Economics & Strategy

Digital Assets Update 4Q23: Managing in a high interest rate environment

Currencies/monetary policy/economics/digital/banking/finance

Group Research

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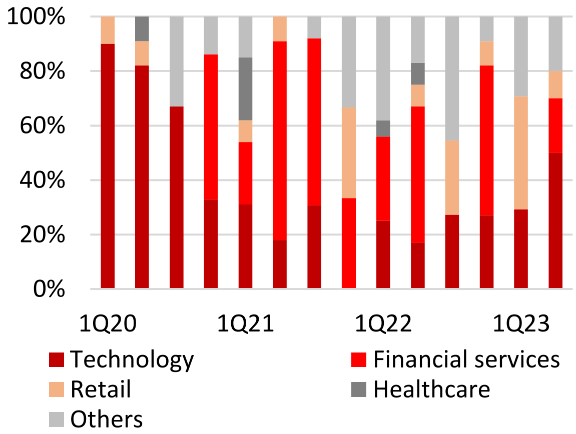
Fortune 100 companies: Crypto adoption initiatives by industry



Source: The Block, Coinbase

This is our quarterly update on digital assets. Please refer to the end of this article for a set of useful resources and links to past publications

Summary

Sharply rising interest rates should have dented risk assets substantially by now, but cryptos have been surprisingly strong this year. What is causing this, and can this outperformance last?

Main points

Crypto volume and volatility are on a soft patch.

Correlation with conventional assets like equities, rates, and gold have weakened considerably.

Crypto adoption has experienced a modest recovery this year.

Wars, regulation, and inflation are likely motivators.

We examine the findings of the latest BIS survey on digital assets

Introduction: Rising rates and digital assets

A tightening monetary policy cycle tends to be difficult for stocks, as dividends lose attractiveness relative to the rising yields from safe assets. Same applies to gold, and the same should apply to cryptocurrencies as they both yield zero. Considering the substantial tightening of monetary conditions this year, with long-term US real interest rates soaring past 2.5%, these should be difficult times for crypto assets, akin to the correction of 2022.

But that has not been the case at all. For instance, bitcoin's price correlation with conventional assets has declined sharply in recent months, just as its price has held firm. This, in our view, suggests that its price is now less affected by macro developments and more driven by idiosyncratic factors, including market structure developments (realised and potential), and challenges to global payments during times of wars, sanctions, and other uncertainties. Given the frequently occurring nature of shocks these days, the use case for cryptos appears to have gotten a boost. We expect such trend to persist through 2024.

Regulatory scrutiny has been intensifying, with various high-profile lawsuits by US regulators launched against crypto service providers. The lawsuits pose challenges to wider adoption of cryptos, but at the same time they have the potential to lead to a more transparent and well-functioning crypto market.

Here in Singapore, the Monetary Authority of Singapore (MAS) unveiled a comprehensive regulatory framework for stablecoins in August. This framework is specifically designed for single-currency stablecoins linked to the Singapore dollar or any G10 currency issued within the nation.

Results of the "2022 BIS survey on central bank digital currencies and crypto", which represents views of a record 86 central bank respondents, carried some interesting inputs. The results showed a wider acceptance of the central bank digital currency (CBDC), with 93% of the central banks engaged in some form of development.

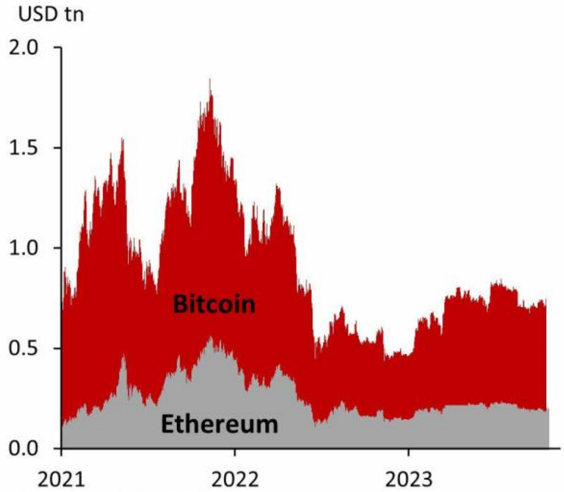
Crypto market

Since our last update in early June, market capitalization of crypto is unchanged at around USD1.09tn. Over the period, **price of Bitcoin remained within the multi-month range of USD25-31k**. Ethereum has underperformed Bitcoin, falling around 13% since early June to USD1.6k.

In the DeFi space, total value locked (TVL) has fallen from USD45bn at early June to USD37bn at present, driven by fund outflows and exit of DeFi users. With Ethereum moving from proof-of-work to proof-of-stake, Lido as a liquidity staking platform has expectedly grown to account for around 38% of the DeFi space.

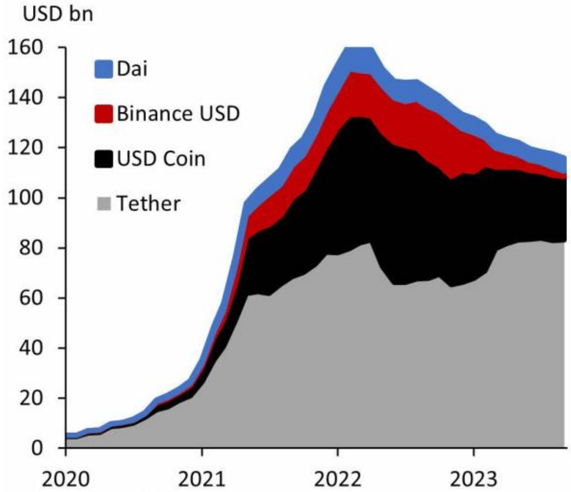
In the Stablecoin space, market capitalization continues to fall gradually, down to USD123bn. USDT's dominance has risen from 64.5% in early June to 67.5% at present. In the near-term, headwinds persist in the form of ongoing US SEC crackdown on stablecoins like USDC and BUSD, collapse of Silvergate/Signature (constraining the fiat-crypto on and off-ramps), high yields on US money market funds (making yields on Stablecoins less attractive) and falling DeFi activity (less need for lending/borrowing of Stablecoins).

Market Capitalization



Source: CoinMarketCap

Market Capitalization - Stablecoins



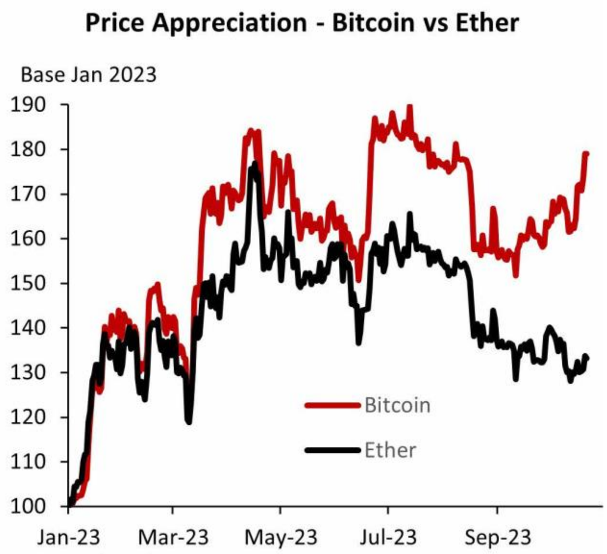
Source: CoinMarketCap

For the broad crypto market, cyclical forces are slightly negative, from the lingering overhang of Terra-Luna and FTX collapses having an impact on institutional interest in digital assets, to continued US regulatory uncertainty clouding some aspects of the outlook. On a macro level, high Fed/US rates curtail the investment interest in crypto as a yield play. Pullback in US Tech stocks, which crypto prices are historically very correlated to, is also seen as limiting the potential for crypto price appreciation.

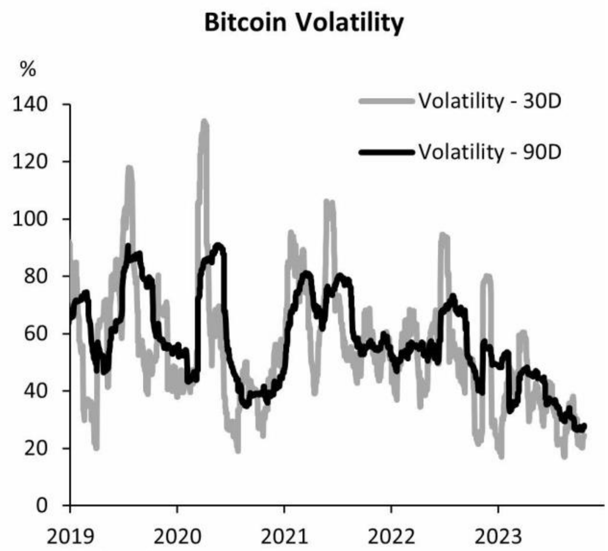
We make a few interesting observations below on how Bitcoin has traded recently, in relation to Ethereum and other asset classes.

1. **Year-to-date, Bitcoin has outperformed Ethereum by 46%**

   Year-to-date, Bitcoin has appreciated by 79% while Ethereum has appreciated by a smaller 33%. The outperformance of Bitcoin is likely due to a couple of key support factors, such as the potential launch of Spot Bitcoin ETFs in the US and the episode of US regional banking crisis (in March) driving some demand for storing wealth in Bitcoin as opposed to bank deposits. In contrast, Ethereum's Shanghai upgrade did not result in a material jump in network activity and that disappointment likely weighed on price.



Source: Bloomberg



Source: Bloomberg

2. **Volatility in Bitcoin price has fallen to multi-year lows**, compressing volatility differentials with other assets.

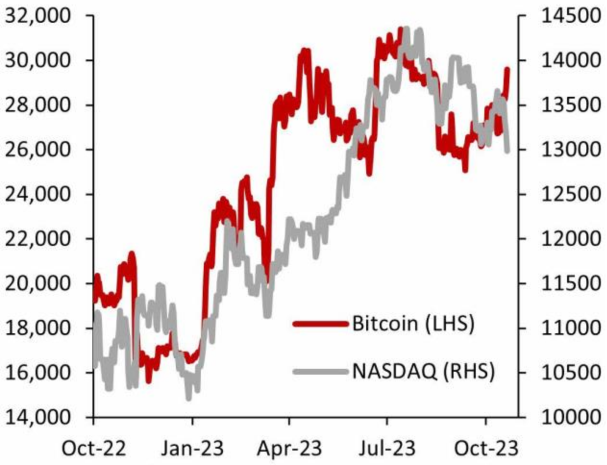
   Realised volatilities of Bitcoin price have been on a downtrend since the middle of 2022, compressing volatility differentials with other assets. 90-day Bitcoin volatility has fallen to around 30%, the lowest since 2016. The low Bitcoin volatility is likely because a large portion of speculative positioning has been flushed out already, post a series of negative events/headlines over the past 12-18 months weighing on sentiments towards the broad crypto market.

3. **Correlation with conventional assets (Equities, Interest Rates, Gold) has significantly weakened.**

Bitcoin's price correlation with conventional assets has sharply declined in absolute terms over recent months, suggesting that **Bitcoin price is now less affected by macro developments and more driven by idiosyncratic factors.**

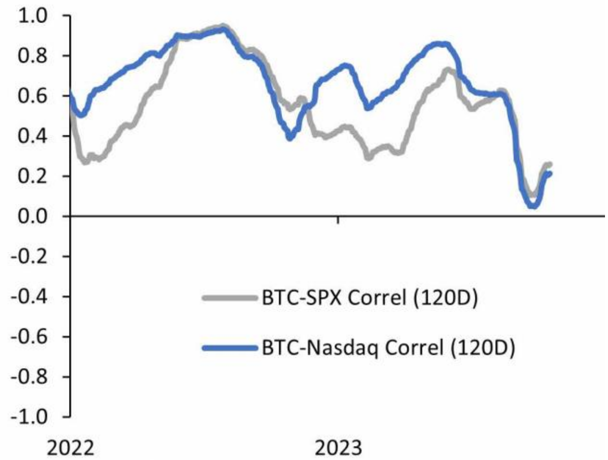
Rolling correlations against SPX and NASDAQ Equity Indices have historically been stable in +0.4 to +0.8 range, but latest correlation measures are closer to +0.2 – This suggests that **Bitcoin has gotten less sensitive to risk sentiments and outlook on US Tech.**

Bitcoin vs Equities



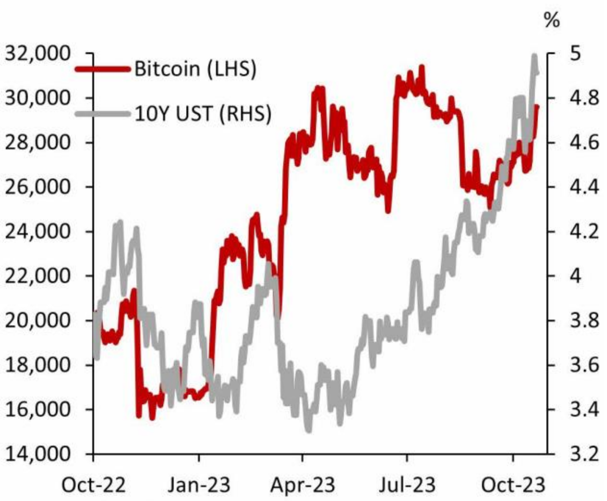
Source: Bloomberg

Bitcoin's Correlations with Equities



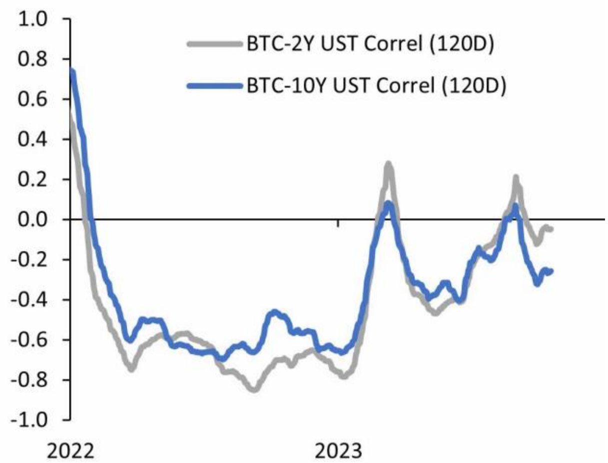
Source: Bloomberg

Bitcoin vs US Rates



Source: Bloomberg

Bitcoin's Correlations with US Rates



Source: Bloomberg

For much of 2022, Bitcoin prices were very negatively correlated to UST yields, but that has also broken down with latest measures at -0.05 against 2Y UST and -0.25 against 10Y UST. Since May, **UST yields have kept trending higher, but Bitcoin price continues to stay in its stable range.**

Correlation between Bitcoin and Gold has historically been more volatile. There could be periods of crisis or uncertainty when both would appreciate or depreciate together, such as around the US Banking Crisis in March where depositors wanted to diversify into alternative non-fiat currencies.

There are a couple of key events ahead to watch for Bitcoin, which could potentially spill over to the broader crypto space.

1. **Potential launch of Spot Bitcoin ETFs in the US**

Several Spot Bitcoin ETFs could be potentially launched in coming months by major financial institutions, such as BlackRock, Fidelity and VanEck, including Grayscale, which is keen to convert its closed-end Bitcoin trust into Spot ETF format so as to narrow the discount of its share price relative to underlying Bitcoin. These potential launches would be on the back of a favourable court ruling, which overturned SEC's rejection of Grayscale's bid for conversion.

Compared to the previous approval and launch of Futures-based Bitcoin ETFs, it is not clear if the potential launch of Spot Bitcoin ETFs would be bullish for Bitcoin price. One, launch of Spot ETFs in Canada and Europe did not attract large inflows. Two, inflows into US Futures-based ETFs have been subdued (proxied by open interest on futures), and we don't see why inflows into Spot ETFs would be much different. Three, Spot ETFs offer some advantages over Futures-based ETFs (such as avoiding cash-futures basis risks), but these advantages are marginal.

2. **Bitcoin halving in April 2024 (estimated)**

Bitcoin halving occurs roughly once every four years, as part of the protocol's design/mechanism to control the pace of supply of new Bitcoins. The next occurrence is estimated to be in April 2024, when the reward for mining a block on the Bitcoin blockchain would be halved from current 6.25 to 3.125 Bitcoin. There is some market excitement around the upcoming halving event, as

previous halving events (2012, 2016, 2020) have preceded strong bull-runs in Bitcoin price. The simple fundamental argument is that a decrease in the pace of supply of new Bitcoins, coupled with the same pace of demand, should lead to higher prices. From a mining perspective, a reduction in mining rewards would imply that the production costs of each new Bitcoin would increase (historically, production cost has acted as a floor for Bitcoin prices).

Date of Halving	Price at Halving	Price after 6 months	Price after 12 months
28 November 2012	12	128	1,055
9 July 2016	660	897	2,527
11 May 2020	8,636	15,831	56,911

Crypto asset adoption

Chainalysis recently published its 2023 Crypto Adoption Report, revealing that global crypto adoption has experienced a modest recovery this year, although it still lags behind the peak levels seen in 2021. When assessing crypto adoption based on raw transaction volume, Central & Southern Asia and Oceania (CSAO) emerge as the third-largest crypto market globally, surpassed only by North America and Central, Northern & Western Europe. This region accounted for almost 20% of the global crypto activity between July 2022 and June 2023. In contrast, Eastern Asia contributed only around 9% of the global crypto activity during the same period.

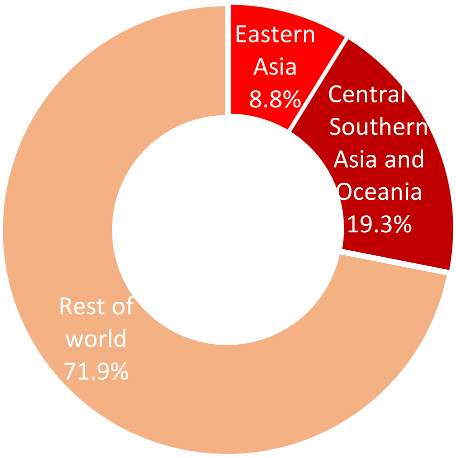
When adjusting these figures for purchasing power and population to gauge crypto adoption, CSAO stands out as the dominant leader among all regions. Notably, six of the top ten countries with the highest crypto adoption rates worldwide are located in CSAO. These countries include India (1st), Vietnam (3rd), the Philippines (6th), Indonesia (7th), Pakistan (8th), and Thailand (10th).

Despite facing challenges related to tax regulations, India maintains its position as a top crypto market. The country imposes considerably higher tax rates on crypto activities compared to most other nations, with a 30% tax on gains and a 1% tax on all transactions through TDS (Tax Deducted at Source). Although Indian exchanges are obligated to collect TDS taxes from local users, many international exchanges have not been effectively doing so, which may be attracting Indian users to their platforms.

The Philippines and Vietnam exhibit a substantial share of crypto-related web traffic directed towards gaming and gambling platforms. This trend is driven by their young and tech-savvy populations, who actively participate in play-to-earn gaming.

In contrast, Pakistan experiences a higher proportion of crypto activities occurring on peer-to-peer (P2P) exchanges. This is likely due to the impacts of high inflation and currency depreciation, which have led many Pakistanis to turn to cryptocurrencies as a means of wealth preservation.

Cryptocurrency value received by Asia
Compared to rest of world, Jul22-Jun23



Source: Chainalysis, DBS

Global Crypto Adoption Index Top 10

	2023 Rank	2022 Rank	2022-23 Change
India	1	4	↑
Nigeria	2	11	↑
Vietnam	3	1	↓
US	4	5	↑
Ukraine	5	3	↓
Philippines	6	2	↓
Indonesia	7	20	↑
Pakistan	8	6	↓
Brazil	9	7	↓
Thailand	10	8	↓

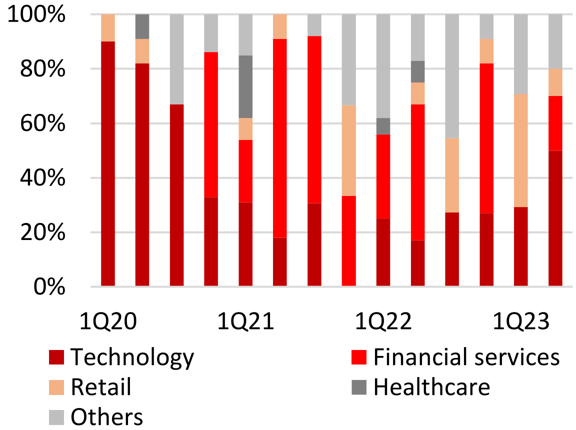
Note: Crypto transaction volumes based on web traffic, weighted by population size or purchasing power

Source: Chainalysis

Coinbase and The Block recently conducted research on the crypto adoption by major US companies. Their findings reveal that over half (52%) of Fortune 100 companies have engaged in crypto, blockchain, or web3 initiatives since the beginning of 2020. Moreover, approximately 60% of the initiatives introduced by Fortune 100 companies since the start of 2022 are either in the pre-launch phase or have already been launched.

The sectors of technology, financial services, and retail are the primary drivers behind the majority of these initiatives among Fortune 100 companies. Furthermore, their survey of Fortune 500 executives indicates that the most prominent web3 use cases currently in development include blockchain infrastructure that supports a web3 network, data collection and management, as well as payments and settlement systems.

Fortune 100 companies: Crypto adoption initiatives by industry



Source: The Block, Coinbase

Fortune 500 executives: Use cases of current and planned crypto, blockchain, and web3 initiatives

Blockchain infrastructure	52%
Data collection and management	51%
Payments/Settlements	48%
Supply chain management	45%
Process automation/smart contracts	40%
Identity management	38%
Tokenization	35%
Customer loyalty/engagement/community building	34%
Marketing efforts	31%
Cross border transfers	25%
Corporate treasury	22%
NFTs/collectibles	20%
Metaverse	18%
Crypto investment product development	14%
Ticketing	9%
Crypto mining	6%
Others	2%

Source: The Block, Coinbase

Crypto asset policy update

US: In the US, there has been no significant federal crypto legislation passed this year. The heightened volatility in crypto markets has intensified debates among lawmakers regarding how to regulate the sector, creating uncertainty in the regulatory landscape.

In June, the Securities and Exchange Commission (SEC) filed lawsuits against Coinbase and Binance, alleging that they operated as unregistered exchanges, brokers, and clearing agencies. Binance faced additional allegations, including the commingling/diversion of customer assets, inflating trading volumes, and permitting US customers to trade on its non-US platforms, among others.

Conversely, Ripple and Grayscale recently emerged victorious in their legal battles against the SEC. The court ruled that Ripple's sales of XRP tokens to retail investors on public exchanges did not breach securities laws. Additionally, the court sided with Grayscale in its lawsuit challenging the SEC's denial of its application to convert the Grayscale Bitcoin Trust into an ETF.

The focus now turns to the SEC's decision on Bitcoin ETFs. In June, BlackRock filed for a spot Bitcoin ETF, while other asset managers such as Fidelity and Franklin Templeton also submitted their applications. To date, the SEC has only approved futures-based Bitcoin ETFs, which are intricate financial products suitable for institutional investors. The industry eagerly awaits the SEC's decision on spot ETFs, which would provide greater clarity on crypto regulations.

EU: In Europe, significant progress has been achieved in crypto legislation. The Markets in Crypto-Assets (MiCA) regulations entered into force in June, offering comprehensive guidelines for engaging in crypto-related businesses within the EU.

MiCA defines a crypto asset as "a digital representation of value or a right that can be electronically transferred and stored using distributed ledger technology or similar technologies." It further categorizes crypto assets into three types: 1) E-money tokens, which aim to maintain a stable value by referencing an official currency. 2) Asset-referenced tokens, which aim to maintain a stable value by referencing another value or right, or a combination thereof, including one or several official currencies. 3) Utility tokens, designed to grant access to goods or services supplied by the issuers. MiCA does not cover NFTs, nor does it govern digital assets issued by central banks or other public authorities.

MiCA establishes standards for public offerings, issuance, and services related to crypto assets. Issuers of asset-referenced tokens are subject to own funds requirements and obligated to maintain a reserve of assets that meet certain composition criteria, which must be properly managed and held in custody according to a custody policy. Furthermore, issuers are required to develop a recovery plan to address significant operational disruptions and failure to meet reserve requirements. They must also maintain an operational redemption plan for assets to facilitate the orderly redemption of asset-referenced tokens.

In addition, the provision of crypto-asset services (CAS) falls under licensing requirements. CAS-Providers are obligated to meet fit and proper standards, as well as governance requirements, which include a minimum capital requirement and the implementation of effective systems, procedures, and measures to detect and prevent money laundering and terrorist financing.

Singapore: The Monetary Authority of Singapore (MAS) has unveiled a comprehensive regulatory framework for stablecoins in August. This framework is specifically designed for single-currency stablecoins linked to the Singapore dollar or any G10 currency issued within the nation.

Issuers are obligated to adhere to a set of requirements encompassing aspects like value stability, capital adequacy, redemption at par, and disclosure. Reserve assets held by issuers are subject to requirements governing their composition, valuation, custody, and audit. To mitigate the risk of insolvency, issuers are also mandated to maintain a minimum base capital and sufficient liquid assets. Additionally, issuers are obligated to return the par value of single-currency stablecoins to holders within five business days of a redemption request. Issuers are expected to provide appropriate disclosures to users, including information concerning the value stabilizing mechanism, the rights of holders, as well as the audit results of reserve assets.

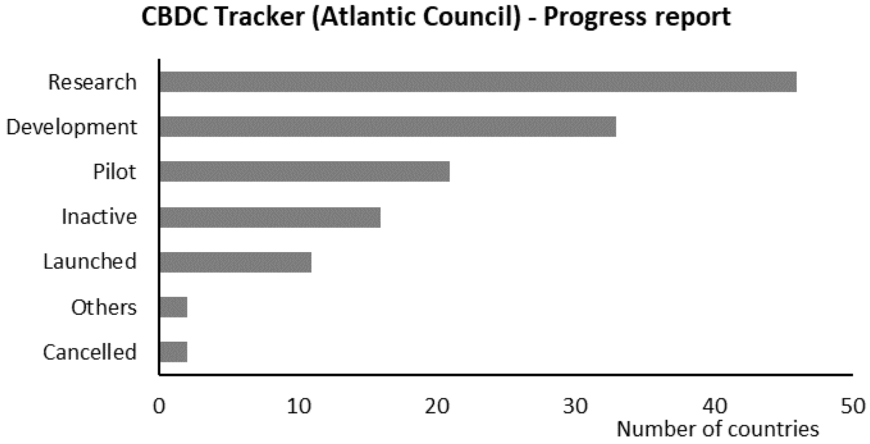
In a separate development, MAS introduced investor protection measures for digital payment token (DPT) services in July. These measures encompass several key requirements for DPT service providers, such as segregating customers' assets from their own, holding them in trust, safeguarding customers' funds, and maintaining an independent custody function, among others. Concurrently, MAS announced its intention to restrict DPT service providers from facilitating lending and staking of DPT tokens by retail customers.

Hong Kong: Hong Kong is actively positioning itself as a regional crypto hub. The Guidelines for Virtual Asset Trading Platform Operators came into effect in June. The guidelines encompass requirements for establishment, including criteria such as fitness and properness, competency, and financial soundness. Furthermore, they outline ongoing obligations for operators, covering various aspects like dealing with clients, custody of client assets, prevention of market manipulation and abusive practices, operational standards, internal controls, cybersecurity, and conflict of interest management. Under these new regulations, crypto exchanges operating in Hong Kong can provide trading services to both individual and institutional clients, contingent on their ability to obtain and adhere to licenses.

Global: International organizations are actively pushing for coordinated crypto regulation. In September, the Financial Stability Board (FSB) and the International Monetary Fund (IMF) jointly issued a report to the G20, focusing on the current policies and regulatory challenges associated with crypto assets. This comprehensive report assesses the primary risks posed by crypto activities to macroeconomic stability, financial stability, financial integrity, market integrity, and legal aspects. Subsequently, it outlines policy responses to mitigate these risks, spanning macro-financial policies, financial stability regulation, and other regulatory measures. The report concludes with an implementation roadmap, which encompasses various initiatives. These include planned and ongoing efforts related to the implementation of crypto-asset policy frameworks, extending outreach beyond G20 jurisdictions, fostering global coordination, cooperation, information sharing, and addressing data gaps to gain a more comprehensive understanding of the rapidly evolving crypto asset ecosystem.

Central Bank Digital Currencies

Progress report



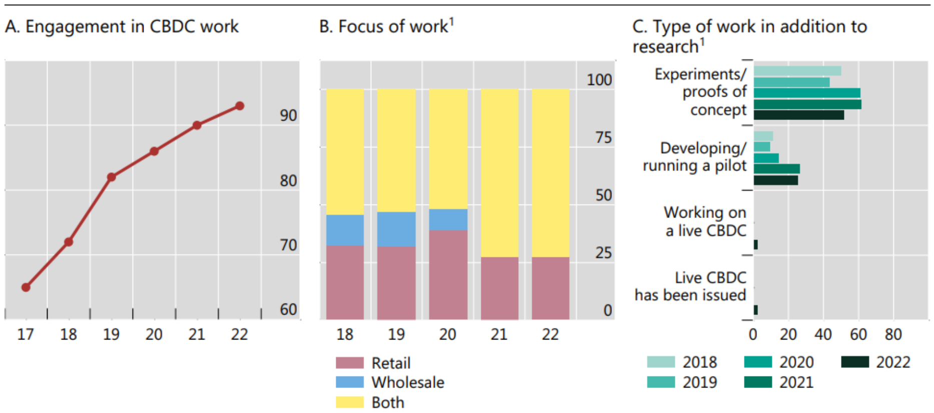
Initiatives by Multilateral organisations

Bank for International Settlements survey

Results of the "2022 BIS survey on central bank digital currencies and crypto", which represented views of a record 86 central bank respondents, carried interesting inputs. The responding central banks represent 82% of the world's population and 94% of global economic output. The results showed a wider acceptance of the central bank digital currency (CBDC), with 93% of the central banks engaged in some form of development. Other takeaways were:

- Progress on retail CBDC is more advanced than on wholesale version, with a quarter of the surveyed central banks piloting the former. This is driven by nearly 80% of the central banks seeing potential higher value seen in the retail edition, including faster payments and likelihood of additional features;
- The survey projects that 15 retail and nine wholesale CBDCs could be in public circulation by 2030;
- More than nine out of ten central banks are currently working with other stakeholders to design proofs of concept, pilots or live CBDCs;
- Near 60% of surveyed central banks have reportedly stepped-up work on CBDCs to counter emergence of cryptoassets.

Central bank involvement in CBDCs



Source: BIS 2022 Survey

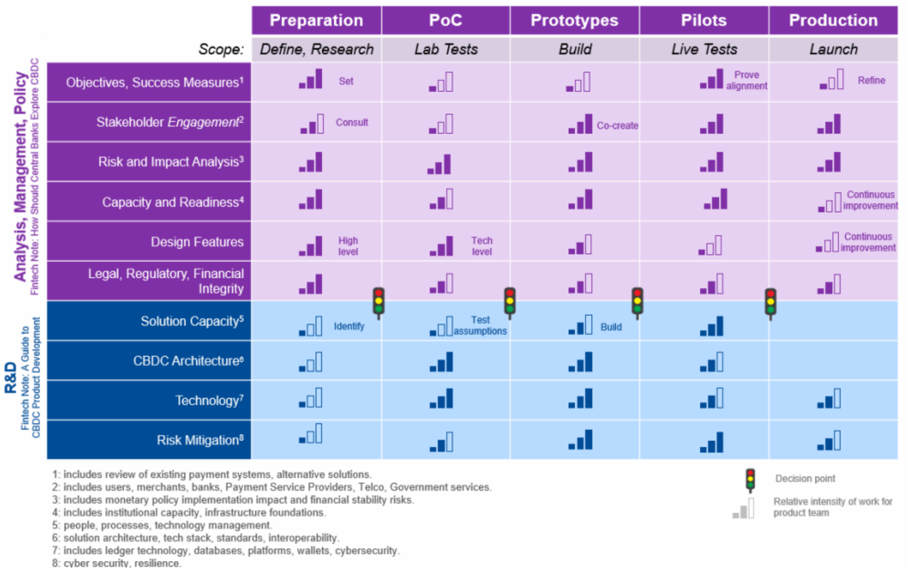
Responses varied according to the development stage of the economy, with EMs more advanced in their CBDC work than advanced economies, with the latter's share in the pilots at a high of 29% for retail and 16% for wholesale, nearly twice of AEs. The impetus to consider CBDCs remained the same across surveys, dominated by financial inclusion (more for EMs), monetary policy implementation (EMs), payment efficiency, safety, financial stability, and ease of cross-border payments.

IMF papers outline framework for CBDCs adoption and its potential for financial inclusion

Authors of the IMF paper, which suggests a framework for central banks to explore CBDCs, suggest that the decision framework should be based on five distinct phases as outlined by the '5Ps' - preparations, proof of concepts, prototype, pilot, and production. The image below highlights the varying degrees of intensity that is required across the phases, with the decision-making process expected to reflect the authorities short- and long-term perspectives of their mandates and policy tools. The latter includes price stability, financial stability, full employment, and growth outlook payment systems, amongst others.

The paper also flagged the possibility that the demand and competitiveness of the domestic currency vs foreign currencies or privately issued digital money can be higher if a) the e-currency is well-designed with attractive use features; b) reduced cost to obtain it. That said, the "overriding factor to avoid currency substitution will still be to maintain credibility of the value of the domestic currency", suggesting a CBDC version alone was not a prerequisite for widening the currency's usage. These remarks are notable in the context of the recent debate over de-dollarisation and a host of EM countries exploring the domestic currency as an alternative for trade settlements, including China, India, Russia, ASEAN countries, amongst others.

Figure 1. A Roadmap of the CBDC Process



Source: Authors

Another [paper](), which discusses the potential role of CBDCs in financial inclusion, highlighted that to gain acceptance by the cash-dependent part of the population, the e-version needs to have qualities similar to cash, including the ability to conduct small cost-effective transactions, with less stringent identification requirements (applies to part of the populace that might not have challenges obtaining formal identity documentation) and ability to operate in offline environments. If the adoption picks up, then the informal cash dependent part can be roped into the formal financial system and connected to other digital financial service providers to tap a suite of products and services.

SWIFT beta-tests interlinking solution

Since announcing that it has developed a solution to enable CBDCs to move between Distributed Ledger Technology-based (DLT-based) and fiat-based systems using existing financial infrastructure in October last year, the solution was deployed in a sandbox in March 2023, with 18 central and commercial banks given access to test, assess, and provide feedback on the viability of the solution. Following up with those efforts, SWIFT initiated a second phase of the sandbox testing in September

2023 to allow nearly 30 financial institutions, including the RBA, Deutsche Bundesbank, HKMA, and BOT, to test the model. More notably, a concurrent beta testing is also ongoing to enhance interoperability function in the mechanism. Three central banks, including HKMA and National Bank of Kazakhstan, are seeking to integrate their infrastructure to the solution.

Country initiatives

US: Gingerly approach towards CBDCs - After a hiatus, the US House Financial Services Subcommittee on Digital Assets, Financial Technology and Inclusion met in September 2023 to discuss CBDCs, referred to as the 'Digital Dollar Dilemma'. One of the two opposing bills i.e. the 'CBDC Anti-Surveillance State Act' gained some ground as the bill passed the House Financial Services Committee, beyond which it faces a congressional vote. Even if the House progresses on the anti-CBDC legislation, its future in the Democrat-controlled Senate is doubtful.

Provisions in the bill could prevent the US Federal Reserve from issuing a CBDC for retail purposes as well tapping the digital currency to implement monetary policy. The other opposes the US Fed from conducting any pilots/ tests on CBDCs without congressional approval. This debate has also taken on political hues as selected prospect candidates, ahead of the Presidential elections next year, have expressed their reservations. Since Project Hamilton was concluded late last year, there has been limited material progress on proposed pilot runs. The US Fed's Vice Chairman for Supervision Michael Barr had clarified that the central bank would not move forward without the explicit consent of the White House and authorized with legislation from Congress.

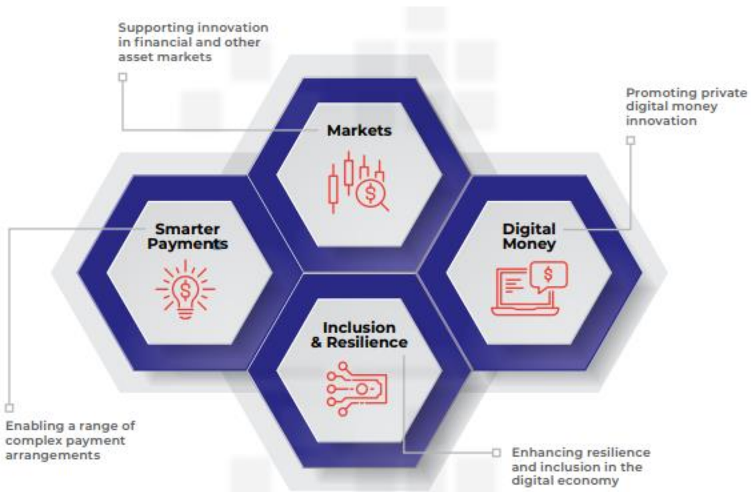
China continues to lead the push towards wider adoption of the e-CNY with more pilot programs. Towards this, inbound tourists will be able to pre-charge their digital CNY wallets using their Visa or Mastercard payment options, through their overseas mobile numbers. This marks another step towards enhancing payment options by the pilot version of the e-CNY application, with this feature coinciding with the start of the Asian Games held in China this year. State run banks reportedly showcased the digital yuan's usage and convenience to promote use of the e-currency at stores in and around the Asian Games Village in Hangzhou. Foreigners had earlier participated in the previous trial run for the digital yuan around the Beijing Winter Olympics in 2022. According to the Director of the Digital Currency Research Institute of the PBOC, these developments back the country's broader plans to facilitate all payment options between the customer and retail outlets via the digital yuan, with private banking apps also expected to implement the QR codes for the CBDC version, besides upgrading their payment tools in the coming months.

To further widen the use of e-yuan, local press reported that a new industrial park was opened in Luohu district in Shenzhen towards developing the digital yuan ecosystem. An estimated CNY 100mn has reportedly been aside to realise plans over the next three years, to create payment solutions between industries, facilitate payment of smart contracts, start-ups will receive incentives to set by base including rent-free space and cheaper loans, amongst others, besides seeking to attract banks to set up branches in the park. Shenzhen is one of the most active centres in eCNY adoption, with ~36mn digital CNY wallets opened by mid-23. More broadly, there has been steady progress on the rollout of the CBDC since 2019 through pilots and experiments. Separately, the recent BRI summit saw the state-owned commercial Bank of China sign a cooperation agreement with UAE's largest bank, First Abu Dhabi Bank, just as PBOC signed a digital currency agreement with the Central Bank of the UAE, with the two countries already working together under the mBridge initiative.

Separately, the **mBridge project** that is being developed by China, Thailand, Hong Kong, and UAE in collaboration with the BIS, is expected to launch a basic working product by end of this year. This will make cross-border payments easier, but the expedited progress on this initiative has also given risen to the speculation that the e-CNY might be used to settle large corporate transactions with offshore counterparties. In contrast to the current mechanism, which relies on the USD and correspondent banks to act as intermediaries, the mBridge facility neither involves the USD nor the Swift, making it a challenge to monitor transactions and/ implement sanctions. Theoretically, large FX transfers can be conducted between banks, in exchange for tokenised currency from the central bank, with last year's trial reportedly facilitating transactions worth more than $20mn, according to Bloomberg. More countries might be involved in the m-Bridge, with BIS officials reportedly visiting other countries to likely expand the pool of users.

India launched the first wholesale CBDC pilot in November last year, which was later expanded to the retail segments. More recently, the central bank is reportedly working with domestic financial institutions to introduce new features to make CBDCs/ e-rupee more attractive for retail participants, including making the digital version available offline, and linking with the Unified Payments Interface (UPI) facility through a QR code. Back in July, the RBI had targeted one million transactions per day by end-2023, though the actual run-rate has been closer to 18k. Technology proposals to allow for offline use of the e-rupee is under consideration, with private banks reportedly also exploring tech partners to meet that demand. Early feedback from the participants suggest that an absence of clear benefits from CBDCs vs internet-based banking or the highly successful UPI alternative is also crimping the take-up rate during the pilot runs. The RBI reportedly starting using the e-Rupee in the call money markets for interbank lending this month. An estimated INR 164mn of digital rupee or E-Rupee is in circulation in the wholesale and retail segments, according to the RBI data.

Australia: To explore potential use cases for a CBDC in Australia, the Reserve Bank of Australia had teamed up with the Digital Finance Cooperative Research Centre's (DFCRC) and Mastercard, in March 2023. The study's outcome to kickstart a Pilot for Digital Finance Innovation was released in August 2023. The project involved the RBA issuing a limited scale 'pilot' CBDC in a ring-fenced environment to selected industry participants, with pilot CBDC issued as a 'real legal claim' on the RBA. The key case findings are highlighted in the graphic below:



Source: RBA report

References

1. The 2023 Global Crypto Adoption Index: Central & Southern Asia are Leading the Way in Grassroots Crypto Adoption, Chainalysis
2. The State of Crypto: Corporate Adoption, Coinbase, The Block
3. Markets in Crypto-Assets Regulation (MiCA), European Securities and Markets Authority
4. MAS Finalises Stablecoin Regulatory Framework, Monetary Authority of Singapore
5. MAS Publishes Investor Protection Measures for Digital Payment Token Services, Monetary Authority of Singapore
6. Guidelines for Virtual Asset Trading Platform Operators, Securities and Futures Commission
7. IMF-FSB Synthesis Paper: Policies for Crypto-Assets, International Monetary Fund, Financial Stability Board
8. Website - https://cointelegraph.com/tags/cbdc

Past publications

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Digital Asset Update: Use case and pushback galore
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