drives Global Financial System

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Introduction:

What is money?

Something we use to purchase:

- Medium of exchange
- Unit of account
- Store of value
- Etc.

Why we need money?

- To satisfy:
  - Consumption
  - With Specialization

Evolution of Money:

Barter System:

- Inefficient due to needing a "double coincidence of wants."

Commodity Money:

- Cattles, grains, cowry shell, others, standardized the trade

Metallic Coins:

- Lydia (modern-day Turkey) introduced durable, widely accepted metallic coins

Paper Money:

- Tang Dynasty China introduced paper money, simplifying large transactions.

Fiat Money:

- Backed by government authority

Both Central Bank and Commercial Banks Create Money:

Central Banks:

- Issues currency
- Manage reserves, and controls interest rates
- Issued currency is only about **5%-10%** of total money

Commercial Banks:

- Expands the money supply
- by creating bank deposits through lending;
- these deposits make up most of the money supply.

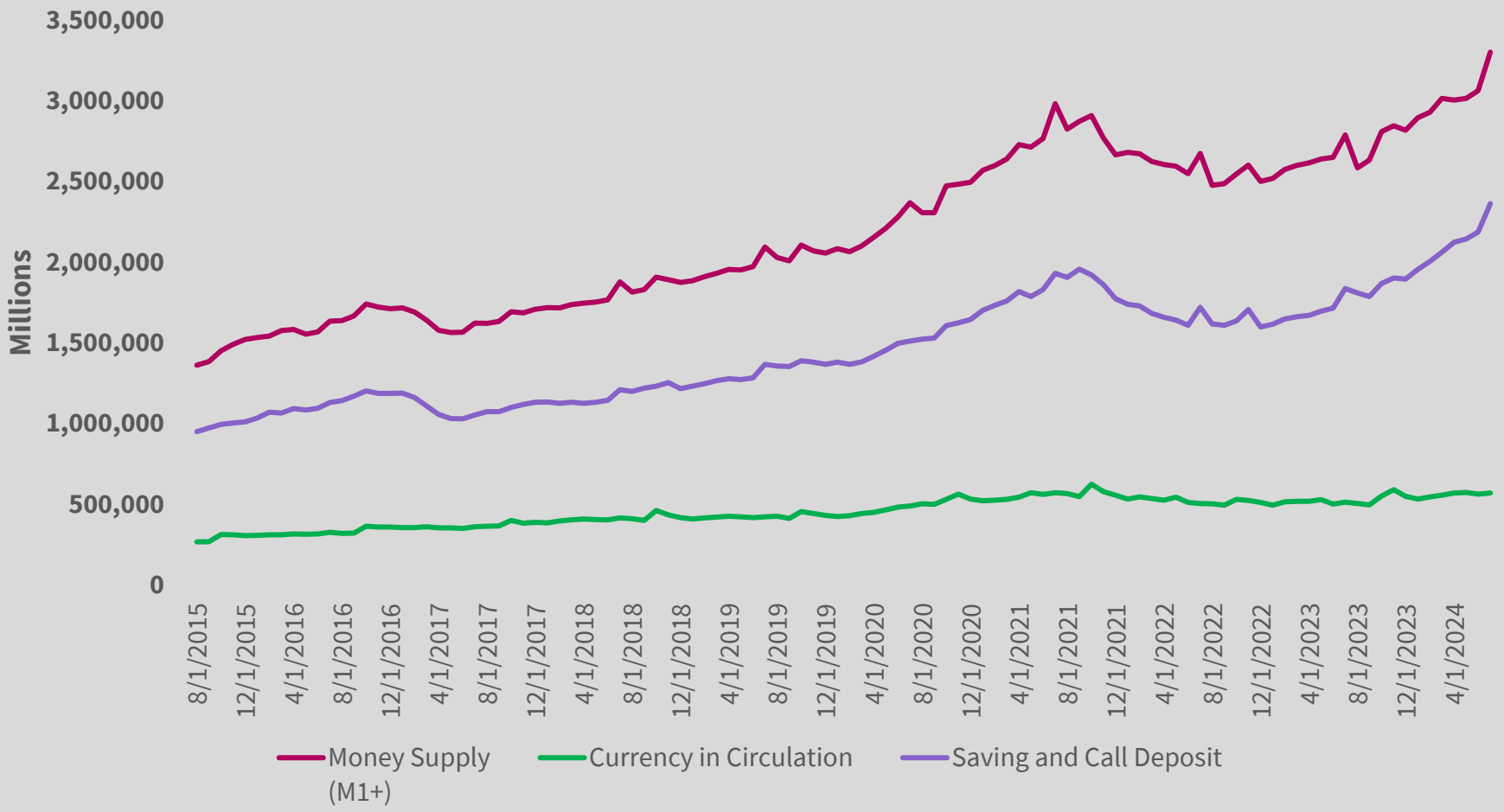
Central Bank influences Commercial Banks:

- Central banks use:
  - interest rates,
  - and policies
  - to influence commercial bank lending.

Most Money is Credit:

Credit Money (Deposit) is much bigger than Currency Money

Currency vs Deposit vs Money Supply (M1+) (Nepal):



Money Creation by Central Banks:

Balance Between Collateral and Currency:

- Currency is backed by:
  - government bonds,
  - gold,
  - foreign exchange reserves,
  - And other collaterals.

Risk:

- Unlimited money creation by use of government bonds

Legal Limits:

- Limits are enforced by law:
  - Maximum limit on certain collateral,
  - Requirement of physical gold
- This prevents excessive inflation,
- and ensures stability

Theories of Banking and Money Creation:

1) Financial Intermediation Theory:

- Banks act as intermediaries between savers and borrowers

2) Fractional Reserve Theory of Banking (Money Multiplier Model):

- Suggests banks multiply central bank reserves into new money

3) Credit Creation Theory:

- Banks create money themselves through lending
- Take Loans -> Create Money , Pay it back -> Destroy Money

Financial Intermediation Theory:

Explanation:

- This theory suggests that banks only facilitate the flow of money from savers to borrowers
- acting as intermediaries without creating new money

Criticism:

- This model applies more to "warehouse" banks with full reserves, not modern banks that actively create credit
- Despite this, it is still widely misunderstood and believed by many today

Fractional Reserve Theory (Money Multiplier Model):

Illustration:

The Textbook Representation of 'Money Multiplication'

	Deposit	–	1% Reserve	=	Loanable Funds
Bank A	$100	–	$1	=	$99.00
Bank B	$99	–	$0.99	=	$98.01
Bank C	$98.01	–	$0.9801	=	$97.0299
	.....		.....		.....
	.....		.....		.....
	========		========		========
	Σ$10,000	–	Σ$100	=	Σ $9,900.00

Source: Werner (2005), p. 175.

Fig. 1. The fractional reserve theory as represented in many textbooks.

Fractional Reserve Theory (Money Multiplier Model):

Explanation:

- Money Supply = Monetary Base * Money Multiplier
- Where, Money Multiplier = 1/reserve requirement

Criticism:

- Empirical evidence shows otherwise
- Incorrectly assumes base currency determines total money
- Requires existence of reserve requirements.
  Hence, doesn't explain banking in economies like UK where reserve requirements are zero.

Credit Creation Theory:

Simplified Accounting Example:

	Bank A				Bank B				
	Liability		**Asset**		**Liability**		**Asset**		
	Capital	5,000	Cash	5,000	Capital	5,000	Cash	5,000	
Step 1:	**Loan = 50,000**				**Loan = 49,000**				
	Liability		**Asset**		**Liability**		**Asset**		
	Capital	5,000	Cash	5,000	Capital	5,000	Cash	5,000	Total Deposits in System
Money Creation Starts ->	Deposit	50,000	Loan	50,000	Deposit	49,000	Loan	49,000	99,000
Step 2:	**Customer spent 50,000**				**Customer spent 49,000**				
	Shopkeeper has account with Bank B				**Shopkeeper has account with Bank A**				
	Liability		**Asset**		**Liability**		**Asset**		
	Capital	5,000	Cash	5,000	Capital	5,000	Cash	5,000	
Settle Payable with Receivable ->	Payable to Bank B	50,000	Loan	50,000	Payable to Bank A	49,000	Loan	49,000	Total Deposits in System
	New Deposit	49,000	Receivable from Bank B	49,000	New Deposit	50,000	Receivable from Bank A	50,000	99,000
Step 3:	Bank A settles with Bank B				Bank B settles with Bank A				
	Liability		**Asset**		**Liability**		**Asset**		
	Capital	5,000	Cash	4,000	Capital	5,000	Cash	6,000	Total Deposits in System
Money Creation Ends ->	New Deposit	49,000	Loan	50,000	New Deposit	50,000	Loan	49,000	99,000
		54,000		**54,000**		**55,000**		**55,000**	

Credit Creation Theory:

Support for This Theory:

- The leading theory of money creation
- Empirical research (Werner, 2014), Bank of England, The Fed are among others that provide strong support for this view

Lending + Clearing = Money Creation:

- Banks create money by issuing loans.
- Banks don't necessarily require base money to make loans.
- Since, payment has to be made to another bank, banks can settle among themselves.

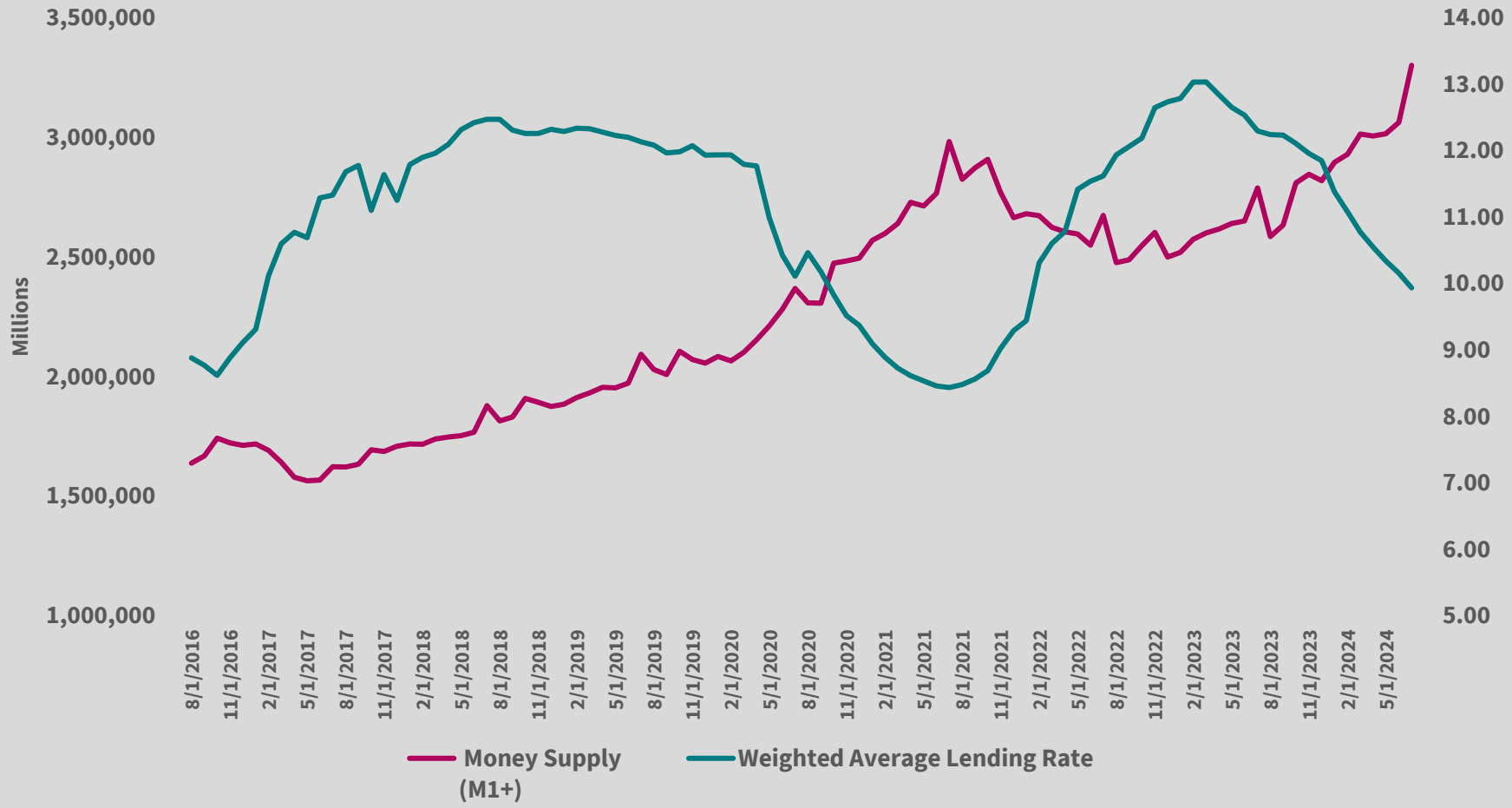
Limit is dictated by Demand, Demand's influenced by Central Bank:

- Central banks use tools like interest rates to influence demand for loans, influencing how much money banks create.

Credit is Elastic:

Money expands during good times, contracts during bad times.

Money Supply (M1+) vs Average Lending Rate (Nepal):



Credit fuels Bull and Bear:

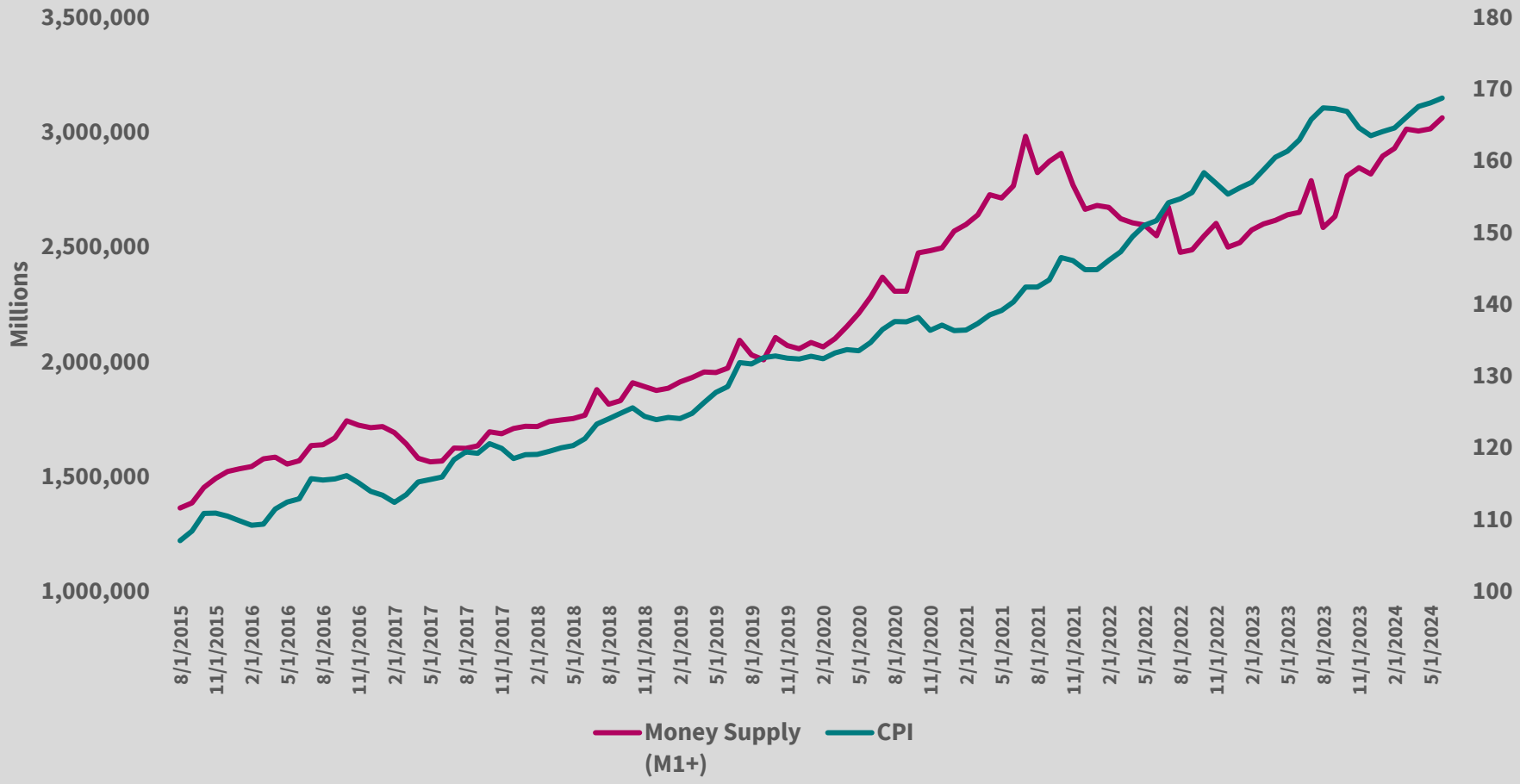
A New Technical Indicator?:

Money Supply (M1+) vs NEPSE Stock Index (Nepal):

Credit Affects Your Grocery Prices:

Consumption Prices:

Money Supply (M1+) vs Inflation (CPI) (Nepal):



Risks in Credit Money:

Credit Booms and Busts:

- Over-lending creates economic bubbles that burst, leading to downturns.

Debt Overhang:

- High debt can limit future borrowing and growth

Credit Misallocation:

- Lending to non-productive sectors can harm economic progress

Inequality:

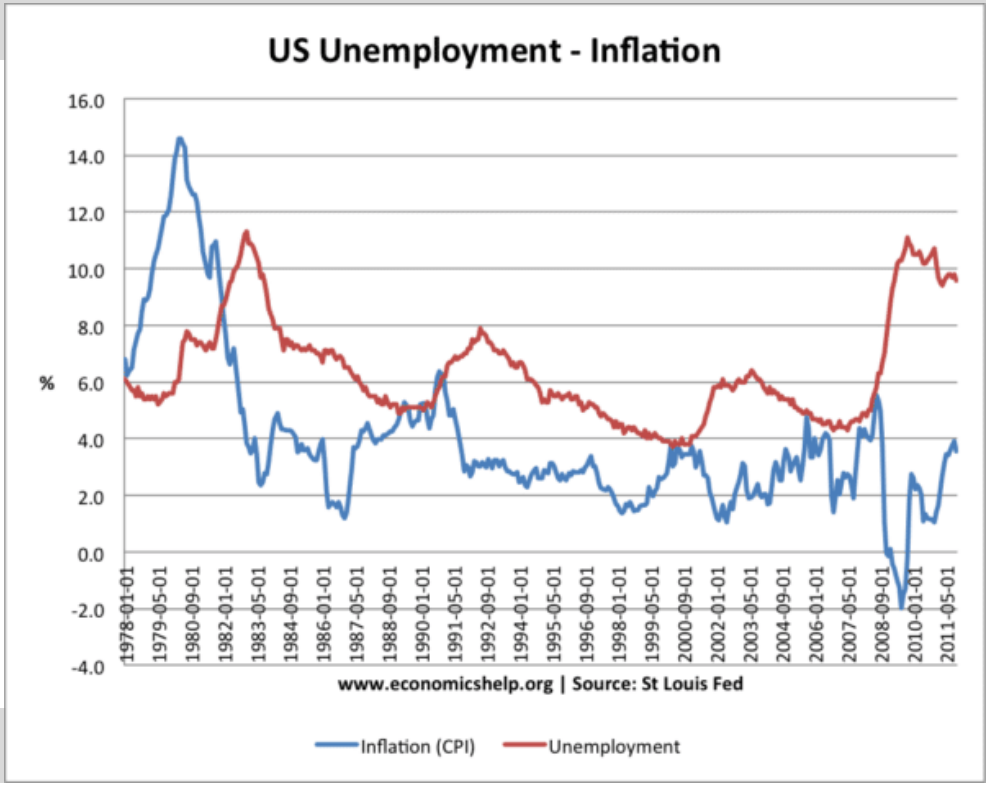
- Large banks have more control over who gets to use money.
- Large Borrowers have ability to buy, before new money creates inflation. (Cantillon Effect)

More Money vs Less Money:

Inflation vs Unemployment:

At overall economy level:

- More Money -> Low Unemployment & High Inflation
- Less Money -> High Unemployment & Low Inflation
- It's a tradeoff



Cutting Edge :

Digital Wallets and Cryptocurrencies:

- Operate outside traditional banking
- Reduces reliance on traditional banking system
- promotes decentralized finance

Central Bank Concerns:

- Loss of monetary control
- Disruption of existing banking system

Regulatory Challenges:

- Hard for central banks to manage money supply if digital wallets and cryptocurrencies become dominant, affecting monetary policy

Central Bank Digital Currency:

CBDCs as a Response:

- To provide a regulated alternative to private digital wallets and cryptocurrencies
- Public money resides in central banks, bypassing banks
- To maintain control over the monetary system
- To improve monetary policy effectiveness

Concerns:

- Greater Government Control -> Potential privacy issues
- Single Point of Failure
- Bypass of banks -> Financial stability risks

Summary:

Recap:

- Money is always evolving
- Money is needed for consumption with specialization.

- Take Loans -> Create Money , Pay it back -> Destroy Money

- Money is highly elastic to demand.
- To control money, Central banks control demand using rates

- Credit money fuels prosperity, markets and food prices
- Valuations rise when everyone has money

- Inflation vs Unemployment

- What is central bank worried about?
- Central Banks want you to love CBDCs.

Questions?

Thanks.