

National Bank of the Republic of North Macedonia

Trends in Central Bank Digital Currencies

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John Velissarios



INTRODUCTION



John Velissarios

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& Digital Currency Expert

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BIOGRAPHY

John advises leading institutions on digital financial markets, digital currency, and CBDC topics ranging from strategy to design, implementation, and secure operation, allowing these institutions to take the next step in developing the digital financial ecosystem.

With over 25 years of experience in IT and financial services, John's expertise includes cryptography, digital currencies, digital assets, custody, security protocols, solution architecture, implementation, and secure operation for financial services clients, exchanges, and central banks.

John was previously a Managing Director at Accenture, based in London, where he led the global team for Digital Assets, Custody, and Central Bank Digital Currencies. He spearheaded many lighthouse projects with top central banks around the world as a CBDC pioneer and innovator.

He is a well-sought-after industry expert, regularly speaking at conferences and events. He also has numerous publications and patents to his name.



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TOPICS COVERED TODAY

1. Current Trends – Digital Currency
2. Key Strategic Attributes of CBDC
3. Rapid Adoption of CBDC
4. Forex Market Implications
5. Wholesale CBDC Applications
6. CBDC Global Implications
7. CBDC Lessons Learned (So Far...)
8. Summary

CURRENT TRENDS - DIGITAL CURRENCY



Crypto

- Is it Digital Asset or Currency?
- Main Ones: BTC, ETH, etc..
- Investors Typically Buy & Hold
- Proliferation of 'Alternatives'
- Speculative Trading
- Easy Acquire, Trade & Transfer
- Not Private or Anonymous
- On & Off Ramp via Fin Svcs



Deposit Tokens Stablecoins

Regulated Financial Institutions

- Fully Reserve Backed
- Balance Sheet Backed
- Money Market Fund Backed

Non-Financial Institution

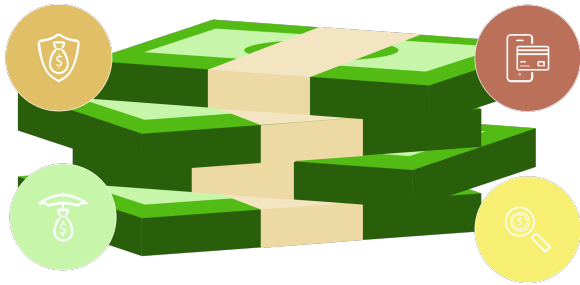
- Not Fully Reserve Backed
- Pegged To Currency (Variable)
- Volatile & High Risk



CBDC

- CBDC - 3rd Format of Money
- Digital Bearer Instrument
- Leverages Two Tier Banking
- Controllable Privacy
- (Non) Interest Bearing
- Peer To Peer Payments
- Off-Line Usage Like Cash
- Retail / General Purpose

CURRENT TRENDS - DIGITAL CURRENCY (CONT'D)



De-Dollarisation & Pricing In Local Currency

With bilateral CBDC payments there is no need to triangulate through third party currencies.

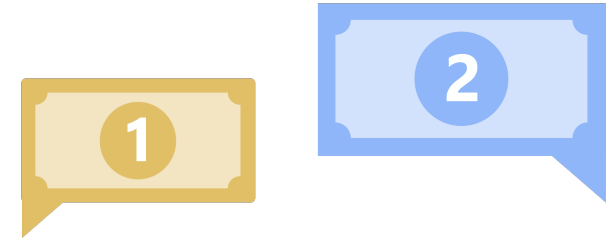
Implications for commodity trading pricing, price discovery and market efficiency.



The Need For 'Resilient' Infrastructure

One of the key requirements of many projects is to provide 'resilient' infrastructure.

Eliminate reliance and dependency on commercial entities and foreign actors.



Bifurcation of Global Financial System

Geopolitics, global conflict, divergent national interests are playing a key role in the bifurcation of global finance.

Key players are dominating in their intent and positioning.

KEY STRATEGIC ATTRIBUTES OF CBDC (1)



Digital Bearer Instrument

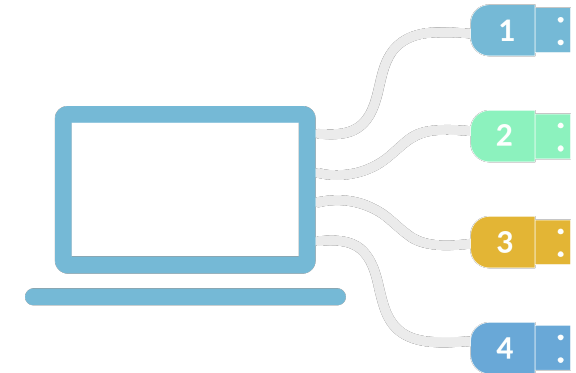
The innovation of CBDC enables a new format of money, a digital bearer instrument with 'zero' counterparty risk.

Applications of CBDC include retail, wholesale and general purpose use cases.



Geography of Money

CBDC transforms the geography of money. The ability to use a CBDC across national boundaries can transform business models and financial relations.



Rewires Global Finance

The ability for parties to transact instantly across geographic boundaries with 'zero' counterparty risk and without intermediation from FMIs and / or correspondent banks, transforms today's finance.

KEY STRATEGIC ATTRIBUTES OF CBDC (2)



Privacy & Anonymity

Privacy and (degrees of) anonymity of CBDC users, wallets and transactions is key to ensuring broader adoption.

Balancing user acceptance, regulatory compliance and technology capabilities is key.



Offline Capability

CBDC needs to provide offline capabilities to enable retail spending when there is low / poor network coverage or other distressed scenarios.

Provides resilience to existing RTGS for wholesale payments.



Sovereign Payment Rail

CBDC enables a national digital infrastructure / public utility independent from commercial banks and card schemes operating in a jurisdiction or market.

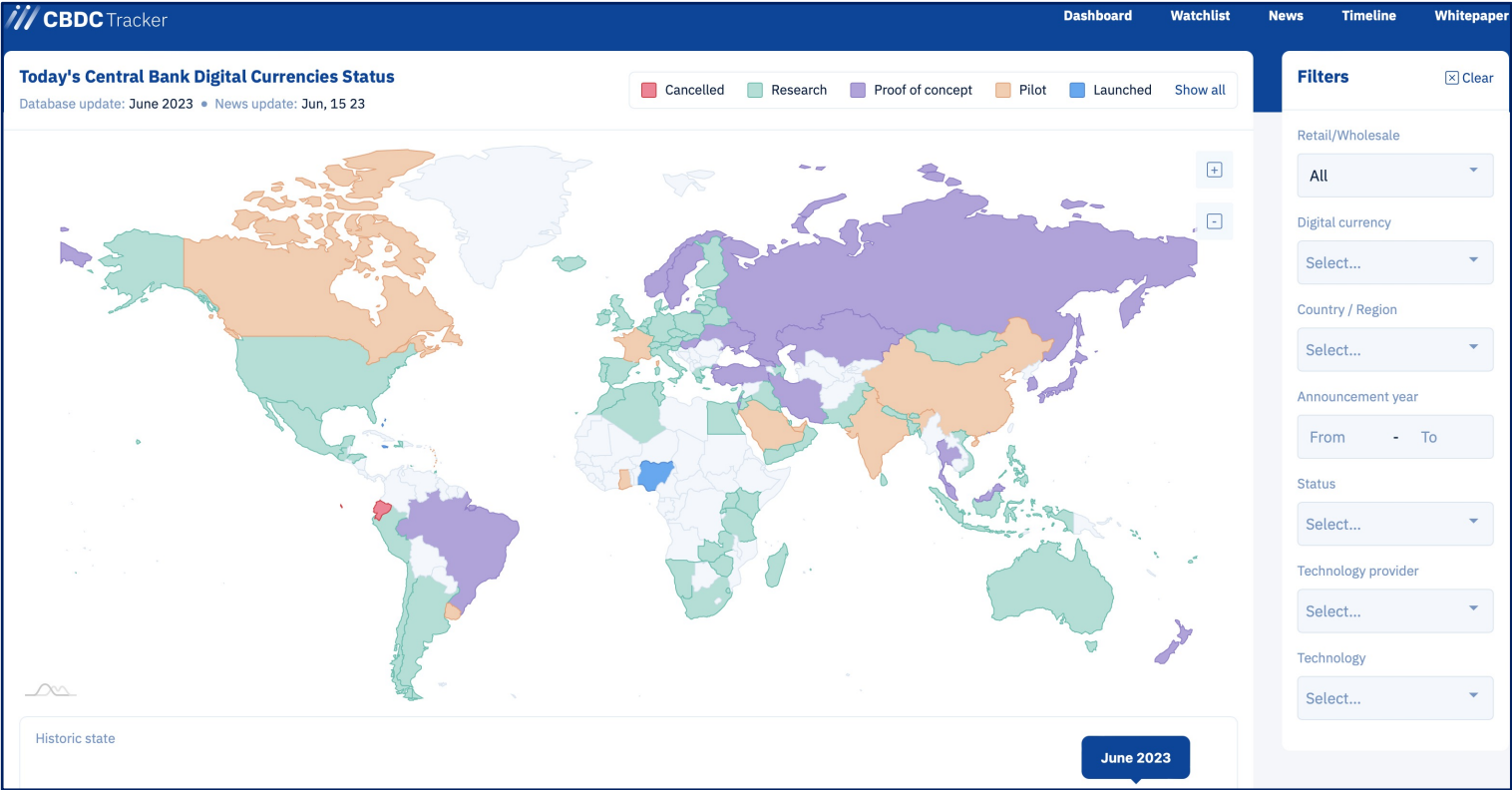
Central banks can leverage two-tier banking to distribute CBDC.

RAPID ADOPTION OF CBDC

Global Interest

The majority of central banks around the world have researched and / or experimented with CBDC in retail, wholesale and cross border applications.

CBCDtracker.org



137 PROJECTS

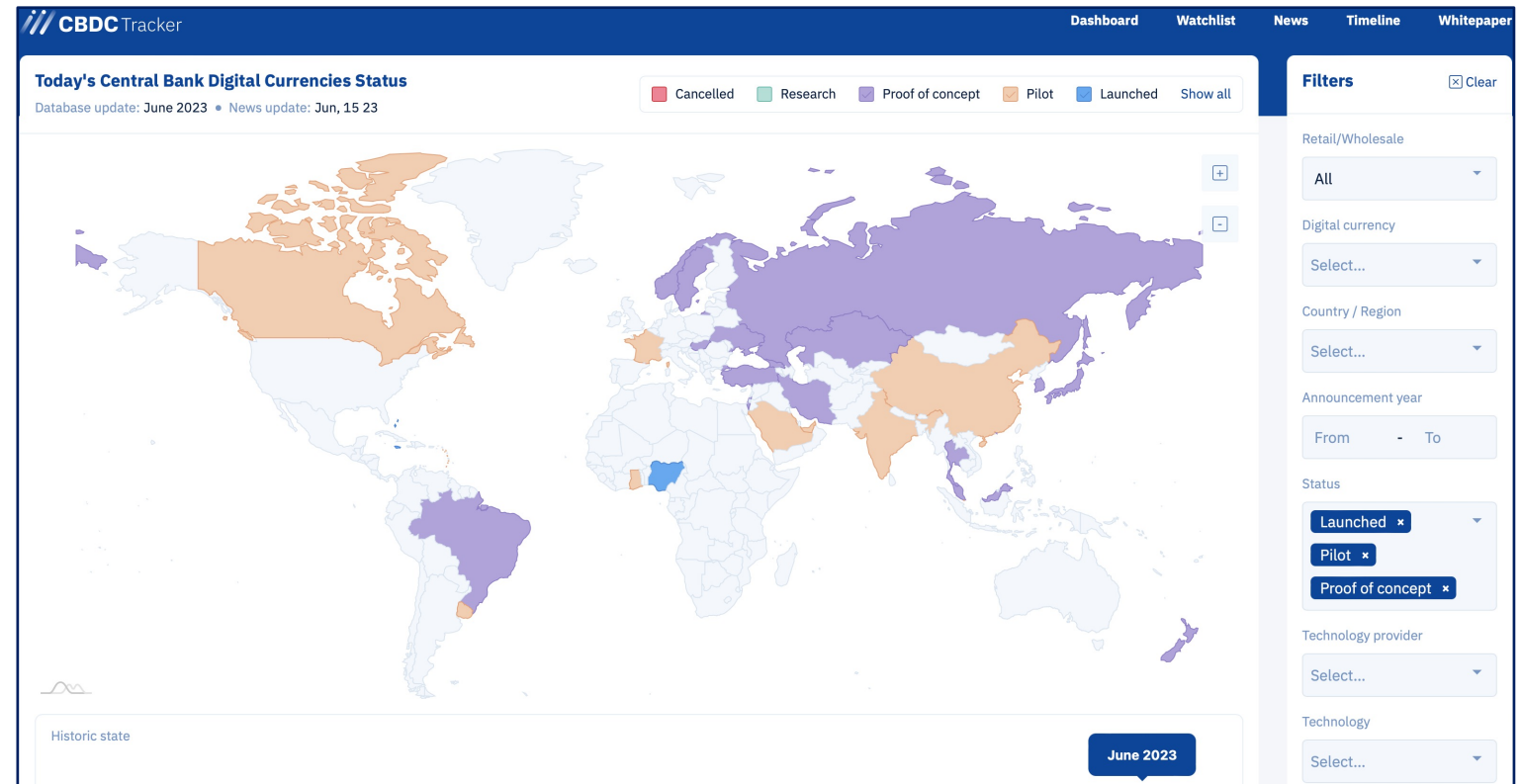
GLOBAL COVERAGE

RAPID ADOPTION OF CBDC (CONT'D)

CBDC Goes Mainstream

Central banks around the world have begun adopting CBDC as part of their national payment infrastructure and as a means of internationalizing their currency for broader global market adoption, for example, China.

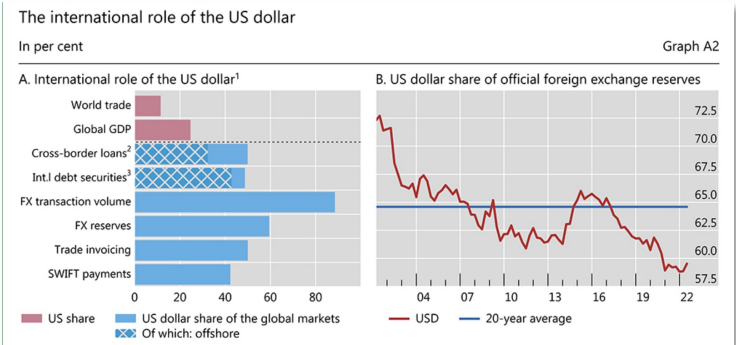
CBCDtracker.org



3 LAUNCHED
14 PILOT
24 PROOF OF CONCEPT

NIGERIA, BAHAMAS, JAMAICA
CHINA, INDIA
GEORGIA, KAZAKHSTAN, JAPAN

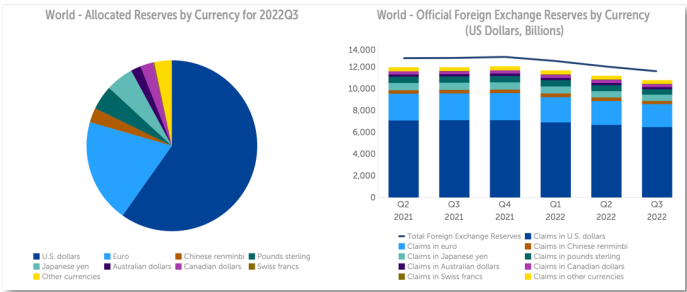
FOREX MARKET IMPLICATIONS



Forex & The Dollar

Turnover in global FX markets reached \$7.5 trillion per day in April 2022 a volume that is 30 times greater than daily global GDP.

Source: [BIS – Dec 5, 2022](#)



Declining Role of Dollar

US dollar share of global foreign exchange reserves drops to 25-year low due to declining role of the dollar.

Source: [IMF – Dec 23, 2022](#)

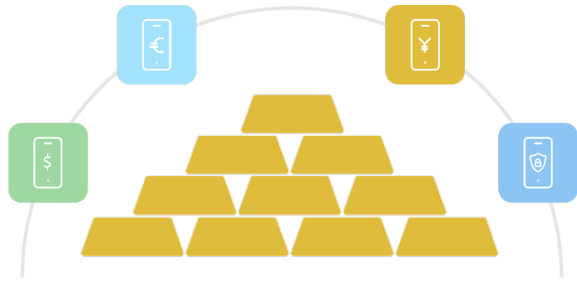


Direct CBDC Settlement

Projects like Jura and mBridge will challenge the incumbent FMI players and correspondent banking models.

Source: [BIS – Dec 2021, Oct 2022](#)

WHOLESALE CBDC APPLICATIONS



Securities Settlement

W-CBDC enables DVP and PVP in digital asset exchanges which reduces counterparty risk and embeds atomic settlement directly in the transaction. Note: Not suitable for all transactions.



Treasury Management

The ability to hold (domestic and foreign) central bank reserves directly as a liability of the central bank and not through treasury notes or other high-grade assets is itself transformative.



Cross Border

Cross Border W-CBDC applications represent the area of greatest potential given the friction in international money movements.

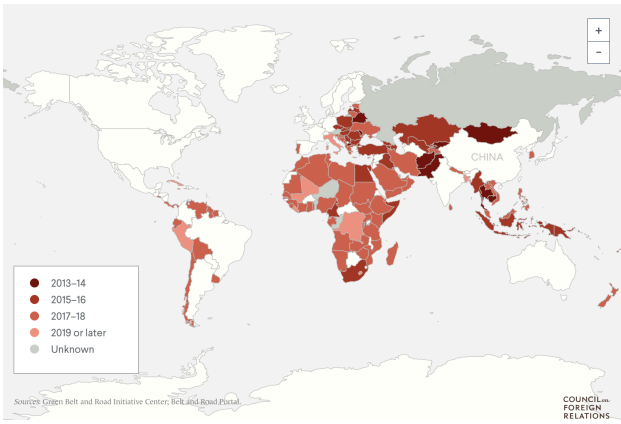
CBDC GLOBAL IMPLICATIONS



Wallet Infrastructure

E-CNY mobile application open to foreign users and integrated with Alipay and WeChat pay.

Source: [South China Morning Post](#)



Belt & Road Initiative

200 cooperation agreements with 151 countries and 32 international organizations increasing direct investment by 80%.

Source: [CFR – Mar 24, 2021](#)



This New Money will Destroy the US Dollar

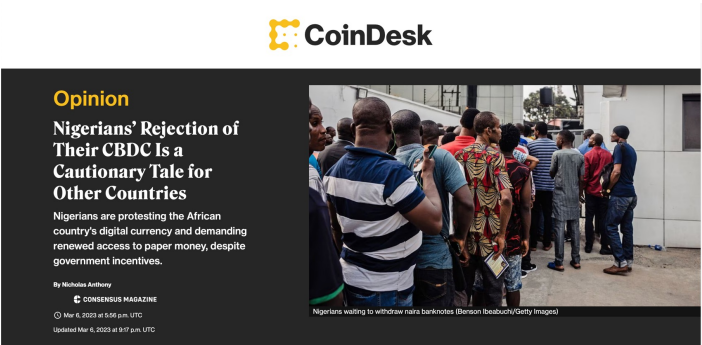
Brazil, Russia, India, China & South Africa (BRICS) are set to create a “New Global Reserve Currency”

Currency Wars Forming

Regional blocks are beginning to form focusing on issuing and trading with their own CBDCs.

Source: [Medium, October 2022](#)

CBDC LESSONS LEARNED (SO FAR...)

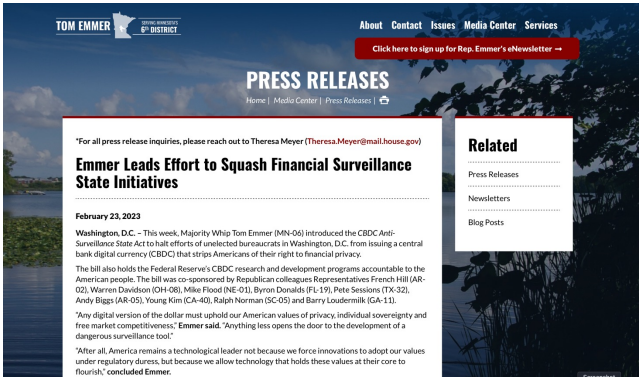


Source: Coindesk

(Dis)Incentives For Use

The Nigerian Central Bank on Dec 6, 2022 capped ATM withdrawals to 20K Naira (\$45) down from 100K Naira (\$337) following the release of the eNaira CBDC to encourage adoption of CBDC.

Source: [Coindesk](#)



Surveillance Suspicion

Highly dependent on the design, the ability to have complete surveillance on all transactions in real time or post factum. Possibility to have high degree of privacy and anonymity — dependent on design.

Source: [Emmer](#)

Wholesale CBDC vs. Retail CBDC

	Wholesale CBDC	Retail CBDC
Accessibility	Financial institutions	General public
Use cases	Interbank settlements, wholesale transactions	Retail transactions, peer-to-peer payments
Monetary policy tool	Less direct impact on the money supply and demand	Significant direct impact on the money supply and demand
Impact on traditional finance	Limited	Significant
Privacy concerns	Limited	Significant

[coindesk.com](#)

Broader Adoption Story

Highly jurisdiction specific – what problem does CBDC solve for in the wider economy especially in societies of over-banked? Do the benefits outweigh the risks? What problems do you tackle first?

Source: [Coindesk](#)

SUMMARY



Maturing Landscape

Landscape is developing and maturing rapidly. Vendor space is still wide open, but experiments are quickly becoming rollouts.

Large institutional FMI players now heavily involved: BIS, IMF, SWIFT.



Role of Digital Currency

Digital currency is the 'oil' in the financial market machinery and is both a prerequisite for and accelerating the adoption of digital assets in the new Digital Financial Markets.



Transforming Finance

Consumer sentiment, regulatory acceptance and new opportunities are rapidly emerging.

Applying regulated activities (e.g. CBDC) to 'DeFi like' offerings will transform financial services.

QUESTIONS?



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