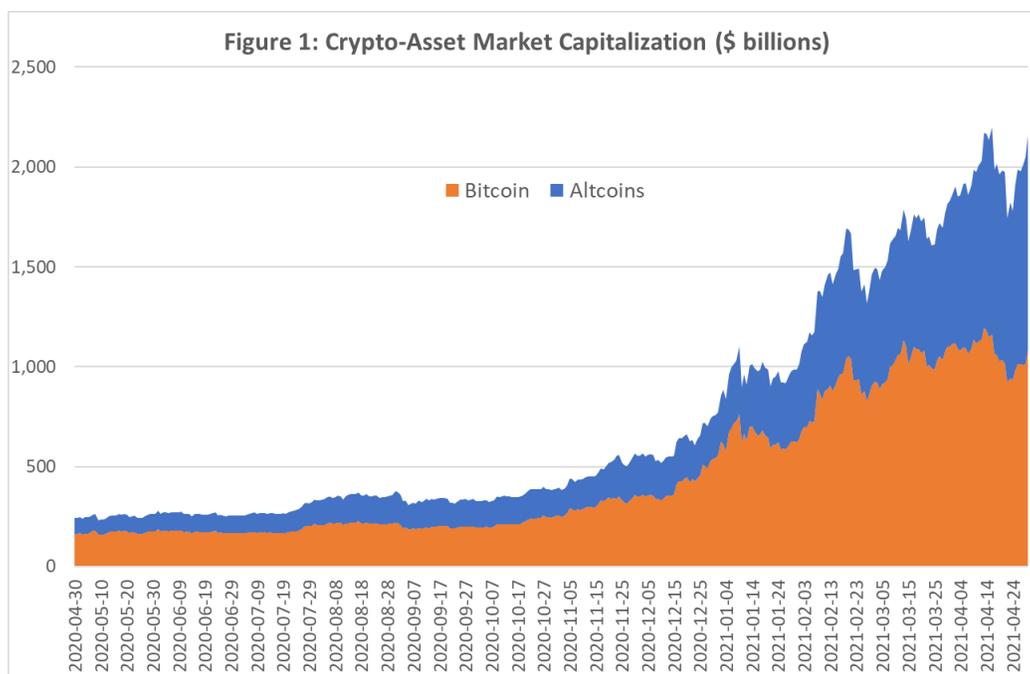


Kiffmeister's Global Fintech Monthly Monitor (April 2021)

Crypto-asset prices spiked to new highs this month with Altcoins leading the way, although prices faded after Coinbase launched on April 14. Bitcoin finished down 3% on the month, and 11% off the all-time high price of \$64,863 of April 14. By contrast, Altcoin market capitalization finished up 37% with XRP up 177%, Binance Coin 107% and Ethereum up 45%. The impetus continued to be continuing institutional investor interest in, and popularization of, crypto-assets. Meanwhile, central banks continued to advance their digital currency explorations, with the Bank of Japan launching its proof of concept (PoC) work and the Riksbank wrapping up its first round of PoC work.

Crypto-Asset Markets (see also the Annex)

Crypto-asset [market capitalization](#) increased about 14% from March 31 to \$2,158 billion, although [Bitcoin](#) finished down 3% (\$57,750) after hitting an all-time high of [\\$64,863](#) into the mid-April [Coinbase listing](#) (see below). Altcoin markets led the way with capitalization up 37%, with [Ethereum](#) finishing up 45% possibly bolstered by the mid-April ["Berlin" hard fork](#) that [reduced costs](#) for certain transaction types, and introduced a new transaction envelope that will make it easier to package multiple transactions into a single transfer. It also paved the way for the ["London" upgrade](#) scheduled for the summer of 2021, that aims to reduce transaction costs ("gas fees") on the network.



Source: <https://coin.dance/stats/marketcap/historical>

[XRP](#) continues to soar (+177% in April) after Ripple's motion [was granted](#) to keep the financial records of CEO Brad Garlinghouse and his predecessor private from the U.S. Securities and Exchange Commission (SEC) in its lawsuit against the firm. The case hinges on the classification of XRP as a security (i.e., a financial asset from which the investor intends to profit), as opposed to a currency or medium of exchange. By failing to file a securities registration statement or seek special exemption, the SEC is accusing Ripple of violating multiple sections of the Securities Act of 1933. Ripple [won another skirmish](#) when it was granted permission to get access to the SEC's documents related to its exemption

of Bitcoin and Ethereum from being given "security" status. Emboldened by these wins, Ripple has [filed](#) a motion to dismiss the lawsuit entirely.

Moves towards "popularizing" crypto-assets continue. Venmo's "Crypto on Venmo" [started](#) rolling out on April 20. The service will let its 70 million users buy, hold and sell crypto-assets (BTC, ETH, LTC and BCH) within its mobile app, using funds from their balance with Venmo, or a linked bank account or debit card. Also, Coinbase's U.S. customers [can now buy](#) crypto on the exchange via debit cards and bank accounts linked to PayPal. Such purchases are limited to \$25,000 per day.

Stablecoin market [capitalizations](#) continue to increase (see Annex). Almost all are USD-pegged, and Tether's USDT remains dominant (\$51.6 billion), followed by USDC (\$14.7 billion), BUSD (\$7.6 billion), DAI (\$3.7 billion) and UST (\$2.0 billion). Tether [released](#) another attestation that shows that its stablecoins are fully backed, to assuage rumors that it was not. However, the report still doesn't describe how Tether's reserves are invested. Coinbase [started supporting](#) Ethereum blockchain-based (ERC-20) USDT on its Pro platform. The ERC-20 variant comprises almost half of all outstanding USDT, although the [TON-based variant](#) is now larger.

Less than a week after the Fei protocol's April 4 launch, Fei Labs [found](#) a vulnerability in the incentive calculation of the Ethereum-backed algorithmic stablecoin. The team patched the vulnerability on April 6, but it did not prevent the stablecoin from losing 30% off its peg. Fei uses a bonding curve to manage supply and demand based upon its collateralization levels and uses a system of 'direct incentives' to penalize the withdrawal of liquidity during periods of selling pressure. This [caught](#) many investors off-guard as they would have to take a hit when withdrawing their ETH collateral or the supposed dollar-pegged tokens it generated. However, by the end of the month it was closing back in on USD parity.



Coinbase [reported](#) first-quarter revenue that soared nearly 900% from \$190.6 million in the same period last year, blowing past the \$585 million nabbed in the fourth quarter. Meanwhile, the platform's verified users (those with confirmed identities who are eligible to trade) swelled to 56 million at quarter's end,

compared to 34 million one year prior. Founded in June 2012, Coinbase debuted on Nasdaq on April 14, under the ticker COIN, the price spiking to \$430 on opening day, but closing the month at \$298.

The U.S. SEC has yet to approve a crypto-asset exchange-traded fund (ETF) although it [extended](#) its window to approve (or disapprove) VanEck's Bitcoin ETF from May 3 to June 17. Also, investment manager Grayscale [published](#) a roadmap that implied it planned to convert two of its crypto-asset funds (GBTC and ETHE) into ETFs. Meanwhile, the Ontario Securities Commission [has approved](#) four Ethereum ETFs to trade on the Toronto Stock Exchange (TSE); 3iQ Corp, CI Global Asset Management, Purpose Investments, and Evolve Fund Group. And [Horizons ETFs Management](#) (Canada) [launched](#) the TSE-traded BetaPro Inverse Bitcoin ETF that will allow investors to take short positions on bitcoin futures.

According to Michael Morell, a former CIA acting director, the broad generalizations about the use of bitcoin in illicit finance are significantly overstated. This flies in the face of the false narratives spun by senior government officials, such as Treasury Secretary Janet Yellen, who issue public warnings about bitcoin's alleged use by criminals. Morrell's [research](#) concluded that there is probably less illicit activity in the bitcoin ecosystem than there is in the traditional banking system. Furthermore, he highlighted blockchain analysis as a highly effective crime fighting and intelligence gathering tool.

Crypto-related regulatory developments

Türkiye Cumhuriyet Merkez Bankasi [has banned](#) the direct and indirect use of crypto-assets for payments. According to its statement "payment service providers cannot develop business models in a way that crypto assets are used directly or indirectly in the provision of payment services and electronic money issuance and cannot provide any services related to such business models." The regulation comes into force on April 30. Turkey [ranks 29th out of the 154 countries](#) on the Chainalysis' Global Crypto Adoption Index, and number one in the Middle East.

A [review](#) of 16 leading crypto-asset exchanges, including the seven that contribute prices to the CME Bitcoin Reference Rate, found that just four were found to be subject to a significant level of trading-related regulation (itBit, eToroX, LMAX Digital, and Currency.com). Seven of the remaining exchanges, including Coinbase, operate as licensed Money Service Businesses (MSBs) or equivalent, but their trading activities are effectively unregulated. And three of the top exchanges appear not to be subject to any regulatory scrutiny whatsoever (Bittrex, Luno, and Bitfinex).

The U.S. House of Representatives [passed](#) the Eliminate Barriers to Innovation Act of 2021 (H.R. 1602) which includes a section on digital assets. The legislation seeks to set up a digital asset working group with representatives from the Securities and Exchange Commission (SEC) and Commodity Futures Trading Commission (CFTC). The overarching goal is to clarify when the SEC has jurisdiction over digital assets, in the case of when they are deemed securities and when the CFTC has a final say, in the case of when digital assets are classified as commodities.

U.S. Securities and Exchange Commission (SEC) Commissioner Hester Peirce [unveiled](#) an updated version of her proposed three-year regulatory safe harbor for token sales. The update adds "semi-annual updates to the plan of development disclosure and a block explorer"; an "exit report requirement" that "would include either an analysis by outside counsel explaining why the network is decentralized or functional, or an announcement that the tokens will be registered under the Securities Exchange Act of 1934"; and that exit report requirement "provides guidance on what outside counsel's analysis should address when explaining why the network is decentralized."

Other digital asset market developments (see also Table 1)

Robinhood experienced [on and off again issues](#) executing users' crypto-asset trades on April 16, blaming it on [unprecedented demand](#) for crypto services. At the same time, Robinhood [continues to face headwinds](#) from regulators. For example, the Massachusetts Securities Division [published](#) has accused Robinhood of a "pattern of aggressively inducing and enticing trading among its customers - including Massachusetts customers with little or no investment experience." Subsequently, Robinhood [filed a complaint and motion](#) in the Massachusetts State Court to block the complaint.

The People's Bank of China (PBOC) [has ordered](#) Ant Group to "cut off" the "improper connections" between its payment platform and its financial products. More [specifically](#), told the PBOC told Ant to become a financial holding company that will be regulated more like a bank, eliminate unfair competition in its payments business, end its monopoly on information, improve its corporate governance, and better manage liquidity risks in its major fund products (including downsizing its Yu'eobao money-market fund).

Retail Central Bank Digital Currency (CBDC) developments (see also Table 2)

On April 5, 2021, the Bank of Japan (BoJ) [began](#) its Phase 1 central bank digital currency (CBDC) proof of concept (PoC) work. In PoC Phase 1, the Bank plans to develop a test environment for the CBDC system and conduct experiments on the basic functions that are core to CBDC as a payment instrument such as issuance, distribution, and redemption. This phase will be carried out through March 2022. The BoJ [will then move](#) to Phase 2 to test more detailed functions of CBDC, and then, if necessary, on to Phase 3, in which private businesses and end-users will participate in a pilot program.

The Riksbank [concluded](#) the first phase of its e-krona central bank digital currency (CBDC) proof of concept (PoC). Working with Accenture, the objective was to test a blockchain-based R3 Corda technical platform to increase the Riksbank's knowledge of how an e-krona could function and be used as a complement to cash. The next phase of the PoC will test the platform's capacity to manage retail payments on a large scale and will include potential distributors. It will also test offline functionality and integration with existing point-of-sale terminals, and different means of storing private keys to the tokens and the tokens containing e-kronor.

The Bank of Thailand [has set its agenda](#) for a retail central bank digital currency (CBDC) with preliminary testing protocols scheduled to begin in Q2 2022. As part of its plans, the central bank published a [preliminary report](#) detailing its CBDC thesis. The main motivations are increasing financial inclusion and reducing the risk of private stablecoins undermining the central bank's "monetary sovereignty and financial stability." The central bank will begin its CBDC developmental efforts by engaging with stakeholders followed by cost-benefit analysis to ascertain the opportunities, risks and challenges.

The European Central Bank (ECB) [published](#) in-depth results of their digital euro consultation. The survey, which ran from October 20, 2020 to January 12, 2021 and collected 8,221 responses, asked 18 questions pertaining to the benefits and challenges of issuing a digital euro and on its possible design. It found that privacy is the most demanded feature followed by security and usability. 47% of respondents were from Germany, which is notorious for its continuing high levels of cash usage, and most respondents (33%) come from the tech industry. More than two-thirds of respondents acknowledge the importance of intermediaries providing innovative services that allow access to a digital euro and

indicate that it should be integrated into existing banking and payment systems. They would like additional services provided on top of basic digital euro payments.

The Bank of England and the U.K. Treasury [announced](#) the creation of a Central Bank Digital Currency (CBDC) Taskforce that will (i) coordinate exploration of CBDC objectives, use cases, opportunities and risks, (ii) guide evaluation of the design features, and (iii) support a rigorous, coherent and comprehensive assessment of the overall use case. Also, the Bank of England established a CBDC Unit, and created a CBDC Engagement Forum to engage senior stakeholders and gather strategic input on all non-technology aspects of CBDC, and a CBDC Technology Forum to gather input on all technology aspects of CBDC.

General Fintech Developments (see also Table 3)

The People's Bank of China (PBOC) and four other regulatory agencies [summoned](#) 13 domestic internet platform companies including Tencent, JD Finance and ByteDance for talks on their financial businesses. The firms [were urged](#) to bring their online lending and deposit-taking businesses in line with regulatory requirements, and to refocus on their payment service business, enhance their transaction transparency and break any information monopolies.

Paxos Trust Company [completed](#) a same-day settlement of US-listed equity trades in partnership with Instinet and Credit Suisse on its Paxos Settlement Service permissioned blockchain solution. Paxos said the project demonstrated its ability to enable same-day settlement for trades conducted throughout the day. In the current system, settlement can only occur the same day if trades are completed before 11 AM ET and therefore is rarely utilized. The platform is said to be interoperable with the legacy clearing system and can facilitate settlement on any time cycle.

The Bank of England [unveiled](#) a new type of omnibus account as part of its real-time gross settlement service. With it an operator of a payment system can hold funds in the omnibus account to fund their participants' balances with central bank money. This account co-mingles funds from different entities for the purposes of wholesale settlement. [Fnality](#) sees these new accounts as supportive of the opportunity to use tokenized cash assets to enable on-chain wholesale exchange of value.

Fnality uses an Ethereum-based permissioned blockchain that will run on chain payment systems in multiple currencies in each jurisdiction. When a bank wants to make a payment, it transfers money from its central bank account to the Fnality omnibus account, which then tokenizes it. The bank then uses the tokens to make a payment, and the recipient bank can then opt to convert the received tokens back to central bank money, or it could use the tokens for further payments.

The Monetary Authority of Singapore and the Bank of Thailand [launched](#) the linkage of Singapore's PayNow and Thailand's PromptPay real-time retail payment systems. Customers of participating banks in Singapore and Thailand will be able to seamlessly and securely transfer funds of up to S\$1,000 or THB25,000 daily across the two countries, using just a mobile number. The fees will be affordably priced and transparently displayed to senders prior to confirming their transfers.

The European Investment Bank (EIB) launched a €100 million two-year digital bond issuance on an Ethereum-based public blockchain platform. The EIB paid the three underwriters (Goldman Sachs, Santander and Societe Generale) using [Banque de France-issued](#) wholesale CBDC. Societe Generale – FORGE provided the end-to-end services to issue and manage the digital-native security tokens.

Miscellaneous commentary and research

A Bank of Canada [paper](#) proposed a framework to allow authorities to understand the defining characteristics of stablecoin arrangements, to be specific about any concerns they may have, and to be objective in their treatment from issuer to issuer. First, it classifies arrangements into three parts, coin structure, related transfer system(s) and related financial service(s), and then categorizes the attributes of each one. Secondly, it identifies specific risk scenarios that are relevant to the stablecoin arrangement, and thirdly, it quantifies the range of probable loss and possible frequency associated with the identified risk scenarios.

A BIS [paper](#) assessed emerging crypto-asset financial integrity regulatory approaches and supervisory practices and identifies policy priorities to address common challenges faced by financial authorities. It points to opportunities to adopt new approaches, like blockchain analytics, that take advantage of the inherently data-rich nature of the crypto-asset sector. Also, the inherently cross-border nature of crypto-assets, as well as the uneven global implementation of international standards in this area, make international cooperation a critical component for effective supervision.

The ECB [published](#) a report on the use of distributed ledger technology (DLT) in securities post-trade processes. It categorized securities issuance and post-trade processes into models depending on how DLT is used in each case, drawing implications for the use of DLT at different stages of the securities life cycle, from issuance to custody and settlement. It recommends that, to prevent market fragmentation, the adoption of DLT-based solutions should be based on common practices and standards that enable DLT systems to interact with both each other and conventional systems.

Table 1. Other Crypto-Asset Market Developments
The amount of crypto-assets on decentralized finance (DeFi) platforms increased 58% to \$69.2 billion (from \$43.8 billion on March 31). Decentralized exchange (DEX) volumes are up 236% from Q4 2020, Uniswap leading the way as volumes continue to rise in lockstep with asset prices.
Several Morgan Stanley's institutional funds may gain exposure to bitcoin in the form of cash-settled futures or a Grayscale's Bitcoin Trust. The U.S. Securities and Exchange Commission (SEC) filing names twelve funds considering some kind of bitcoin investment or exposure strategy. The filing also indicates that as much as 25% of their respective assets could be put towards bitcoin products.
Signal is rolling out the ability for U.K. users to send money to one another from within their mobile apps, using the privacy-focused crypto-asset MobileCoin. Unlike payment features integrated into other messaging apps, it doesn't link to a user's bank account. However, some uncomfortable questions are being raised about potential conflicts of interest around the choice of MobileCoin.
Circle has partnered with Signature Bank to hold billions of dollars in reserve deposits related to USD Coin. The two companies also committed to a long term roadmap that will start with the integration of Circle into Signet, the Bank's blockchain-based digital payments platform.
The U.S. Office of the Comptroller of the Currency (OCC) has granted Paxos provisional approval for a federal bank charter that will allow it to conduct business across state lines. It only allows Paxos to operate as a trust bank, which can't lend customer deposits.
State Street's Currenex trading technology arm is working with London-based FX trading infrastructure provider Pure Digital to create an institution-focused digital currency trading platform. It will be a fully automated over-the-counter market for digital assets, with physical delivery and bank custody. Scheduled for launch in mid-2021, the new platform will allow institutional investors to trade using bilateral credit and multiple custody solutions.

Deutsche Telekom is purchasing Celo tokens in "significant" size, and investing in infrastructure to support the Celo network, which is working to build decentralized payment platforms. Celo maps user mobile phone numbers to the public key for a blockchain wallet, which simplifies access to crypto. Deutsche Telekom sees a variety of opportunities using Celo, including remittances.
Mastercard and U.S. crypto-asset exchange Gemini will launch a no-fee credit card that gives users digital currency rewards on purchases this summer.
French insurer AXA's Swiss arm announced that its customers are now able to pay their non-life policy premiums in bitcoin. Life insurance products do not carry this option for "regulatory reasons." AXA will not be holding any bitcoin on its balance sheet. Bitcoin paid goes to broker Bitcoin Suisse, which will convert them into Swiss francs minus a 1.75% fee.
WeWork has partnered with BitPay to accept crypto-assets (BTC, ETH, USDC,PAX and several others) in payment for its workspaces. WeWork will also hold the crypto-assets on its balance sheet.
TIME is accepting crypto-assets to pay for digital subscriptions via a partnership with Crypto.com, only in the U.S. and Canada for now, with global access to roll out in the next several months.
The Turkish government is reportedly planning to establish a central custodian bank to eliminate counterparty risk following the April collapse of the Thodex and Vebitcoin exchanges.
The Central Bank of Iran is reportedly authorizing banks and licensed foreign exchange shops to use crypto-assets as payments for imports, to mitigate the impact of U.S. economic sanctions. The crypto-assets must derive from officially licensed mining operations
Germany's Federal Financial Supervisory Authority (BaFin) warned investors that Binance has probably violated securities rules over its launch of trading in tokens that track the movement of shares in Tesla, Coinbase and MicroStrategy. The warning said that such tokens represent securities requiring a prospectus that has not yet been issued.

Table 2. Other Central Bank Digital Currency (CBDC) Developments
The Reserve Bank of India is still working on introducing a CBDC, currently assessing the financial stability implications, and exploring ways for clear, safe and legally certain settlement finality.
The Hong Kong Monetary Authority and the People's Bank of China (PBOC) reportedly conducted technical tests on the cross-border use of China's CBDC.
The government of Macau reportedly plans to amend laws to regulate the issuance of a virtual legal tender, and will work with the PBOC to study the feasibility of issuing a CBDC.
The People's Bank of China (PBOC) will reportedly try to make it possible for foreign athletes and visitors to use its e-CNY CBDC during the Beijing Winter Olympics in 2022.
The PBOC has reportedly tested putting expiration dates on their CBDC to encourage users to spend it quickly, for times when the economy needs a jump-start.
The PBOC reportedly signed a technical strategic cooperation agreement with Ant Group to move forward with the development of the digital yuan based on Ant Group's database, Ocean Base, and the mobile development platform, mPaaS. Tencent is also supporting and participating in digital yuan design, research, development and operational work.
The Central Bank of Russia plans to release a CBDC in 2023. A prototype will be created by end-2021. The Bank also published a report on the current state and future plans for the project.
Norges Bank will test various technical solutions for a CBDC over the next two years, to find a preferred solution if it becomes relevant to introduce a CBDC in Norway.
The Central Bank of Trinidad and Tobago is studying the possibility of issuing CBDC, according to its most recent strategic plan. It plans to complete the study by the end of 2021.

The Bank of Mauritius is developing a CBDC. It will also soon deploy a digitalized know-your-customer platform and will introduce a dedicated license for digital banks.
The National Bank of Georgia is considering launching a digital version of its national currency, the Lari (Gel) using its Open Regulatory Framework tools, to facilitate the retail CBDC development process.
Bitkòb is the name of the prospective CBDC of the Bank of the Republic of Haiti, unveiled on March 26, 2021. The central bank has been working on this project since 2019.
According to its 2020 Payments and Settlement Report , the Bank of Korea will conduct simulation experiments for its CBDC in the second half of 2021.

Table 3. Other General Fintech Developments

The U.S. Federal Reserve released message specifications for the initial launch of its FedNow Service for instant payments based on the standard set by the International Organization for Standardization, or ISO. The FedNow ISO 20022 specifications define the message flows and formats that the service will leverage when operational in 2023.
Facebook is testing QR code payment links in Facebook Pay to make it easier for people in the U.S. to send or request money between each other. The QR code feature will allow a user to scan a friend's code with their smartphone's camera to send or request money.
The Central Bank of Cuba granted a license to the country's telecommunications monopoly, Etesca to operate a digital wallet service. Customers can only use the wallets to make payments at businesses that use Transfermovil, to transfer money between wallets, or to transfer to bank accounts.
The European Investment Bank reportedly hired Goldman Sachs, Banco Santander and Societe Generale to explore a euro-denominated digital bond registered and settled using blockchain.
Grab Holdings, the Southeast Asia ride-hailing, food-delivery and digital-wallet group, will go public by merging with a special-purpose acquisition company (SPAC) securing a \$39.6 billion valuation.
The U.S. state of Wyoming has officially recognized decentralized autonomous organizations (DAOs) as a new type of limited liability company. DAOs are governed by the terms of smart contracts, without the hierarchical control structure seen in traditional companies. The new law solves several important legal issues, such as joint-and-several liability for all participants in a DAO.

Annex: Crypto-Asset and Stablecoin Market Capitalization

Crypto-Asset Market Capitalization (\$billions)			
	March 31, 2021	April 30, 2021	Change
Bitcoin	\$1,111	\$1,085	-26 (-2%)
Altcoins	\$785	\$1,073	+\$288 (+37%)
Total	\$1,896	\$2,158	+\$262 (+14%)

Top Five Stablecoin (all USD) Capitalization (March 31, 2021)	
	Market Capitalization (\$billions)
Tether (USDT)	\$40.5 -> \$51.6 (+\$11.1)
USD Coin (USDC)	\$10.8 -> \$14.7 (+\$3.9)
Binance USD (BUSD)	\$3.5 -> \$7.6 (+\$4.1)
Dai (DAI)	\$3.0 -> \$3.7 (+\$0.7)
Terra USD (UST)	\$1.6 -> \$2.0 (+\$0.4)