Economics & Strategy

Digital Assets Update 3Q24: Crypto and US politics

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

Group Research

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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

Crypto markets are volatile and increasingly focused on the US elections for cues toward greater acceptability. CBDC trials, design, and experiments continue, with virtually all central banks participating in this space.

Main points

The Bitcoin market has matured, with its response to supply shocks being similar to equities.

US election outcomes could pose changes to the regulatory landscape for digital assets.

Ether underperformed Bitcoin in the recent sell-off.

Potential regulatory approval for ETH staking via ETFs could serve as a medium-term catalyst.

Global progression of CBDCs continues apace, with China increasing e-CNY access in Hong Kong and the ECB outlining privacy upgrades for the digital euro.

Gulf states like Saudi Arabia and the UAE are also collaborating with Asia Pacific nations to test CBDCs for streamlining cross-border payments.

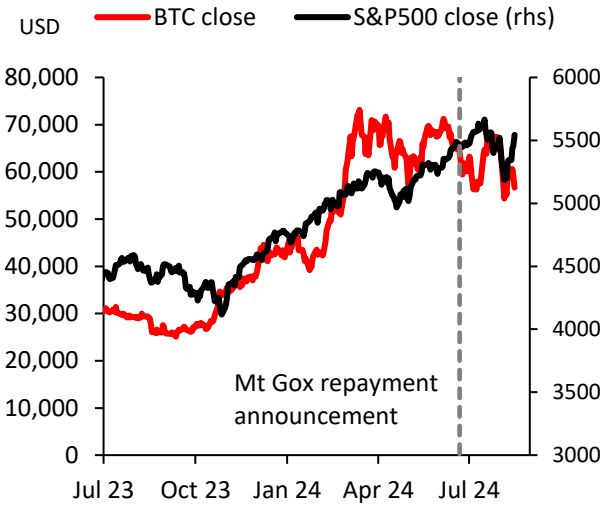
Introduction

In an extraordinary set of developments, US elections and cryptos have found a non-trivial area of overlap. While Donald Trump has been quoted launching a strident support for cryptos, particularly bitcoin, even the Kamala Harris team has given constructive signals toward private digital currencies. We think this reflects the wealth of the crypto lobby, as election finances are at stake. We are less sure if this translates into major regulatory support post elections. On the central bank digital currency space, we see tangible progress toward refining the parameters of wholesale CBDC. The bottom line is that both private and public digital assets are very much in play, with past instances of strident regulatory action increasingly in the rearview mirror.

Crypto market

Crypto asset markets have experienced high volatility lately, with rapid swings arising first from idiosyncratic supply factors, before suffering spillovers from an unwind of carry trades and a global equity sell-off. For Bitcoin, prices averaged USD64k since June, but the trading range was a +/- 8k.

Bitcoin vs S&P500



Source: Bloomberg, DBS

The first sell-off from a high of USD71k in early June to USD55k in July was due to supply concerns. It subsequently rebounded back towards USD68k in mid-July, before selling off again to USD54k due to a wave of global risk aversion in financial markets.

Concerns of a deluge of Bitcoins emerged after the defunct Mt Gox exchange announced that it will repay 140k Bitcoins (USD9bn or 0.7% of market cap) to creditors in June (link), on top of the German government starting sales of 50k of confiscated Bitcoins between June and July. While they are not newly issued Bitcoins, non-price sensitive sales are typically associated with drawdowns. Across the traditional finance literature, many researchers such as Masulis et al (1986) have documented equity pricing discounts in the wake of seasoned equity offerings (or SEO). **We compare the reaction of Bitcoin prices to the Mt Gox supply shock with the reaction of equity prices following SEOs to determine if there are differences in the speed and magnitude of reactions.**

Following the methodology of Fama et al (1969), we performed an even study of abnormal Bitcoin daily returns for the 5 US trading days following Mt Gox's announcement (day 0) on 24 June. The abnormal return is the difference between Bitcoin's return and its expected return, which is based on Bitcoin's CAPM beta that was estimated over a 100-day period ending 10 days before the event. Bitcoin's abnormal return on day-0 was -6.5%. This was statistically significant at the 5% level. Subsequent returns from day 1 to day 5 were small and insignificant.

Daily abnormal returns after Mt Gox announcement

Trading Day	Bitcoin daily abnormal return	t-statistic	One-tailed Signif level
0	-7.3%	-2.3	**
1	3.2%	1.0	
2	-2.1%	-0.7	
3	0.3%	0.1	
4	-1.9%	-0.6	
5	4.5%	1.4	

Source: Bloomberg, DBS **: 5% ***:1%

Our findings show that **Bitcoin's price response is not different from that of stocks in the wake of seasoned equity offerings.**

A recent study by Zenzius, Flore, and Schiereck (2022) estimated that the average 1-day abnormal return from an SEO was -8.6%, with an interquartile range of -14.52% to -1.58%. They used a sample of 297

SEOs of large and medium-cap stocks during the COVID-19 pandemic Mar-Sep 2020. Bitcoin's abnormal return of -6.5% is not too different from the average abnormal return of stocks following an SEO. This is quite striking given that Bitcoin's historical volatility is higher than most stocks. **Investors should be encouraged to see that the Bitcoin market has sufficient liquidity to absorb new supply without an over-reaction in prices,** comparing favourably with large and medium-cap stocks.

In addition, insignificant Bitcoin returns for the next 5 days post-event implies an efficient market reaction to news. This underscores the maturity of Bitcoin markets, with efficiency being close to that of traditional financial markets. The rise of institutional participation, facilitated by the introduction of spot Bitcoin ETFs in the US earlier this year, has likely played a role in fostering efficiency and a quick response.

Bitcoin ahead of US elections

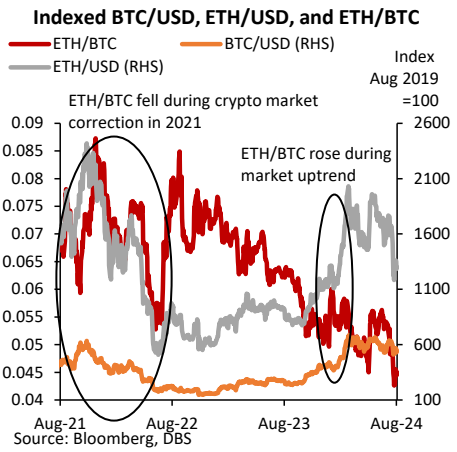
Given upcoming US elections in November, we also assess how the US regulatory environment for Bitcoin and cryptocurrencies could change depending on the election outcomes.

The Democrats have historically been more circumspect over cryptocurrencies, with the Biden-appointed SEC Chair Gensler having pursued lawsuits against a slew of crypto companies in the past and present, including Coinbase, Binance and Ripple Labs. However, Harris in her campaigning had reached out to the crypto industry for discussions and a reset. She reportedly desires to build a constructive relationship, which would set a smart regulatory framework that would help the growth of the entire crypto asset class. While this does not imply that regulatory changes will certainly happen, it is a shift in attitude towards accepting a larger role for private digital currencies, with appropriate regulatory safeguards.

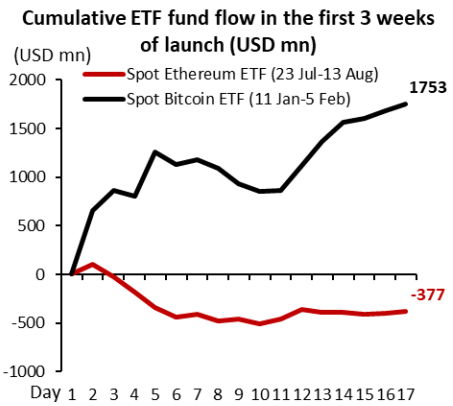
In contrast, Republicans historically lean towards being more supportive of cryptocurrencies. The Republican House, with partial Democrat support, has already passed the Financial Innovation and Technology for 21st Century Act (FIT21) in May this year. This Act aims to provide regulatory clarity for digital assets. Notably, it deems the CFTC (and not the SEC) to hold regulatory responsibility for all

digital assets with a functional and decentralized blockchain. Senate Republicans are more likely to support many aspects of FIT21. The political lobby group, Stand With Crypto, shows Republican Senators to be overwhelmingly more pro-crypto than anti-crypto (44 vs 2), while Democrat Senators lean towards anti-crypto (13 vs 8). Trump has also embraced the crypto industry. In his speech at the Nashville Bitcoin Convention, he declares that he will create a "strategic Bitcoin stockpile", where the US government would keep the tokens it currently holds or acquires. Though he did not offer further details, a US Bitcoin reserve could raise the perception of Bitcoin as a plausible reserve asset. He had also said that he will remove SEC Chair Gensler, which signifies an intention for a more relaxed regulatory environment. **Bitcoin prices could see additional upside if the Republicans are perceived to have a higher chance of electoral success**. But no matter the outcome, political attitudes on both sides of the aisle in Washington are turning more receptive towards Bitcoin than in the past.

Performance of ETH and fund flow into ETH ETF



Source: Bloomberg, DBS



Source: The Block, DBS

Ethereum retreated by over 40% from its peak of over $4,000 in mid-March, falling to a trough of $2,350 in early August. Similar to BTC, the recent ETH sell-off was largely a result of unwinding of the JPY carry trade. While Ether has closely tracked Bitcoin's trajectory, it underperformed BTC in the market downturn. The ETH/BTC retreated from a recent peak of 0.056 in late June to around 0.045 in August, the lowest level since April 2021.

The impact of ETH ETF launches on spot prices also appeared to be short-lived. In the first three weeks since its launch, there was a net outflow of $400 million. This compared to a net inflow of $1.8 billion for BTC ETFs over the same period. Meanwhile, total ETH ETF AUM also fell by 25% in the first three weeks post-launch.

Flight to quality is not a surprising development during a market correction. Like traditional assets including equities, bonds, and properties, quality assets tend to outperform riskier one in risk-off environments. Notably, AUM of ETH ETF is just 13% of its BTC counterpart as of August 13.

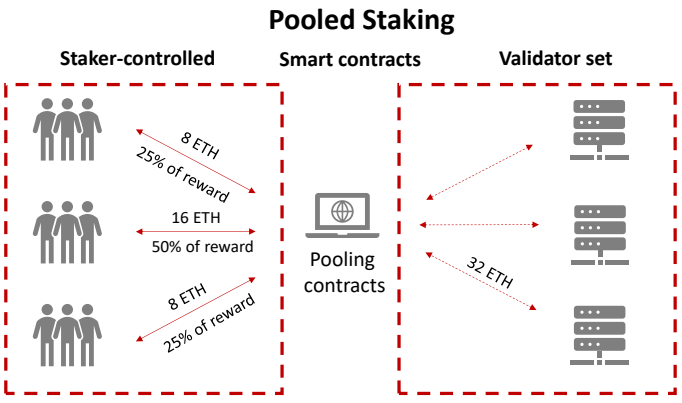
However, as traditional financial market conditions stabilize, cryptocurrencies may rebound accordingly. In a risk-on environment, the relatively riskier ETH could bottom out in a stronger way. Note that the standard deviation of ETH in the past 5 years is even higher than BTC.

Investment return and standard deviation (Aug 2018- Aug 2024)

Asset classes	Average annualized return	Annualized standard deviation
BTC	48.1%	74.5%
ETH	73.6%	95.7%
S&P 500	18.2%	25.2%

Source: Columbia Law School Blog on Corporations & Capital Markets, DBS

What's next for ETH?



Source: Consensys, DBS

Regulatory concerns on staking

Regulatory concerns	Potential way out
1. Staking is similar to interest or fixed income return	1. Regular distribution of staking rewards
2. Liquidity risk	
3. Unstable return	2. Minimum rewards threshold
4. Concentration risk	

Source: Columbia Law School Blog on Corporations & Capital Markets, DBS

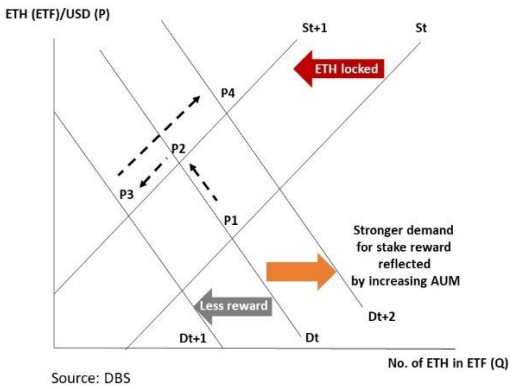
Over the medium-term, ETF listings on public exchanges represent a milestone in including ETH as part of the traditional finance network. Retail investors can buy, sell and hold ETH in pension and brokerage accounts. The next hurdle for the ETF for gaining traction is the regulatory restriction of ETH staking via ETFs. To recap, Proof of Stake (PoS) is a consensus mechanism that relies on validators who are selected based on the number of tokens they stake as collateral. Staking rewards can yield returns ranging from 3% to 8% annually, depending on network conditions.

The very reason why SEC prohibits staking in ETF is simple. Staking rewards will turn ETH ETFs into fixed income or interest-bearing securities. By definition, securities should be under regulators' scrutiny. Also, the lock-up period for staked Ether limits liquidity for investors. Additionally, the value of Ether is subject to market volatility, which affects the overall staking return. Another source of concern is the concentration risks. While locking up ETH can enhance network security, it also creates a single point of failure.

A potential way out could be setting staking restrictions that limit the amount or proportion of ETH staked by a single ETF. Also, regulators may require ETF managers to distribute staking rewards (like a fixed income payout) regularly to mitigate concentration and liquidity risks.

Should such regulatory hurdles be removed, staking could be a catalyst for ETH spot prices. In the immediate term, as more ETH is locked up in staking, the circulating supply could decrease and potentially pushing up prices. Over the medium-term, additional yield will attract more investors to join the party. A significant influx of institutional capital into Ethereum via ETFs could lead to increased liquidity.

Demand and Supply of ETH in ETF



Source: DBS

Demand Supply Dynamics of Staking

Supply and Demand	Price
Immediate-term: Less ETH supply in ETF after staking	Higher ETH / ETH ETF price
Short-term: Strong competition in staking rewards, hence weaker demand	Lower ETH / ETH ETF price
Medium-term: Institutional investors still find return attractive and inject money into the ETFs	Higher ETH / ETH ETF price

Central Bank Digital Currencies (CBDCs)

Overview

Global progression of central bank digital currencies continues apace. A recent BIS report indicates 94% of surveyed central banks exploring CBDCs. Central banks adopt varied approaches testing wholesale and retail forms. In the next six years, wholesale CBDCs are seen as more likely to be issued than retail CBDCs. Key design aspects like interoperability and programmability are being considered. For retail CBDCs, central banks are exploring features such as holding limits, offline usage, and zero interest rates. Advanced and emerging economies differ in their testing of distributed ledger technology and transaction limits.

China

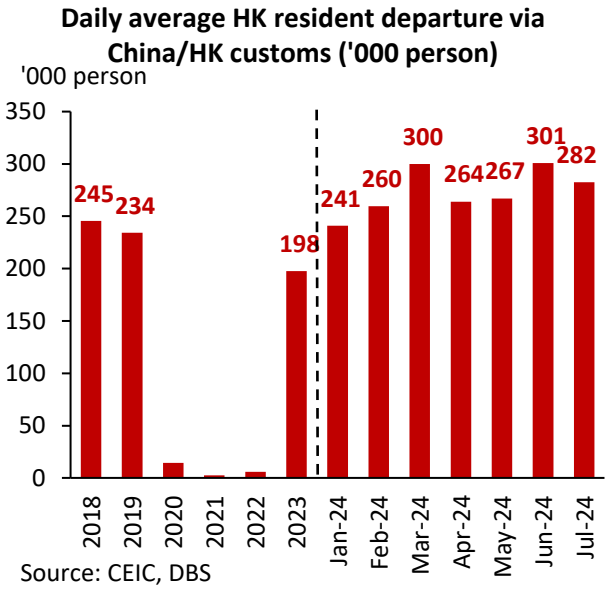
China has made significant progress developing its CBDC, known as the digital yuan or e-CNY. As one of the leading pioneers, it has conducted pilots for several years to test various applications. In a milestone expansion, Hong Kong residents can now open e-CNY digital wallets without a mainland bank account - the first city outside mainland China to participate.

Starting in mid-May, users in Hong Kong establish wallets via their phone numbers. They can directly make payments to merchants accepting e-CNY in the Greater Bay Area and other pilot regions of

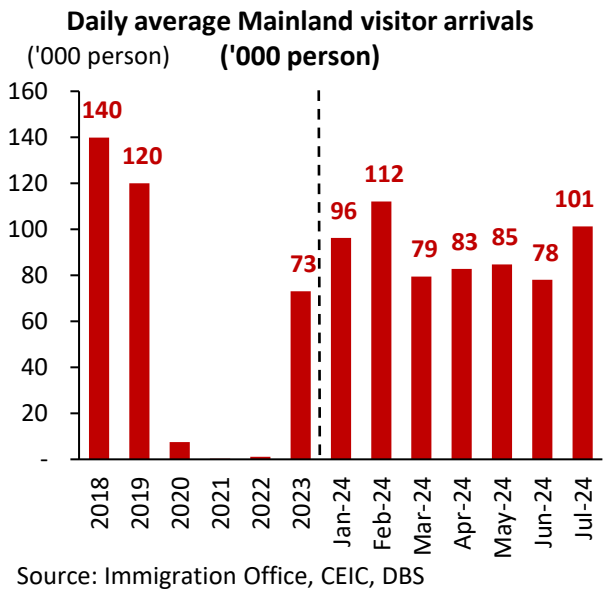
China. Deposits to the wallets can be made instantly through 17 retail banks utilizing Hong Kong's fast payment system.

This well-timed expansion coincides with rising travel between Hong Kong and mainland cities. The seamless e-CNY transactions should boost popularity positively. Given Hong Kongers' growing embrace of digital payments, involving local partners capitalizes on an opportunity to accelerate adoption.

Currently, individual wallets remain capped at RMB10,000 daily and RMB50,000 annually, with RMB2,000 per transaction. The Hong Kong Monetary Authority (HKMA) intends deeper collaboration with the People's Bank of China (PBOC) to evolve the program. Areas of future work may include advanced name verification and improved interoperability. This could facilitate applications like cross-border trade settlements on the blockchain-based digital currency network.



Source: CEIC, DBS



Source: Immigration Office, CEIC, DBS

Hong Kong

Alongside testing China's digital yuan, Hong Kong also launched its own e-HKD pilot. After concluding Phase 1 examinations in October 2023, the HKMA has now advanced the initiative into its second phase. Phase 1 explored potential domestic retail applications like programmable payments, tokenized asset settlement, and offline usage. Phase 2 aims to deepen exploration of select Phase 1 concepts demonstrating unique potential, including programmability and

tokenization through atomic transactions. It will also survey novel use cases not previously investigated.

Concurrently, the Bank of International Settlements Innovation Hub Hong Kong Center started Project Aurum 2.0 in collaboration with the HKMA. Building upon Phase 1's validation of integrating wholesale and retail platforms, Phase 2 prioritizes enhancing privacy for retail CBDCs. Privacy emerges as a core consideration for adoption based on public consultations globally.

As part of evaluating privacy-enhancing solutions, the project will examine emerging technologies such as pseudonymization and zero-knowledge proofs. Testing will indicate how enhanced privacy levels may influence a system's operational performance and regulatory compliance. Combined, these ongoing pilots provide valuable insight into CBDCs' real-world applications and progress toward rigorous privacy protection.

Thailand

The Bank of Thailand recently concluded a pilot program testing the viability of a retail CBDC. The trial involved two major Thai banks, Krungsri and Siam Commercial, as well as a digital payments provider, 2c2p. They assessed the efficacy of a digital Thai Baht used by 4,000 consumers and 140 merchants for transactions, transfers, and a restricted "Grow Up Wallet" for minors. While pleased with initial results suggesting a CBDC could enable innovation, the central bank has no immediate plans for retail deployment. Key challenges included non-bank providers facing transaction fees to access the CBDC through intermediary banks and instability of offline digital payments.

In the absence of a near-term CBDC rollout, Thailand's government sought to distribute cash benefits digitally. In August, registration opened for a 10,000 baht digital voucher program pledged in the previous election. Officials categorized these more as programmable vouchers rather than a true CBDC due to restrictions. The vouchers imposed limits on location, timing and recipients unlike cash. In particular, strict purchase exclusions prevented fulfillment of all payment roles. Merchants also struggled to readily convert received vouchers, disrupting typical cash flow. Due to these shortcomings,

the vouchers could not fully substitute for cash as an open medium of exchange.

Thailand's digital money giveaway

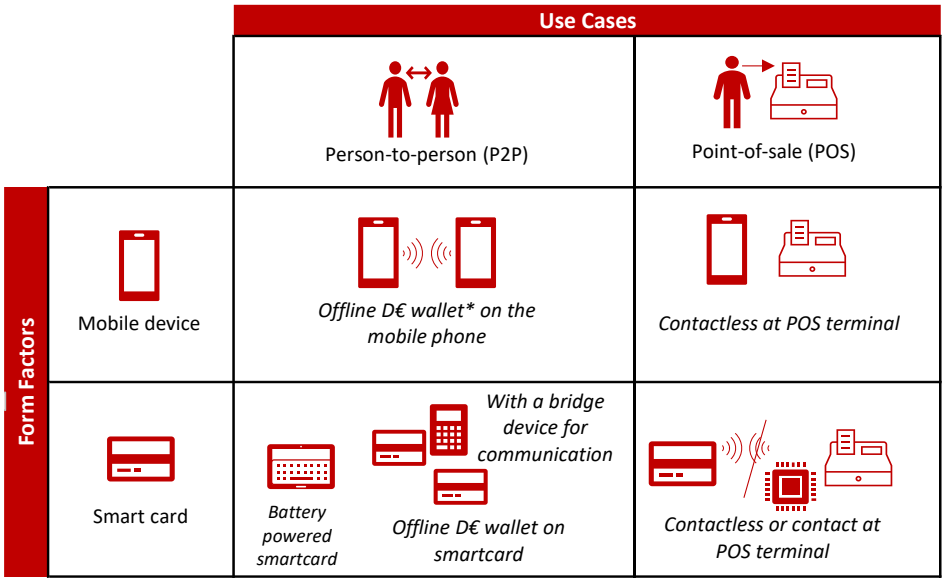
Restrictions on the giveaway usage include:
Recipients must not be in prison
Recipients cannot have 2023 earnings of more than 840,000 baht ($23,260)
Recipients cannot have bank-like savings of more than 500,000 baht ($13,847)
Recipients must spend the money in face-to-face transactions
Money cannot be spent on government lottery tickets, alcohol, tobacco, cannabis, kratom products, Marijuana and kratom, gift certificates, cash cards, gold, diamonds, gemstones, gasoline, natural gas, electrical appliances, electronic equipment and communication tools

Eurozone

In its recent progress report, the European Central Bank (ECB) outlined technical specifications to ensure greater privacy for the digital euro versus existing digital payment systems. Notable measures include pseudonymization, hashing and encryption to prevent directly linking transfers to individuals. Payment service providers will only access personal data mandated by anti-money laundering regulation, in line with current norms.

For offline usage, the digital euro's design facilitates direct p2p settlement between user devices without third party intermediation. The ECB explored enabling such functionality on smartphones, payment cards and other standard technologies. Battery-powered smart cards present another potential offline solution requiring only a bridge for communication.

Overview of offline digital euro use cases and potential form factors



Crucial for the digital euro's pan-European reach is developing a single rulebook to standardize payments across the euro area. To build the rulebook, the ECB established seven specialized workstreams, each focusing on distinct aspects of the underlying architecture or infrastructure. Workstreams will regularly report to the Rulebook Development Group, representing consumers, retailers and intermediaries. Candidates for new workstreams must be nominated by a member of this stakeholder group.

Previous workstreams defined standards compatibility and established identification/authentication protocols. The establishment of specialized workstreams reflects the ECB's comprehensive, collaborative approach to designing core elements defining a cohesive yet flexible digital euro network across Europe. Their work aims to develop robust, inclusive solutions.

Middle East

The Central Bank of the UAE (CBUAE) recently unveiled plans for its digital currency strategy dubbed the "Digital Dirham". Scheduled for implementation over the next 12-15 months, phase one will focus on three primary pillars:

- Soft launching mBridge to facilitate real-value CBDC transactions for international trade settlement.

- Proof-of-concept for bilateral CBDC bridges with India, a key trading partner.

- Domestic CBDC proof-of-concept covering wholesale and retail usage.

The Digital Dirham forms part of CBUAE's broader "Financial Infrastructure Transformation Program" reinventing the UAE's payments by 2026. As domestic adoption expands, all financial institutions are encouraged to integrate with its CBDC network node.

Meanwhile, Saudi Arabia's central bank recently joined Project mBridge alongside counterparts from China, Hong Kong, Thailand, and the UAE. Launched in 2021, Project mBridge evaluates CBDCs' potential for instant cross-border payments and trade utilizing blockchain technology. It represents Saudi Arabia's latest foray into CBDC experimentation following initial scoping done via Project Aber with the UAE. Both initiatives aim to test technical solutions supporting fast, frictionless transactions beyond national borders. Their involvement underscores Gulf nations' commitment toward realizing the transformative promises that CBDCs may offer regional and global commerce.

Key CBDC objectives by country group

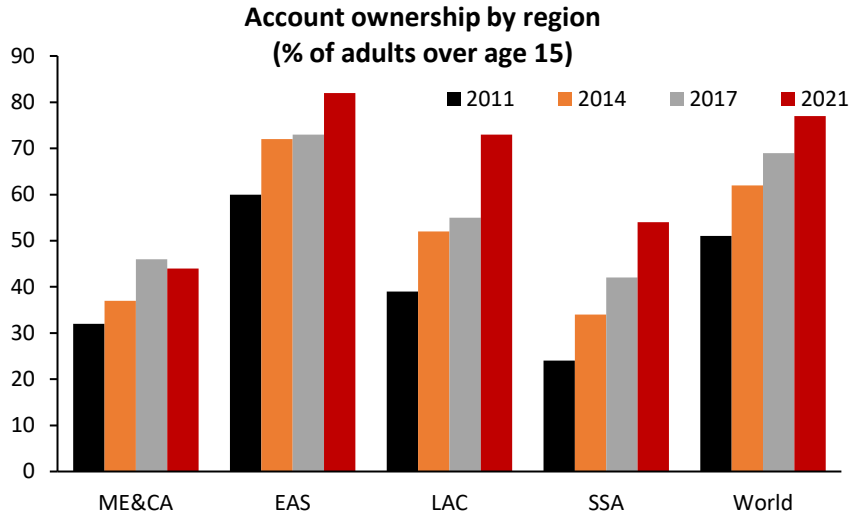
Country Group	Marking payments more efficient (cross-border)	Making payments more efficient (domestic)	Broadening access to payments	Increasing financial inclusion
MENA Oil Exporters	√	√		
MENA Oil Importers			√	√
Caucasus and Central Asia		√		√
Low-Income Countries				√
Gulf Cooperation Council Countries	√	√		
Fragile and Conflict-affected States		√	√	
Emerging Markets		√	√	

Sources: IMF survery to country teams

Note: MENA = Middle East and North Africa

A recent IMF survey underscores Middle Eastern interest, indicating two-thirds of nations in the Middle East and Central Asia (MECA) exploring CBDC adoption. For oil exporters and the Gulf Cooperation Council countries, prioritizing cross-border efficiency reflects economic priorities. Transactions face issues like non-standard formats and inconsistent rules across regions, complexifying compliance. CBDCs may significantly reduce costs by addressing such inefficiencies.

Bank account access across MECA countries also trails the global average. If priced accessibly, CBDCs may spur competition and inclusion domestically. An offline functionality could further help extend reach to remote communities with intermittent connectivity issues. Arguably, geopolitics serves as an implicit, yet imperative, influence on strategic thinking around CBDCs.



Source: Global Financial Inclusion database, IMF, DBS
ME&CA: Middle East and Central Asia; EAS: East Asian countries;
LAC: Latin America and the Caribbean: SSA: sub-Saharan Africa

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