FUNCTION OF MONEY
FORMS OF MONEY
INTERNET OF INFORMATION 1990

FIRST WEBSITE FROM TIM BERNERS-LEE
SUCCESS OF BASED ON ONLINE BANKING
NO FRICTIONLESS AND AUTONOMOUS END-TO-END FINANCIAL SOLUTIONS

41.6 BILLION IOT DEVICES WILL GENERATE 79.4 ZETTABYTES OF DATA IN 2025
NEW VALUE TRANSFER SYSTEM CALLED THE BLOCKCHAIN

INTERNET OF VALUE

2009
HIGH VOLATILITY

NO CURRENCY & NO RISK FOR CENTRAL BANKS
POTENTIAL CURRENCY & **HUGE RISK** FOR
CENTRAL BANKS
CONNECTED INDUSTRY ≠ FINANCIAL SERVICES
NO AUTOMATION

WITHOUT THE DIGITAL EURO

WITHOUT NEW ASSET CLASSES
01 CENTRAL BANK DIGITAL CURRENCY
02 PROGRAMMABLE COMMERCIAL MONEY
03 CRYPTO STABLECOINS
PAY-PER-USE: FINANCIAL FLEXIBILITY FOR SMES
Finance as it works today

Manufacturer ➔ Customer

Manufacturer ➔ Bank

Bank ➔ One-off Payment ➔ Customer

Bank ➔ Loan ➔ Manufacturer

Annuity ➔ Customer ➔ Bank

Finance as it works tomorrow

Manufacturer ➔ Customer

Manufacturer ➔ Bank

Bank ➔ One-off Payment ➔ Customer

Bank ➔ Loan ➔ Manufacturers

Annuity ➔ Customer ➔ Bank

Investors ➔ Bank ➔ Asset

Customer ➔ Recurring Payments ➔ Investors

Bank ➔ Asset ➔ Customer

Clients
High Demand for OPEX models

OEMs
Limitation by CAPEX increases financing need

Investors
Missing asset lifecycle transparency

Pay-per-Use
Rent
Leaseback
Sale
Performance
➢ Accessibility of alternative and illiquid asset classes
➢ Real-time payments
➢ Micropayments
➢ Fractional Ownership

Efficiency
➢ Technology allows for more direct financing of assets
➢ Lifecycle Management of Assets
➢ Programmability of investment process

Transparency (Single Point of Truth)
➢ Ownership of Asset
➢ Quality of Asset
➢ Performance of Asset

Value Proposition

Off-chain
- Physical Assets

On-chain
- Token
- DLT

Crypto Custody
Contacts

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Differentiation between programmable payment & money

**Contract Execution System**
The first step in our programmable payment value chain is a contract that automatically triggers a payment. For example, any business logic or a business process can execute such contracts.

**Digital Payment Infrastructure**
It can either be processed using DLT or — with the help of a bridge or trigger solution — using conventional infrastructure such as SEPA, TARGET2 or TIPS. The digital payment infrastructure also determines whether the payment asset is account- or token-based (3rd feature of smart contracts). Payments based on accounts require the identification of the account holder. Payments based on tokens require the ability to verify the validity of the token. Tokens realize their full potential when they can be exchanged for other tokens, such as tokenized assets or services. This enables the seamless exchange with immediate transaction finality, also known as “delivery vs. payment”.

**Monetary Unit**
- Central bank digital currencies (CBDC)
- Synthetic central bank digital currencies (sCBDC)
- DLT-based commercial bank money
- DLT-based e-money
- FIAT-pegged Stablecoins

Figure 1: Programmable payment value chain. Integrating different dimensions of programmability with underlying features of smart contracts.
Monetary units

**Central Bank Digital Currency (CBDC)**
Issued by the central bank as legal tender.

**Synthetic Central Bank Digital Currency (sCBDC)**
Issued by commercial banks or e-money institutes. No legal tender, but backed 100% by central bank reserves. Obligation to exchange for legal tender at any time.

**DLT-Based Commercial Bank Money**
Issued by regulated financial organizations, e.g., commercial banks. No legal tender and only partially backed by central bank reserves (i.e., fractional reserve system). Obligation to exchange for legal tender at any time.

**DLT-Based E-Money**
Issued by e-money institutes. No legal tender. Fully backed by e-money on accounts. Obligation to exchange for legal tender at any time. In the sense of the new MiCA regulation proposed by the European Commission, these would be so-called E-Money tokens (EMTs).

**Fiat-Pegged Stable Coins**
Issued by regulated (e.g., commercial banks, payment service providers) or unregulated financial organizations. Stablecoins are only "fiat derivatives". They replicate the price of a fiat currency, but are neither legal tender nor is there an obligation to exchange them for legal tender. They exhibit counterparty, exchange rate, and liquidity risks (ARTs).

**Central Bank Digital Currency (CBDC)**
Issued by the central bank as legal tender.