

GBBC OVERVIEW

Overview of U.S. Financial Services: Announcements on Blockchain Technology, Cryptocurrencies, and Digital Assets

Time Frame: 4Q 2020 – 1Q 2021



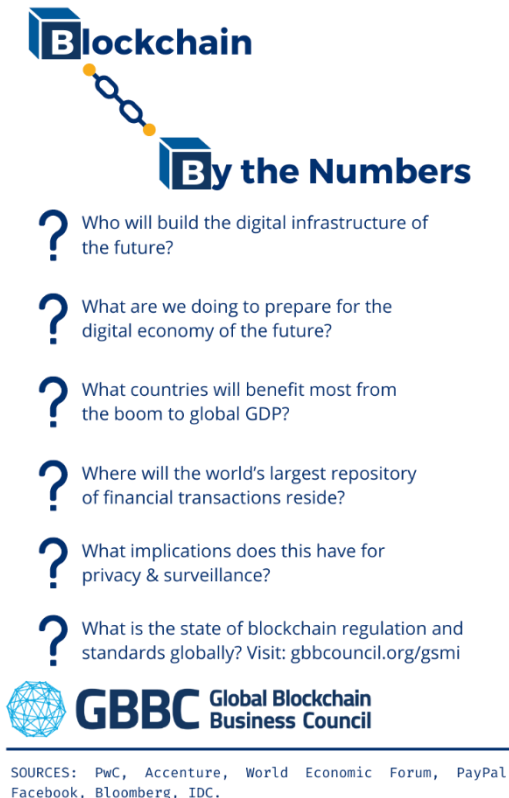
1 April 2021

Washington, DC

Introduction

Below is a survey of high-level headlines and public information for the U.S. financial services and fintech industries in connection with blockchain technology, crypto assets, and digital assets during the period 4Q 2020-1Q 2021. This is a rapidly growing multi-trillion-dollar industry and major financial institutions, Fortune 500 companies, household brand names, as well as emerging fintech companies, continue to announce investments and related business initiatives.

Fact Sheet






Blockchain
By the Numbers

- ? Who will build the digital infrastructure of the future?
- ? What are we doing to prepare for the digital economy of the future?
- ? What countries will benefit most from the boom to global GDP?
- ? Where will the world's largest repository of financial transactions reside?
- ? What implications does this have for privacy & surveillance?
- ? What is the state of blockchain regulation and standards globally? Visit: gbbcouncil.org/gsmi

GBBC Global Blockchain
Business Council

SOURCES: PwC, Accenture, World Economic Forum, PayPal, Facebook, Bloomberg, IDC.

\$4.3B GLOBAL BLOCKCHAIN SPENDING IN 2020	BLOCKCHAIN COULD BOOST GLOBAL GDP BY
346,000,000 PAYPAL USERS CAN NOW BUY & SELL CRYPTOCURRENCIES	\$1.76T OVER THE NEXT DECADE
2,570,000,000 ACTIVE FACEBOOK USERS COULD SOON HAVE ACCESS TO A DIGITAL CURRENCY	3.5B INTERNET USERS
Sectors Predicted to Benefit Most From Blockchain:	\$4.4B IN DIGITAL PAYMENTS
<ul style="list-style-type: none">  PUBLIC ADMINISTRATION  EDUCATION  HEALTHCARE 	\$300M VALUE OF TRANSACTIONS PROCESSED BY CHINA'S DIGITAL YUAN PILOTS
10% OF GLOBAL GDP LIKELY TO BE STORED ON BLOCKCHAIN BY 2027	10% OF WORLDWIDE INFRASTRUCTURE PROJECTED TO BE USING BLOCKCHAIN WITHIN A DECADE

Retail Payments, Trading, and Digital Wallets

VISA:

- Visa [partnered](#) with First Boulevard, “a digitally native neobank focused on building generational wealth for the Black community. First Boulevard will be first to pilot Visa’s new suite of crypto APIs, which will enable their customers to purchase, custody and trade digital assets held by Anchorage, a federally chartered digital asset bank. The pilot will serve as a key first step in supporting API capabilities that help additional Visa clients access and integrate crypto features into their product offering, and is anticipated to launch later this year.”
- Visa also [announced](#) that “transactions can be settled using USD Coin (USDC), a stablecoin powered by the Ethereum blockchain. Crypto.com is the first company to test the new capability with its own Visa-branded cards.”



PayPal

- “PayPal [plans](#) to expand its recently-introduced cryptocurrency offering into the UK market... On its Investors day, PayPal said the existing financial system is outdated, and that it will be investing a lot of money into blockchain and digital currencies... PayPal plans to roll out these features to its mobile payment service app, Venmo in select international markets before the end of the first half. Additionally, the company will make crypto available this year as a funding source for retail purchases at its 29 million merchants worldwide.”
- PayPal [announced](#) that customers “who hold bitcoin, ether, bitcoin cash and litecoin in PayPal digital wallets will now be able to convert their holdings into fiat currencies at checkouts to make purchases... The service, which PayPal revealed it was working on late last year, will be available at all of its 29 million merchants in the coming months, the company said.”

Mastercard

- “We are [preparing](#) right now for the future of crypto and payments, announcing that this year Mastercard will start supporting select cryptocurrencies directly on our network. This is a big change that will require a lot of work. We will be very thoughtful about which assets we support based on our principles for digital currencies, which focus on consumer protections and compliance.”
- “Not all of today’s cryptocurrencies will be supported on our network. While stablecoins are more regulated and reliable than in the recent past, many of the hundreds of digital assets in circulation still need to tighten their compliance measures, so they won’t meet our requirements.”
- Mastercard previously teamed up with Wirex and BitPay “to create crypto cards that allow people to transact using their cryptocurrencies.”

Signature Bank

- “Deposits from digital currency customers now [make up](#) nearly 16% of total deposits at New York’s Signature Bank... Signature Bank CEO Joseph DePaolo added that the bank’s blockchain-based payments platform Signet is the main driver of deposit growth in digital asset banking, and that institutional adoption is causing the vertical to ‘grow by leaps and bounds.’ Prominent customers include Voyager Digital Holdings, Polychain Capital and bitFlyer USA.”

Diem Association (formerly known as Libra Association)

- February 16, 2021: “Fireblocks is [partnering](#) with First Digital Asset Group to accelerate the adoption of Diem payments. Together, we will provide an easy-to-use platform for licensed providers to launch services supporting Diem.”
- Diem is [looking to launch](#) sometime this year.

Coinbase

- Coinbase is [preparing](#) to go public at a \$67 billion dollar valuation. This makes it slightly smaller than CME Group (about \$70 billion market cap) and CBOE Global Markets (\$10 billion market cap).
- *Bloomberg* [reported](#) the direct listing will take place in April.

Commercial/Wholesale Banking

J.P. Morgan (ONYX and LIINK)

- From [GBBC 2021 Annual Report](#): “Liink by J.P. Morgan is the first bank-led, production-grade, scalable, and peer-to-peer blockchain-based network. It serves to address the longstanding challenges of sharing payments-related information across institutions. More than half of the world’s largest banks have signed up to join the new paradigm, using shared ledgers to simplify information exchange around how money moves.”
- “Onyx Digital Assets is a new Onyx network for the exchange of digital assets, and platform for digital asset use cases. At the end of 2020, J.P. Morgan launched Onyx Digital Assets, along with its first live application for the execution of intraday repurchase transactions or ‘repos’, which allowed for the simultaneous exchange of cash for securities on a blockchain, without physical movement of securities. Onyx Digital Assets is a new network for the exchange of digital assets and platform for digital asset use cases.”
- “J.P. Morgan recognized an opportunity to offer a financial technology with the initial goal of significantly enhancing active intraday liquidity management and reducing reliance on unsecured funding. By more efficiently securing a portion of liquidity provision to J.P. Morgan clients with intraday collateral, J.P. Morgan aims to reduce market risk by reducing exposure to counterparty credit risk.”

Wells Fargo

- Wells Fargo [began](#) its Digital Cash pilot in 2020, which is used to “complete internal cross-border payments within the group. The bank plans to scale the distributed ledger (DLT) network to other operations in the future. Wells Fargo clarified that its blockchain network will not be connected to any other digital cash solution and is proprietary to the group and its subsidiaries.”

Citigroup

- “On Tuesday, January 28, 2020, Citigroup and Goldman Sachs quietly [conducted](#) what some will consider a historic transaction: the first equity swap on a new blockchain built using tools originally designed for ethereum. While this first transaction, a total return swap in which one bank agreed to make a payment based on the returns of an underlying asset, and the other based on a set rate, involved only the two counterparties, another 13 are waiting in the rafters.”
- [Using](#) “its treasury function for cleared derivatives through a new partnership with post-trade and blockchain technology provider Baton Systems. Citi will automate rules for the movements of cash and securities collateral to and from clearing houses in a bid to reduce risk by removing manual entries in systems.”

Goldman Sachs

- January 2021: [Issued](#) “a request for information (RFI) to explore digital asset custody, according to a source inside the bank... There has been chatter about Goldman perhaps offering something akin to prime brokerage services involving crypto. However, the Goldman insider said the bank is looking at custody but not prime brokerage.”



Fidelity Digital Assets

- “Fidelity Digital Assets [is](#) the first step towards a long-term vision to create a full-service enterprise-grade platform for storing, trading, and supporting eligible digital assets. This platform is built to the same exacting standard as exists in other Fidelity businesses, while incorporating the unique capabilities of blockchain technology to deliver a completely new offering for institutional investors.”

BNY Mellon

- BNY Mellon “[will hold](#), transfer and issue bitcoin and other cryptocurrencies on behalf of its asset-management clients. BNY Mellon said it would allow digital assets to pass through the same plumbing used by managers’ other, more traditional holdings—from Treasuries to technology stocks—using a platform that is now in prototype. The bank is already discussing plans with clients to bring their digital currencies into the fold.”

Market Infrastructure

CME Group

- “CME’s Bitcoin [futures](#) contract, ticker symbol BTC, is a USD cash-settled contract based on the CME CF Bitcoin Reference Rate (BRR), which serves as a once-a-day reference rate of the U.S. dollar price of bitcoin. The BRR aggregates the trade flow of major bitcoin spot exchanges during a one-hour calculation window into the U.S. dollar price of one bitcoin as of 4 p.m. London Time.”
- [Introduced](#) Ethereum futures in February.

Nasdaq

- Nasdaq Crypto Index (NCI) is “[designed](#) to be dynamic in nature, broadly representative of the market, and readily trackable by investors.”

Intercontinental Exchange (ICE)

- Cryptocurrency Data Feed “[delivers](#) real-time and historical data for the most widely and actively traded cryptocurrencies. Covering 90+ cryptocurrencies from leading venues, markets and exchanges across the globe.”

Bakkt

- The digital asset exchange is [going public](#) through a SPAC sponsored by Victory Park Capital; valued at about \$2.1 billion.

Investments

Tesla

- Tesla [purchased](#) \$1.5 billion worth of bitcoin and announced plans to begin accepting it as payment.
- Elon Musk [announced](#) that customers can “buy a Tesla with Bitcoin... Bitcoin paid to Tesla will be retained as Bitcoin, not converted to fiat currency.”

Square

- Square [purchased](#) \$170 million worth of bitcoin

MicroStrategy

- Most recently [purchased](#) over \$1 billion worth of bitcoin, it now holds 90,531 bitcoin.

MassMutual

- “Along with a \$5 million equity investment in NYDIG, MassMutual has also [purchased](#) \$100 million in Bitcoin for its general investment account in a transaction facilitated by NYDIG.”

Guggenheim Partners

- “Guggenheim is [reserving](#) the right for its \$5.3 billion Macro Opportunities Fund -- which aims for total return via fixed income and other debt and equity securities -- to invest in the Grayscale Bitcoin Trust.”

BlackRock

- BlackRock CIO Rick Rieder [said](#) the firm has “started to dabble a bit” in bitcoin. It also added bitcoin futures as a potential investment for its funds.

University Endowments

- Some large university endowments, including Harvard and Yale, have been [buying](#) cryptocurrency for the past year.

Regulation

Office of the Comptroller of the Currency (OCC)

- July 2020: [concluded](#) “that providing cryptocurrency custody services, including holding unique cryptographic keys associated with cryptocurrency, is a modern form of traditional bank activities related to custody services. Crypto custody services may extend beyond passively holding ‘keys’”
- January 2021: “[published](#) a letter clarifying national banks’ and federal savings associations’ authority to participate in independent node verification networks (INVN) and use stablecoins to conduct payment activities and other bank-permissible functions.”
- February 2021: “[Granted](#) its second conditional approval... Protego intends to provide custody services for its clients’ Bitcoin and Ethereum assets — with additional cryptocurrencies expected after launch.”

Financial Crimes Enforcement Network (FinCEN)

- FinCEN received significant pushback on its proposed unhosted wallet rule “to require banks and money service businesses (“MSBs”) to submit reports, keep records, and verify the identity of customers in relation to transactions involving convertible virtual currency (“CVC”) or digital assets with legal tender status (“legal tender digital assets” or “LTDA”) held in unhosted wallets, or held in wallets hosted in a jurisdiction identified by FinCEN.”
 - The future of this proposed rule is unclear.



U.S. Securities and Exchange Commission (SEC)

- The SEC is currently engaged in a lawsuit with Ripple Labs and executives Brad Garlinghouse and Chris Larsen, alleging that the sale of XRP constitutes an unlawful offer and sale of securities. Ripple has argued that there is “clear evidence that there was substantial uncertainty about the SEC’s interpretation of its own rules, particularly given that it was eight years until the SEC brought this case while XRP was trading in the market, particularly given the 2015 DOJ and FinCEN determination that XRP was a currency, and particularly given that it has determined that bitcoin and ether are not securities.”

New York

- Bitfinex and Tether [settled](#) a lawsuit alleging that they deceived investors by failing to maintain a full U.S. dollar backing of their stablecoin. They are paying an \$18.5 million fine and agreeing to “cease trading activity with New Yorkers and submit quarterly transparency reports.”

U.S. States with Active Blockchain Bills

- Arizona, Hawaii, Illinois, Kentucky, North Dakota, Nebraska, New Jersey, New York, Rhode Island, South Carolina, South Dakota, Texas.

Global Trends

Central Bank Digital Currencies (CBDCs)

- [Bank for International Settlements \(BIS\)](#): “Most central banks are now exploring the case for CBDCs in some way and, overall, the survey indicates a continuous move from purely conceptual research to experimentation and pilot projects. Yet despite these developments, a widespread roll out of CBDCs still seems some way off.”
- China has [progressed](#) with its testing of the DC/EP, most recently beginning trials with MYbank and WeBank, which are backed by Ant Group and Tencent, respectively.
- Mu Changchun, director of the People's Bank of China (PBoC) digital currency, has [provided](#) more details on DC/EP, including its use of “controllable anonymity,” in which anonymous wallets will be allowed to be opened with a mobile phone number but will have low transaction limits. Stronger KYC will be required to increase transaction limits.
- Additionally, Mu [proposed](#) a set of global CBDC rules that include interoperability between CBDC systems in different jurisdictions, synchronized information and fund flows to facilitate regulation, and ensuring that a “digital currency supplied by one central bank should not impede another central bank’s ability to carry out its mandate for monetary and financial stability.”

Decentralized Finance (DeFi)

- The DeFi market has experienced significant growth, with some of the top tokens (UNI, AAVE) breaking into the top 20 in terms of market cap. Given that this is a relatively new application of blockchain it will be important to watch this going forward.
 - Regulatory risk remains high and we expect regulators around the world to weigh in on defi.

Regulation

- Countries are tightening AML/KYC regulations to comply with the newly implemented FATF Recommendation 16, which [applies](#) the travel rule to virtual currencies.
- India is [moving to ban](#) “private cryptocurrencies” while allowing for blockchain technology; though there have been mixed messages from the government and the legislation has not yet been revealed.
- Three bitcoin ETFs have launched in Canada, with Purpose Bitcoin ETF [passing](#) \$1 billion AUM a month after launch; they are trading on the Toronto Stock Exchange.
 - Evolve Funds Group and CI Global Asset Management have both [filed](#) a preliminary prospectus for ether ETFs in Canada.
- The Brazil Securities and Exchange Commission [approved](#) QR Capital’s bitcoin ETF, which will trade on the B3 exchange

Non-fungible tokens (NFTs)

- NFTs [can be](#) many things – art, collectibles, video game items, music – that have generally have three traits:
 - Unique – the NFT carries immutable information that differentiates it from other assets
 - Scarce – there are a set number of assets created
 - Indivisible – an NFT can usually not be split into smaller units, similar to how you cannot buy half of a trading card.
- We are still in the very early stages of NFTs, in which most NFTs are digital-native art or collectibles. In the future it is possible real-world assets, for example land titles, tokenized as NFTs.
 - o Examples:
 - The NBA, NBA Players Association, and Dapper Labs [joined](#) to create NBA Top Shot, which has generated a significant amount of media attention.
 - Michael Jordan and Kevin Durant [joined](#) a \$305 million funding round for Dapper Labs.
 - Hashmasks [sold](#) 16,000 NFTs, and rare Hashmasks were sold for 100s of thousands of dollars afterwards.
 - A virtual piece of land on Axie Infinity [sold](#) for 888 ether, about \$1.5 million at the time.
 - Mark Cuban, Chamath Palihapitiya, and Marc Benioff [participated](#) in the Series A for SuperRare, a marketplace for NFTs.

References and Further Reading

Industry Associations

- [Global Standards Mapping Initiative \(GSMI\)](#)
 - o [Legal & Regulatory Report](#)
 - o [Technical Standards Report](#)
 - o [Interactive Map](#)
- [GBBC 2021 Annual Report](#)
- GBBC is working on the World Economic Forum [Digital Currency Governance Consortium’s](#) CBDC report due in July 2021.



International Bodies

- Organisation for Economic Co-operation and Development (OECD)
 - o [“The Tokenisation of Assets and Potential Implications for Financial Markets”](#)
- Bank for International Settlements (BIS)
 - o [“Ready, steady, go? - Results of the third BIS survey on central bank digital currency”](#)

United States Government

- Financial Stability Board (FSB)
 - o [“Regulation, Supervision and Oversight of “Global Stablecoin” Arrangements”](#)
- Federal Reserve Bank of St. Louis
 - o [“Decentralized Finance: On Blockchain- and Smart Contract-Based Financial Markets”](#)
- Federal Reserve Bank of Philadelphia
 - o [“Central Bank Digital Currency: Central Banking For All”](#)

Companies

- Accenture
 - o [“Assessing blockchain’s business value”](#)
- PwC
 - o [“Time for Trust: How blockchain will transform business and the economy”](#)
 - Blockchain technologies could boost the global economy US\$1.76 trillion by 2030 through raising levels of tracking, tracing and trust.