



20th Meeting of the COMCEC Financial Cooperation Working Group (FCWG)

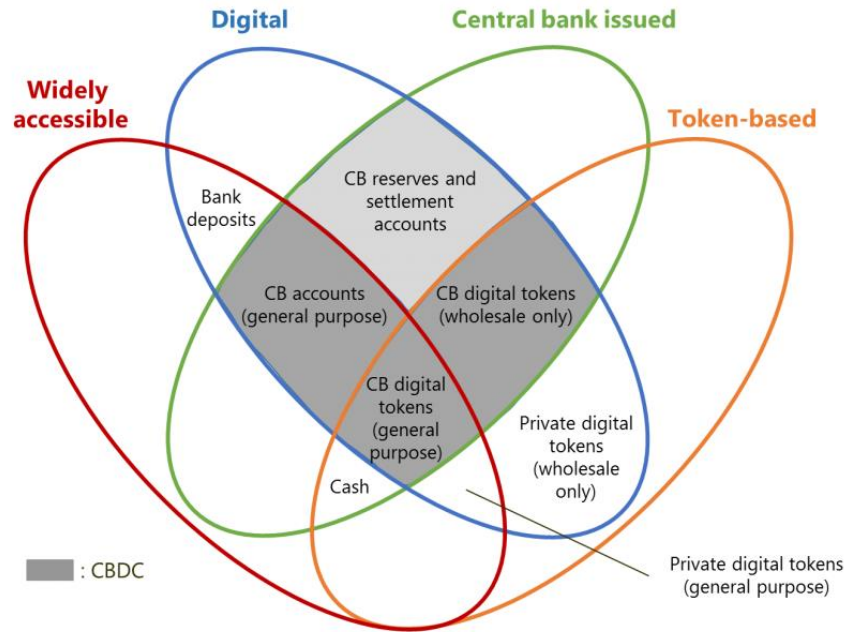
October 9-10, 2023

Perspectives and Experiences with Digital Currencies

A common taxonomy of money:

The money flower: a taxonomy of money

Graph 1

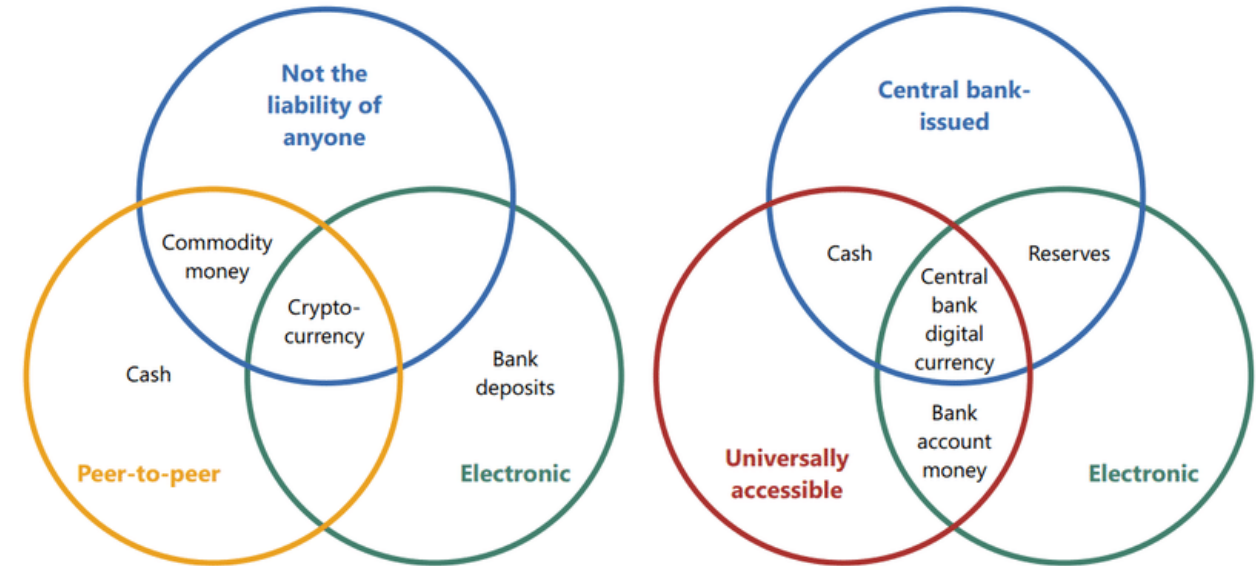


Two taxonomies of new forms of currency

Graph 2

Cryptocurrency, CPMI (2015)

Central bank digital currency, Bjerg (2017)



Notes: The Venn-diagram illustrates the four key properties of money: *issuer* (central bank or not); *form* (digital or physical); *accessibility* (widely or restricted) and *technology* (account-based or token-based). *CB* = central bank, *CBDC* = central bank digital currency (excluding digital central bank money already available to monetary counterparties and some non-monetary counterparties). *Private digital tokens (general purpose)* include crypto-assets and currencies, such as bitcoin and ethereum. *Bank deposits* are not widely accessible in all jurisdictions. For examples of how other forms of money may fit in the diagram, please refer to the source.

Source: Based on Bech and Garratt (2017).

Digital Currency Landscape:

CBDC

A central bank issued, digital version of a fiat currency available to legal and or natural persons.

TOKENIZED DEPOSITS

A type of backed virtual asset issued by a licensed bank that represents

- a liability of the issuer ;
- is redeemable at par and;
- can be used for payment and/or investment purposes.

The liability for a tokenized bearer instrument remains with the issuer, regardless of the holder of token until such time as it is redeemed.

STABLECOINS

A type of backed virtual asset issued by a licensed banks and non-bank legal entities that:

- purports to maintain a stable value
- offers the holder a claim on a segregated pool of assets.

Stablecoins can be used for payment and or investment purposes.

VIRTUAL CURRENCY

A digital representation of value that

- is not issued or guaranteed by a central bank or a public authority,
- is not attached to a legally established currency
- does not possess a legal status of currency or money
- is accepted by natural or legal persons as a means of exchange and
- can be transferred, stored and traded electronically or digitally.

Common Risks and Benefits Associated with Digital Currencies



Potential Benefits

- **Efficiency and Speed** – Digital currencies can offer faster transaction speeds compared to traditional banking systems, especially for cross-border transactions. They might also lower transaction costs, especially in international transfers and remittances.
- **Innovation and Competition** – Virtual assets can drive innovation in the financial sector, leading to the development of new products, services, and technologies, potentially leading to better services and lower costs for consumers.
- **Data and Analytics** - With the proper infrastructure, central banks could gain access to real-time data on economic activities, which can be invaluable for decision-making and forecasting. ;



Potential Risks

- **Financial Stability Concerns** - The widespread adoption of digital currencies can lead to significant shifts in capital, potentially causing liquidity shortages in traditional banking systems.
- **Monetary Policy Execution** - The widespread adoption of digital currencies might interfere with a Central Bank's ability to implement or transmit monetary policy.
- **Regulatory Arbitrage** – Different digital currencies might be subject to varying levels of regulatory scrutiny. This may drive companies to take advantage of regulatory loopholes and gaps due to relative immaturity of regulatory guidance and inconsistency between jurisdictions
- **Operational and Cybersecurity Risks** – Digital currencies are subject to operational risks, including system failures, hacking attempts and other cybersecurity threats
 - Hacking – Exchanges and wallets are frequent targets for hackers.
 - Loss of access – Forgetting a password or loss of a hardware wallet can mean assets are irretrievably lost.
- **Liquidity Risk** – Some digital currencies might not be easily convertible to fiat currency, especially in times of financial crisis.

Major Risks and Benefits of Stablecoins



Major Benefits

- **Increased Efficiency** – Stablecoins can facilitate faster and cheaper cross-border transactions, leveraging new peer to peer infrastructure, and offering instantaneous settlement thereby reducing transaction and reconciliation times.
- **Access to New Services** – Stablecoins can drive financial innovation by integrating seamlessly with emerging digital platforms and services.
- **Transparency**- Stablecoins recorded on transparent ledgers, enable traceable transactions and reduce illicit financial activities. Their inherent auditability ensures compliance with regulations.



Major Risks

- **Financial Stability** - If stablecoins are widely used or payments, operational disruption might impact economic activity and the financial system. Large scale flows of funds into or out of stablecoins could test the ability of the supporting infrastructure to handle high transaction volumes. Additionally, stablecoins may face run risks and although the stability and resilience of stabilization mechanisms are crucial, they cannot guarantee the peg.
- **Market liquidity and credit risk** - The main determinants of market liquidity and credit risks relate to the composition of reserve assets behind the stablecoin, the robustness of liquidity provided by market players, and the ability of asset referenced token arrangements to employ leverage.
- **Operational Risk** – Stablecoins are subject to operational risks, including system failures, hacking attempts and other cybersecurity threats. The capability of underlying DLT network, reliability of custodians and overall operational resilience can also play a role in determining risks.
 - Hacking – Exchanges and wallets are frequent targets for hackers.
 - Loss of access – Forgetting a password or loss of a hardware wallet can mean assets are irretrievably lost.

Major Risks and Benefits of Tokenized Deposits



Major Benefits



- **Enhanced Liquidity and Market Depth** – Tokenized deposits can facilitate easier trading and movement of assets, leading to more liquid markets.
- **Operational Efficiency** – Tokenization can streamline settlement processes, reduce transaction times and cut operational costs.
- **Increased Transparency and Traceability** – Tokenized assets, when integrated with blockchain technology, offer a transparent and immutable record, aiding in regulatory oversight and reducing financial fraud.
- **Innovation and Diversification** – Tokenization can spawn new financial products and services, enhancing the diversification of financial markets and instruments.



Major Risks

- **Financial Stability** - If tokenized deposits are widely used for payments, operational disruption might impact economic activity and the financial system. Consumers will likely be attracted to tokenized deposits and this may cause higher relative volumes on the systems and infrastructure, depending on the uptake of tokenized payment mediums.
- **Market liquidity and credit risk** - Banks will need to ensure they can meet convertibility at par at all times for tokenized deposits. The applicability and materiality of this risk is the same as for normal bank deposits, bar a change in NSFR or LCR because of a higher propensity for bankruns.
- **Operational Risk** –The main determinants of these risks are validation mechanisms including validator nodes and infrastructure, capability of underlying DLT network and reliability of custodians and overall operational resilience.
- **Cross-border risk** - Tokenized deposits could be exposed to cross-border risks if their usage is allowed and extended for cross-border payments.

CBDC: Potential Risks and Benefits

	Cross Border	Wholesale	Retail
 <p>Benefits</p>	<p>Reduced costs and faster settlement: Cross-border CBDCs could reduce the costs and speed up the settlement of cross-border payments. This could lead to increased trade and investment flows.</p>	<p>Reduced costs and faster settlement: Wholesale CBDCs could reduce the costs and speed up the settlement of cross-border payments.</p>	<p>Increased access to financial services: Retail CBDCs could potentially increase access to financial services for people who are currently unbanked or underbanked. This is because retail CBDCs would be accessible to anyone with an internet connection.</p>
	<p>Improved visibility of payment flows: Cross-border CBDCs could provide central banks with real-time visibility of cross-border payment flows. This would help central banks to better understand the dynamics of the foreign exchange market and to identify any potential risks to financial stability.</p>	<p>Increased efficiency and innovation: Wholesale CBDCs could make financial markets more efficient and innovative. For example, via programmability, they could facilitate the development of new financial products and services.</p>	<p>Reduced costs and faster settlement: Retail CBDCs could reduce the costs and speed up the settlement of payments. This could benefit businesses and individuals alike.</p>
 <p>RISKS</p>	<p>Financial stability risks: Cross-border CBDCs could potentially increase the risk of financial instability if they are not designed and implemented carefully. For example, if cross-border CBDCs are used to leverage up positions in financial markets, this could lead to increased volatility and systemic risk.</p>	<p>Financial stability risks: Wholesale CBDCs could potentially increase the risk of financial instability if they are not designed and implemented carefully. For example, if wholesale CBDCs are used to leverage up positions in financial markets, this could lead to increased volatility and systemic risk.</p>	<p>Financial stability risks: Retail CBDCs could potentially increase the risk of financial instability if they are not designed and implemented carefully. For example, if retail CBDCs are used to withdraw deposits from commercial banks, this could lead to a bank run.</p>
	<p>Complexity: Cross-border CBDCs would be complex to design and implement, as they would require cooperation between multiple central banks.</p>	<p>Cybersecurity risks: CBDCs, wholesale and other types, would be attractive targets for cyberattacks, so it is important to ensure that they are designed and implemented with robust cybersecurity measures in place.</p>	<p>Monetary Stability risks: Retail CBDCs pose monetary stability risks by disintermediating banks, weakening monetary policy transmission and increasing volatility in bank reserves.</p>

SAMA CBDC Experience

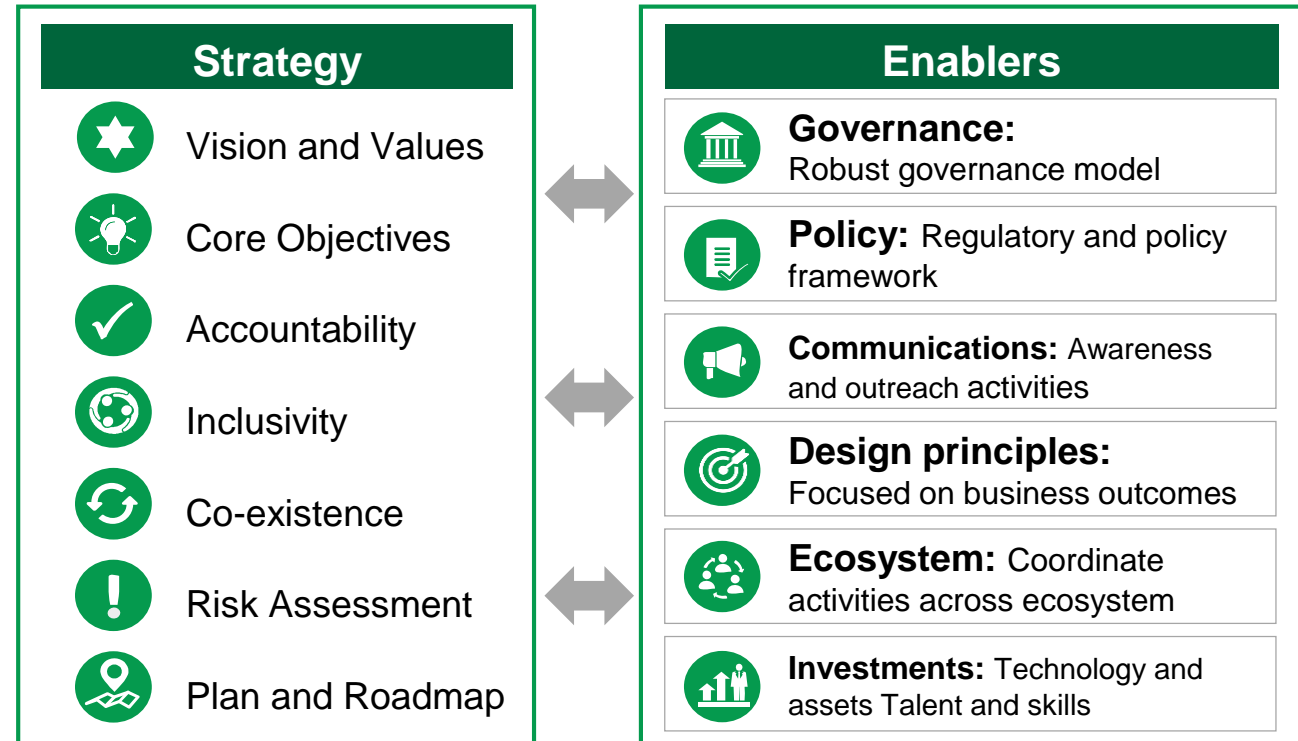
Cross-border Wholesale

SAMA was one of the first central banks to experiment with cross border wholesale CBDC in 2019, achieving several objectives including real-time interbank payments without Nostro accounts. The project utilized a new DLT based solution and demonstrated the potential to address the inefficiency and costs that are inherent in existing cross-border payment mechanisms.

Domestic Wholesale

In 2022, SAMA experimented with a domestic wholesale CBDC to assess the potential benefits and implications for interbank settlements, Fintech access to central bank money, and securities settlements.

SAMA worked with multiple counterparts to understand the adequate calibration and design options of a wholesale CBDC to assess the potential benefits to the payments' ecosystem while mitigating the associated risks. The results and findings are expected to benefit the international community.



Opportunities for Collaboration

Central banks can learn from each other's experiences and assess the potential implications for the development and deployment of CBDCs as well as the regulation of virtual assets (VAs). This would benefit all countries, regardless of their stage of CBDC development or VA adoption.

To achieve this, central banks can:

- Establish forums and networks for sharing information and expertise on CBDCs and VAs. This will help central banks to learn from each other's experiences and best practices.
- Conduct joint research and experiments on CBDCs and VAs. This will help central banks to better understand the potential benefits and risks of CBDCs and VAs, and to develop effective policies and regulations.
- Provide technical assistance and training to central banks that are earlier in the process of developing CBDCs and regulating VAs. This will help to ensure that all central banks have the necessary expertise to develop and implement CBDCs and regulate VAs in a safe and efficient manner.
- Collaborate to develop common standards and guidelines for CBDCs and VAs. This will help to ensure that CBDCs and VAs are interoperable and can be used to make payments across borders.

End