



- **STABLECOINS and CBDCs**
as a promising potential
for an inclusive financial system

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Agenda

- **Introduction**

The Importance of Payment Systems, Financial Inclusion

- **Current state of the knowledge** – stablecoins and CBDCs definitions and comparison, system of their functioning

- **Results and contributions** - The Potential for Financial Inclusion, challenges of CBDCs and Stablecoins

- **Conclusion** – future outlook

Stablecoins and CBDCs as a Promising Potential for an Inclusive Financial System

Inclusive Financial system

The role of digital currencies
in promoting financial inclusion

???



Introduction

STABLECOINS and
CBDCs
as a promising potential
for an inclusive financial
system

Alliance for Financial Inclusion (AFI)

2030 Agenda for Sustainable Development - Paragraph 27.
Adoption of policies which increase:

productive capacities, productivity and productive employment;
financial inclusion; sustainable agriculture,
pastoralist and fisheries development; sustainable industrial
development; universal access to affordable, reliable, sustainable
and modern energy services; sustainable transport systems; and
quality and resilient infrastructure....

Payment systems are indispensable to our lives as
individuals and to the smooth functioning of the
economy (BIS and World Bank, 2024)

Money – the lifeblood of modern monetary
economies.

Payment systems are circulation systems.

Payment systems

Payment systems and remittances

- represent the foundations of financial sector stability and financial inclusion
- support financial stability by reducing systemic and settlement risks,
- act as firewall to prevent contagion of losses,
- facilitate proper liquidity management
- are a critical factor of financial inclusion functioning.

Transactions accounts

- allow people – including the “unbanked” – to make and receive payments in a cost-efficient way.
- promote economic and financial development

The Global Findex Database 2021

➤ **Financial Inclusion: is seen as a cornerstone of development**

Worldwide account ownership-76% of the global population, 71% in developing countries.

➤ **How can policymakers promote financial inclusion**

- Establish Regulatory Frameworks
- National Financial Inclusion Strategies (NFIS)
- Promote Digital Financial Services

➤ **Implementation Guide for the G20 High-Level Principles for Digital Financial Inclusion (PRINCIPLES 1–6) SEPTEMBER 2022**

Framework 1 deploys the Payment Aspects of Financial Inclusion in the Fintech (PAFI)

- Critical enablers:
- Financial and ICT infrastructure
 - Legal and regulatory framework
 - Public- and private-sector commitment

Definition of key terms:

Financial Inclusion,
Stablecoins,
CBDCs.

1. Financial inclusion:

- a) individuals and businesses have access to useful and affordable financial products and services that meet their needs – transactions, payments, savings, credit and insurance
- b) delivered in a responsible and sustainable way.

2. Financial inclusion

has been identified as an enabler for 7 of the 17 SDGs.

3. The G20

- a) committed to advance **financial inclusion** worldwide, and
- b) reaffirmed its commitment to implement the G20 High-Level Principles for Digital Financial Inclusion.

4. The World Bank Group

considers **financial inclusion** a key enabler to reduce extreme poverty and boost shared prosperity.

G20 High-Level Principles for Digital Financial Inclusion

World Bank Group – An “Inclusive Financial System”

The new Principles complement the 2010 G20 Principles for Innovative Financial Inclusion:

- (1) technological innovations in digital financial services,
- (2) availability of new G20-blessed and international standard-setting bodies' standards and guidance,
- (3) enhanced electronic data quality and availability, and
- (4) growing awareness of the critical importance of infrastructure, standards, and conducive regulations beyond the financial sector for financial inclusion.

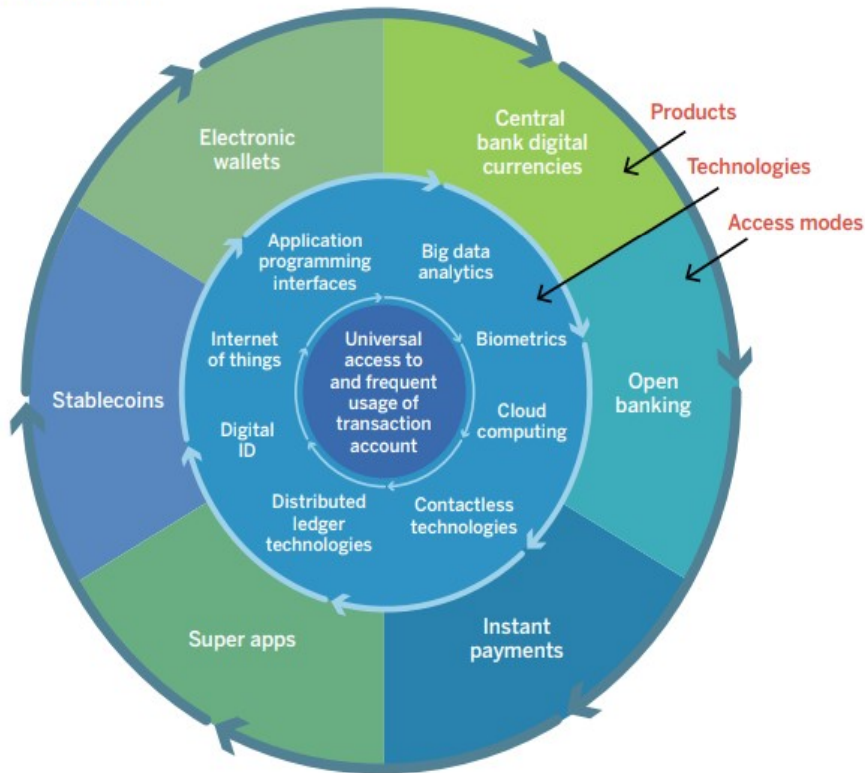
Key aspects (WB, 2023)

- Access to Useful and Affordable Financial Products and Services
- **Digital Financial Inclusion:** This involves the deployment of cost-saving digital means to reach currently financially excluded and underserved populations with a range of formal financial services suited to their needs.
- **Impact on Sustainable Development Goals (SDGs):** Financial inclusion has been identified as an enabler for 7 of the 17 Sustainable Development Goals.
- **Universal Financial Access:** Being able to have access to a transaction (serves as a gateway to other financial services).
- **Improvement in Quality of Life:** As accountholders, people are more likely to use other financial services, such as credit and insurance, to start and expand businesses, invest in education or health.

The Potential for Financial Inclusion

- How Stablecoins and CBDCs can increase accessibility to financial services
- The role of Stablecoins and CBDCs in making financial services more affordable
- The impact of Stablecoins and CBDCs on cross-border payments

PAFI Fintech Wheel²⁶



Foreign/migrant workers sent more than \$800 billion to their families back in their home countries in 2022.

Foreign-working Indians alone sent an estimated \$100 billion home.

[A World Bank study](#) (Remittance Prices Worldwide Q3 2023) indicated that a \$500 international transfer using current service providers would on average cost a worker \$31. Our study suggested that the same transfer using stablecoins would cost an average of \$7.83, or a savings of more than 75%.

PAFI- Payment Aspects of Financial Inclusion in the Fintech



Crypto intangible
assets are a subset
of digital assets

Digital assets





The definition of **digital asset** is crucial to defining a crypto intangible asset.

The term digital asset is to mean any asset that both:

- is created or resides on a distributed ledger based on blockchain (or similar) technology; and
- is secured through cryptography.

Digital assets therefore include all the following (not exhaustive):

- ‘cryptocurrencies’ like bitcoin and ether;
- stablecoins that meet the US GAAP definition of a financial asset (e.g. USDC);
- CBDCs;
- NFTs; and
- various ‘tokenized’ securities (e.g. a token representing a fractionalized share of an underlying corporate bond).

Classification	Meet the definition?	Rationale
Cash or cash equivalent		<p>These digital assets do not meet the definition of cash because they are not legal tender issued by a government.</p> <p>They also do not meet the definition of a cash equivalent because they have no maturity date at which they are readily convertible to a known amount of cash.</p>
Financial instrument or financial asset		<p>These digital assets are not cash (see preceding row) and do not give the holder either (1) an ownership interest in another entity, or (2) a contractual right to receive cash or another financial asset or instrument.</p>
Inventory		<p>A digital asset is not a tangible asset, so does not meet the definition of inventory.</p>
Intangible asset		<p>These digital assets generally meet the definition of an intangible asset as an asset (other than a financial asset or goodwill) that lacks physical substance and meets the asset recognition criteria in the FASB's Conceptual Framework. [350-30-25-4]</p>

Accounting and stablecoins

- **Stablecoins are typically cryptocurrencies that are pegged to a reference asset.**
- The main difference between a stablecoin and a cryptocurrency is the mechanism designed to minimise price volatility by linking the value of the stablecoin to that of a more traditional asset such as fiat currency.
- The appropriate accounting for stablecoins depends on the specific rights and obligations associated with the holding of the crypto-asset, especially any potential redemption rights held by the holder.
- A crypto-asset is only an equity instrument under IFRS **if it embodies a contractual right to a residual interest in the net assets of a particular entity.**

Contractual right to cash or another financial asset

- A crypto-asset, that is not an equity instrument or a derivative would still meet the definition of a financial asset if it is both contractual and embodies a right to receive cash or another financial asset.
- For example, a crypto-asset that entitles the holder to a cash payment, or the delivery of bonds or shares would meet the definition of a financial asset.
- In such cases, the crypto-asset would, in effect, be akin to a digital deposit slip, which exposes the holder to the economic risk on the underlying financial asset as well as counterparty risk.

IFRS 9 classification

- Such a crypto-asset will be subject to the IFRS 9 classification and measurement requirements.
- All **financial assets** are **initially recorded at fair value plus attributable transaction costs**, apart from those subsequently measured at fair value through profit or loss, in which case, the transaction costs should be expensed as incurred.
- **Subsequent measurement** depends on the cash flow characteristics of the asset and the business model in which it is held.
- Financial assets, aside from equity instruments, which fail the solely payment of principal and interest (SPPI) cash flow characteristics test, as well as those held for trading, **are measured at fair value through profit or loss**. The business model in which they are held drives the measurement of financial assets that do meet the SPPI test.
- Those in a 'held to collect' business model **are measured at amortised cost under IFRS 9**.
- While those in a 'held to collect and sell' business model are **measured at fair value through other comprehensive income**, with subsequent recycling to profit or loss on derecognition.

IFRS 9, however, allows a holder to designate a financial asset, despite meeting the SPPI cash flow characteristics test, as at fair value through profit or loss, on initial recognition, if doing so reduces or eliminates

an accounting mismatch.

Example 1- Accounting for stablecoins with redemption rights

Fact pattern:

Company A issues S-coins to third party investors.

S-coins are similar to cryptocurrencies except that each S-coin is backed by an ounce of physical gold.

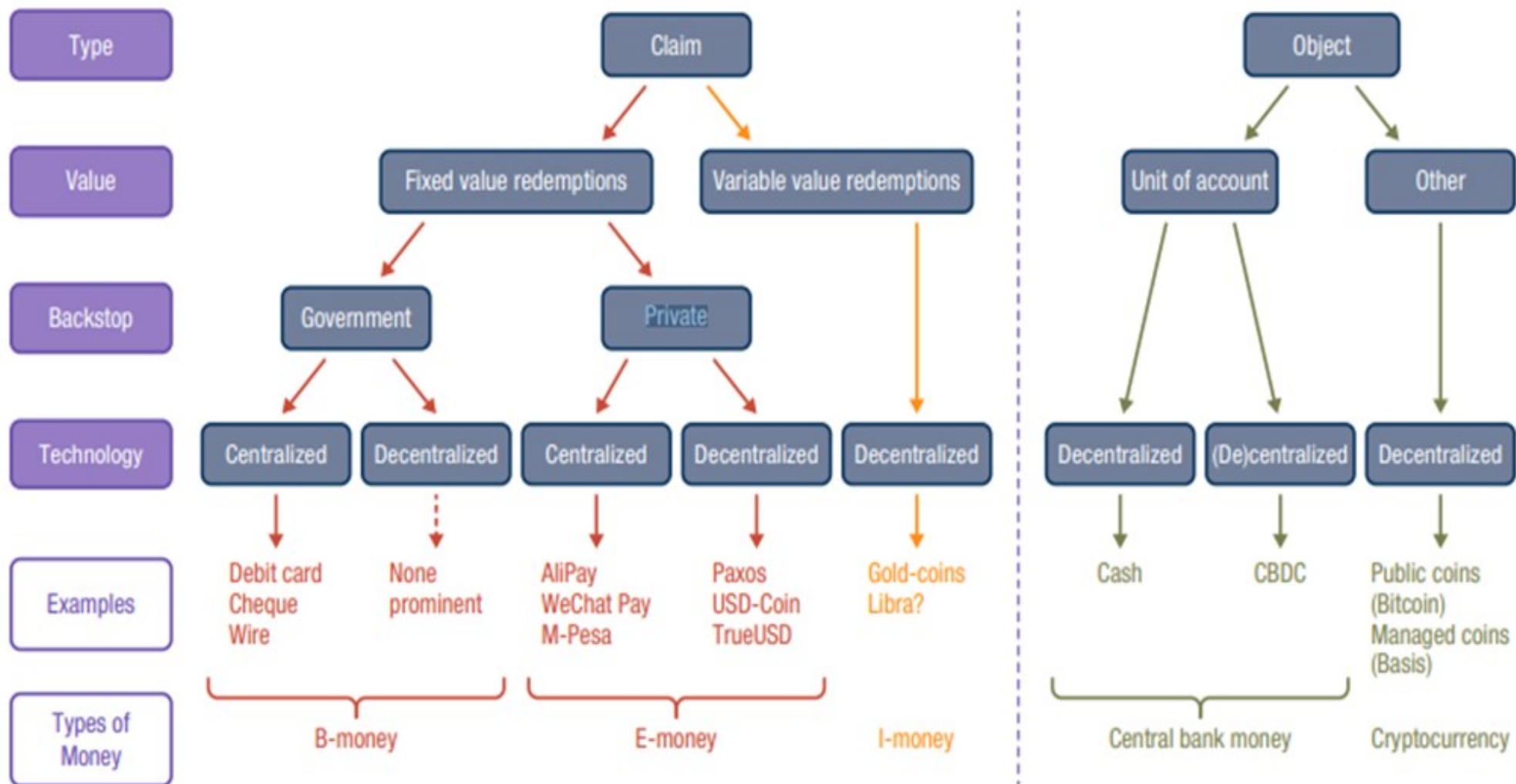
Any S-coins are redeemable any time at the option of the holder for cash at the prevailing market price of the gold.

Analysis:

- A contract exists between Company A and any holder of S-coins as there is an enforceable agreement between the

parties on the rights and obligations associated with the stablecoins.

- A holder of S-coins is contractually entitled to receive cash at the prevailing market price of the gold from Company A by exercising the redemption right.
- Therefore, S-coins meet the definition of a financial asset under IAS 32 from the holder's perspective and are accounted for as a financial instrument under IFRS 9.



Source: IMF Staff.

Note: CBDC = central bank digital currency.

Definition of key terms:

Financial Inclusion

Stablecoin

S

CBDCs,

EU

- **Markets in Crypto-Assets Regulation (MiCAR)**

- **asset-referenced token**
type of crypto-asset

that is **not an electronic money token** and that purports to maintain a stable value by referencing another value or right or a combination thereof, including one or more official currencies;

- **electronic money token** or 'e-money token'

is a type of crypto-asset that purports to maintain a stable value by referencing the value of one official currency;

USA

FIT21: **PERMITTED PAYMENT STABLECOIN**

a digital asset—that is or is designed to be used as a means of payment or settlement;

- the issuer of which is obligated to convert, redeem, or repurchase it for a fixed amount of monetary value.

Stablecoin Transparency Act:

- **FIAT CURRENCY-BACKED STABLECOIN** – fiat currency-backed digital asset
- that maintains price stability by backing the value of such digital asset to a non-digital currency that is denominated in the same currency as such digital asset is issued;
- is redeemable on a one-to-one basis in the denominated currency to which the digital asset is backed.

THE 'STABLE' DIVIDE: USA VS EUROPE APPROACH TO REGULATING STABLECOINS FACT CARD

UPDATED 03 MAY 2024



Lummis-Gillibrand Payments Stablecoin Act of 2024 (S. 4155)

Introduced 17 April 2024; not voted on yet

- **State non-depository trust companies can issue payment stablecoins up to \$10 billion**
 - limited-purpose state/OCC depository institutions authorized to issue any amount
- **Preserves the dual banking system**
 - States' current authority over non-depository trust companies is preserved and limited-purpose state/OCC payment stablecoin charter is authorized
 - Federal Reserve or state/OCC can take independent enforcement action against a depository institution issuer; must act jointly for trust companies below \$10 billion
- **Non-depository trust companies to use a sub-custodian that is a depository institution**
- **Comprehensive third-party risk management of service providers (other than self-hosted wallets), and grants the Federal Reserve supervision authority, unless supervised by another regulator**
- **Receivership regime is established under the FDIC for all payment stablecoin issuers** including order of priority, validity of claims and classification of payment stablecoins as customer assets



Markets in Crypto Assets Regulation (MiCA)

Entered into force in June 2023; applies in two phases in 2024

- **Title 4 amends the Electronic Money Directive, placing Electronic Money Tokens (EMTs) under EMDirective**
 - Electronic Money instruments (EMTs) are FUNDS
 - Asset-referenced Tokens (ARTs) are stable coins but are not qualified as funds, they perform as store of value
 - USDt, USDc, EURc, etc., are not EMTs as long as they are not authorized to be so
 - Explicitly excludes crypto-assets that are unique and not fungible with other crypto-assets. Therefore, in relation to most NFTs, MiCA will not apply
- **Stablecoins not denominated in fiat currency and in non-compliance with regulations by June 30th will not be defined as EMTs**
 - It will be a token that cannot be admitted for trading
- **EU Law does not give clear delineation of "financial instrument". ESMA to issue guidelines by 30 December 2024**
 - View [guidelines for ESMA Consultation on qualification of crypto-asset as financial instrument](#)

Definition of key terms:
Financial Inclusion
Stablecoins,
CBDCs,

EU - MiCAR:

- **Digital assets issued by central banks** acting in their monetary authority capacity, including central bank money in digital form,
- or **crypto-assets issued by other public authorities**, including central, regional and local administrations, **should not be subject** to the Union framework for markets in crypto-assets.
- Nor should related services provided by such central banks when acting in their monetary authority capacity or other public authorities be subject to that Union framework.

USA

CBDC Anti-Surveillance State Act

- A Federal reserve bank shall not—
issue a central bank digital currency, or
any digital asset that is substantially
similar under any other name or label,
directly to an individual.

Understanding Stablecoins

Five (5) Operational characteristics

Asset Pegging:

- The process of linking a stablecoin's value to a stable asset (e.g., USD, gold), ensuring its stability.

Reduced Volatility:

- Stablecoins exhibit minimal value fluctuation, making them ideal for regular transactions and investments.

Blockchain Technology:

- Provides a secure, transparent ledger for stablecoin transactions, enhancing trust and efficiency.

Reserve Assets:

- Holdings in fiat currency or commodities that back the value of stablecoins, ensuring their stability.

Algorithmic Control:

- For non-asset-backed stablecoins, algorithms adjust the supply to maintain stable value.

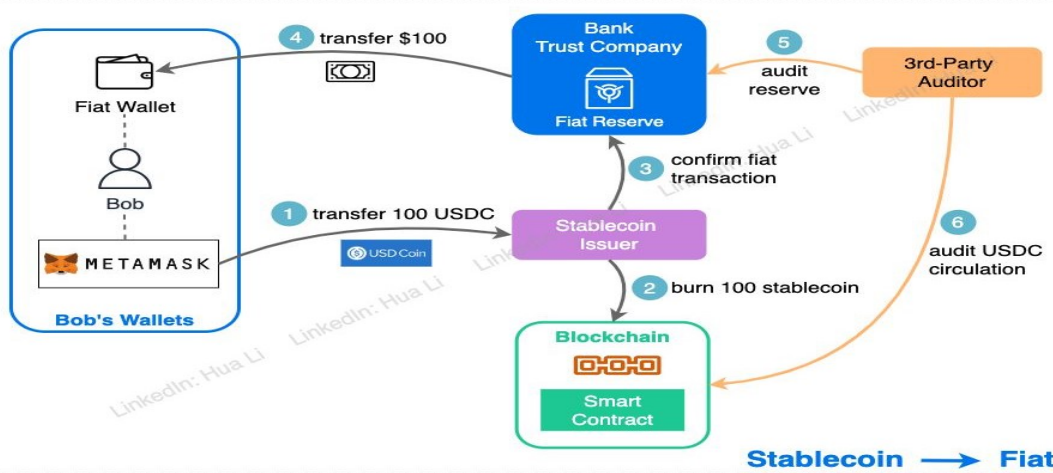
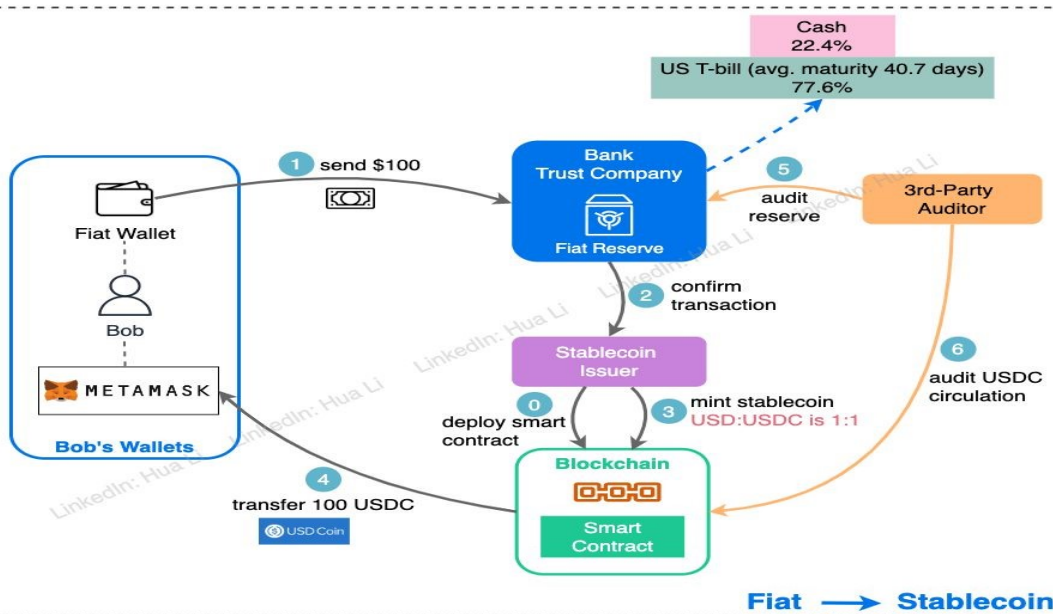
Importance of the stablecoins

Stablecoins

- are vital in the crypto market due to their **reduced volatility**, making them **a safer investment** and **medium of exchange** compared to traditional cryptocurrencies,
- enable seamless, **low-cost, and quick cross-border transactions** while **maintaining stable value**.
- This stability is crucial for businesses and individuals seeking a **digital currency** that **minimizes the risk of value fluctuation**.

How does Stablecoin Work?

blog.bytebytego.com



Fiat → Stablecoin

Step 0 - A ERC-20 smart contract is deployed on the blockchain, with stablecoin token detail

Step 1 - Bob transfers \$100 from his fiat wallet to the custodian (a bank or a trust company) who maintains the fiat reserve for the stablecoin issuer, in exchange for 100 USDC.

Step 2 - The custodian confirms the transaction and asks the stablecoin issuer to mint and transfer stablecoins.

Steps 3 and 4 - The stablecoin issuer mints new tokens and transfers them to Bob's crypto wallet. It is called "stable" because it is 1:1 pegged to USD.

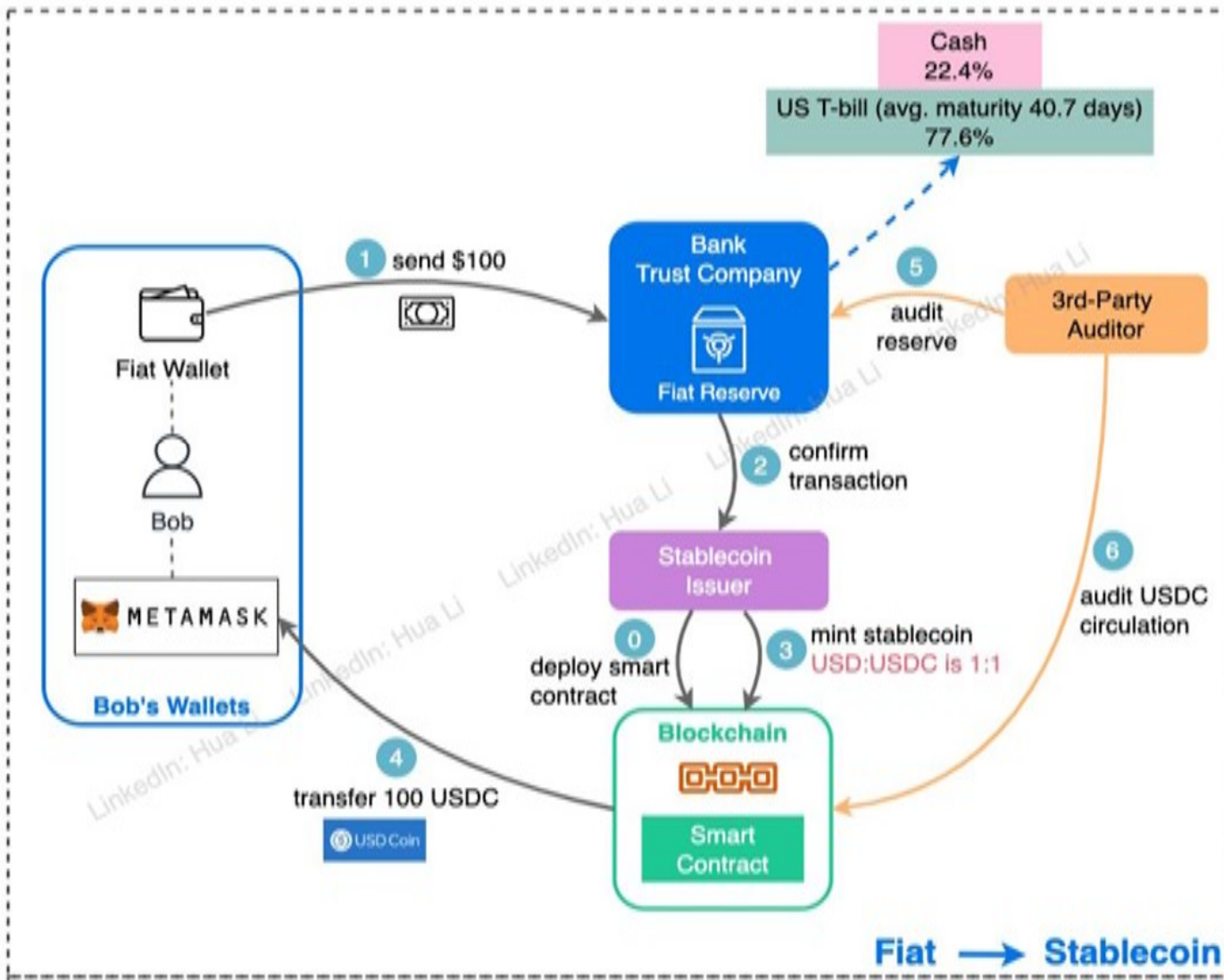
Steps 5 and 6 - A 3rd-party auditor audits the reserves in the custodian and the tokens in the smart contract. It makes sure the tokens are fully backed by fiat money or short-term bills. In USDC's case, the reserve contains 22.4% cash and 77.6% T-bills (low risk) as per the audit report.

Stablecoin → Fiat

Steps 1 and 2 - Bob transfers 100 USDC to the issuer in exchange for \$100. The issuer burns 100 USDC by calling the smart contract.

Steps 3 and 4 - The issuer confirms the transaction and asks the custodian to transfer \$100 to Bob's fiat wallet. (Hua Li, 2024)

How does Stablecoin Work?



Fiat → Stablecoin

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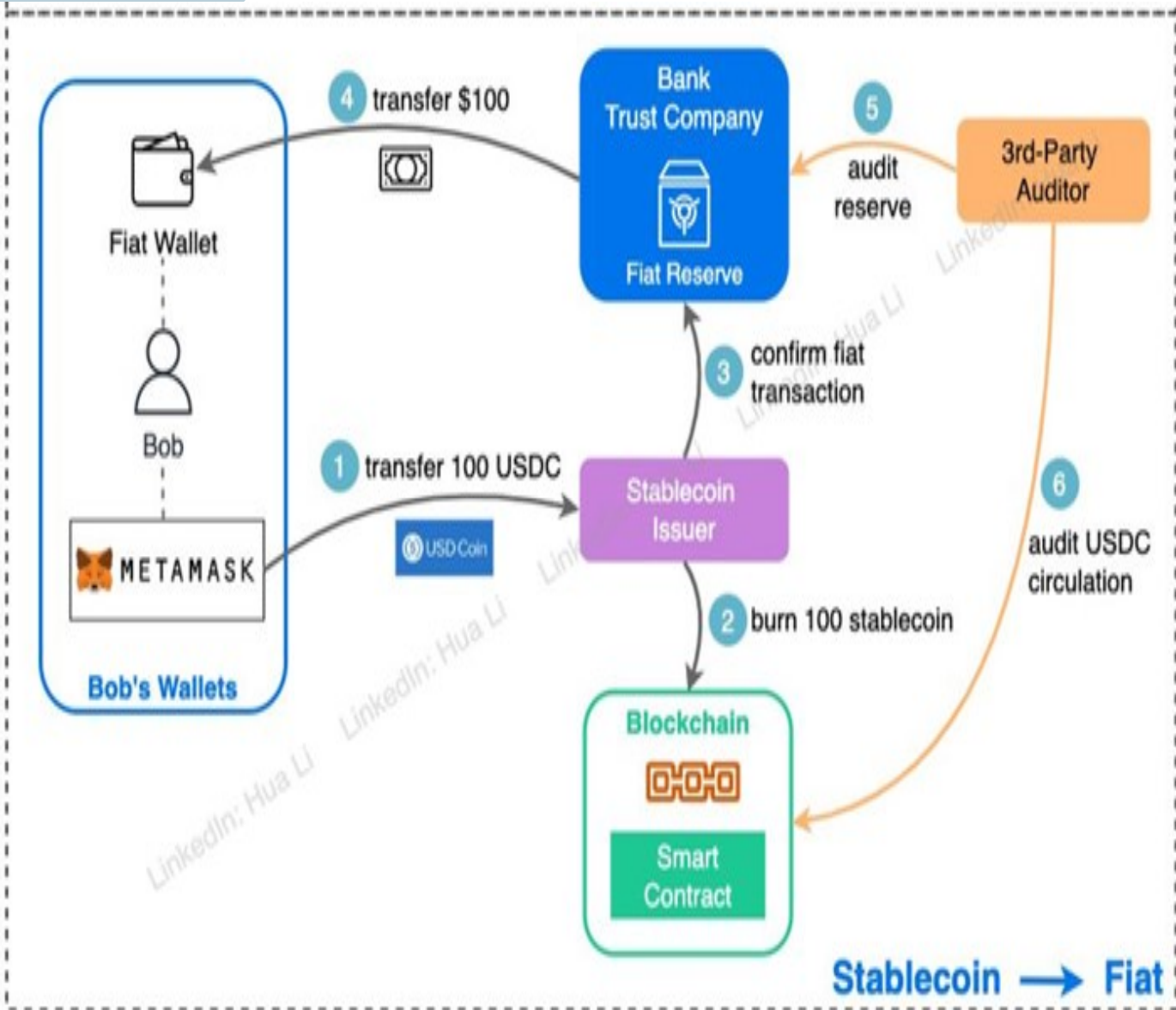
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(Hua Li, 2024)

Understanding CBDCs

Explanation of what CBDCs are

How they work and their benefits

CBDCs vs STABLECOINS

COMPARISON OVERVIEW

CBDCs	STABLECOINS
issued and regulated by a central bank, centralised	issued by private institutions, no regulating authority, decentralised
"middle man" in transfers, also possible central intervention	no central intervention or middlemen
always full-reserve fiat-currency backed	may be backed by fiat currencies, assets, or precious metals
monetary policies like taxation can be implemented	does not include any policies or taxation aspects
limited use within a country just like most fiat currencies	borderless

Characteristics	Cryptocurrency	Stablecoins	CBDCs
Digital	Yes	Yes	Yes
Definition	Regulation of the amount of currency units and the verification of transactions of these units is done through cryptographic techniques.	Cryptocurrencies where the price is designed to be pegged to a currency, called the fiat money.	Digital currency created by a central bank
Value	Not backed by an authority but determined by adoption and acceptance in the real economy	Their value is pegged to one or more currencies (most commonly the US dollar, also the Euro and the Swiss franc) in a fixed ratio.	One to One with the reference currency
Centralization	Rely on peer-to-peer transactions with no middleman	Rely on peer-to-peer transactions with no middleman	CBDC transactions still have to go through the banking system
Technology	Blockchain Technology protocol - distributed ledger of all the transactions	Blockchain Technology - Ethereum	Different types of technology
Securing transaction	Cryptography is generally used to secure the transactions, and also to control the creation of new currencies or coins.	The amount of the currency used for backing of the stablecoin has to reflect the circulating supply of the stablecoin. This is facilitated by through banks or other types of regulated financial institutions which serve as depositaries of the currency.	Lower risk, because backed by a central bank.
Volatility	Very high volatility	Low volatility compared to reference currency	Low volatility compared to reference currency
Positioning public authorities	Under scrutiny with some countries banning is (example China, Turkey)	Less under scrutiny	Supported by public authorities
Examples	Bitcoin, Ripple, Ethereum	True USD (TUSD), USD Tether (USDT), USDC (USD Coin), Diem (formerly Libra).	e-CNY, e-Won, e-Krona

Comparison Price/Time/Safety

Price:

* Legacy Remittance Payments: The World Bank reported that the global average cost of sending remittances was 6.20% of the amount sent¹. For a \$500 international transfer using current service providers, it would cost an average of \$31 (these costs can be higher in smaller migration corridors).

* Stablecoin Remittance Payments: Stablecoins significantly reduce these costs. For the same \$500 international transfer, it would cost an average of \$7.83 (1.57 %) using stablecoins. This represents a savings of more than 75% compared to traditional remittance methods.

Time:

The average transaction time for legacy remittance payments typically takes around 5 days.

Transactions using stablecoins such as XSGD and XIDR, which are based on the Ethereum and Zilliqa token standards, have settlement times that take around 6 minutes or 40 seconds on their respective blockchain networks.

Safety:

Stablecoin remittance payments have certain features that can make them safer compared to legacy remittance payments:

1. Transparency: Unlike traditional payment systems, stablecoins operate on blockchain technology, which allows for an open and immutable record of all transactions¹. This means that every transaction can be traced and verified, ensuring accountability and reducing the risk of fraud or manipulation¹.
2. Stability: By pegging their value to a stable asset, stablecoins mitigate the risks of currency volatility, making them an attractive option for individuals and businesses in international remittances².
3. Efficiency: Stablecoins can reduce costs and streamline processes³. Traditional remittance methods often involve multiple intermediaries, which can increase the risk of errors and fraud⁴. In contrast, stablecoin transactions are peer-to-peer, reducing the number of parties involved and thereby the potential points of failure⁴.

Challenges

Technological hurdles in the implementation of Stablecoins and CBDCs

Regulatory issues surrounding digital currencies

Concerns about financial stability and consumer protection

- Regulatory Framework
- Infrastructure
- Financial Literacy
- Access to Formal Financial System
- Adoption of Electronic Payment Services
- Interoperability

The Future steps
collaborative approach

Potential strategies
Stablecoins and
CBDCs (Benefits vs
Challenges)

**Regulatory
Framework**

Privacy Protection

Interoperability

**Financial Literacy
Programs**

Incentivization

**Public-Private
Partnerships**

Low-Cost Services

**Universal Access
Points**

How can technology play a role in promoting financial inclusion?

1. Digitizing Services
2. Targeting Underserved Populations.
3. Building Trust
4. Utilizing Blockchain
5. Collaboration with Regulators
6. Removing Barriers

Conclusion - The promising potential of Stablecoins and CBDCs in creating a more inclusive financial system

- Stablecoins hold the transformative power to bridge the financial gap for unbanked populations worldwide.
- By prioritizing financial inclusion, stakeholders in the digital asset and financial sectors can play a pivotal role in granting economic empowerment and inclusion.
- Companies with their commitment to leveraging stablecoin technology in a secure and easy way, stand as a testament to the potential of digital money in creating a more inclusive financial landscape.
- The journey towards financial inclusion is ongoing, but with stablecoins platforms, we are one step closer to a world where everyone has access to the financial tools necessary for empowerment.
- Stablecoins can offer banking services to the unbanked, facilitating easier access to global financial systems. They are reshaping cross-border payments, remittances, and digital asset trading by providing a stable medium of exchange.

A. Carstens,
General
Manager of the
BIS, Innovation
Summit, 2025.

- Technology is critical but not sufficient.
- It is only effective once it finds its economic and financial purpose and is underpinned by robust regulatory structures.
- To create a truly coherent vision of the future financial system, we will have to supplement cutting-edge technologies with an efficient economic and financial architecture and robust governance and regulatory arrangements.

Thank you for your attention

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