THE BLOCK | Research

2021 Digital Asset Outlook

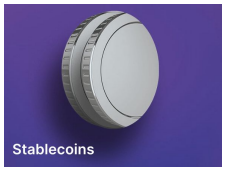
Monthly Analyst Call

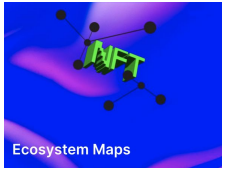
About The Block Research

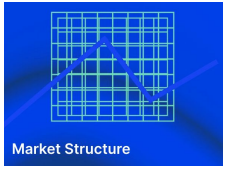
Learn more here

Industry leading research and analysis produced on a daily basis, covering an array of topics within the digital asset space.

The topics we cover







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The Research Team

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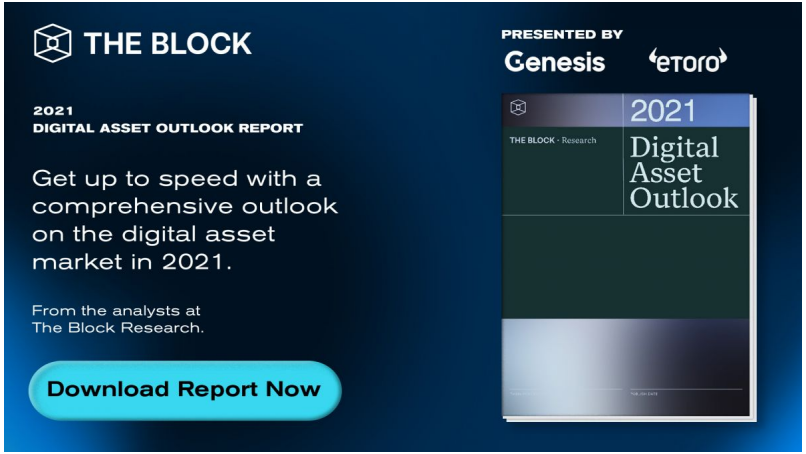
2020 Year in Review, 2021 Outlook

For more information and research behind these slides, see:

[2020 Year in Review]

[The Block Research 2021 Outlook Report]



Agenda

6 State of the Market - Lars Hoffmann

16 Public and Private Market Activity in the Spotlight - Ryan

23 2021 DeFi Outlook - Mika

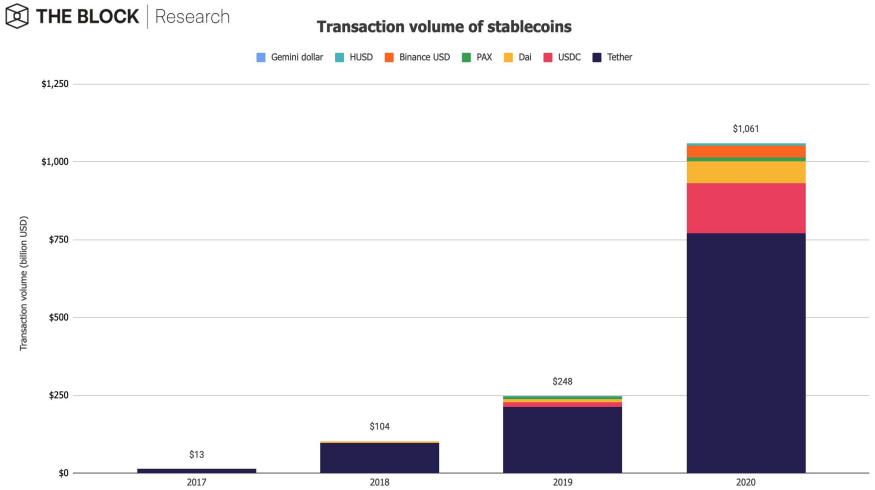
29 The STABLE Act Proposal - Mike Rogers

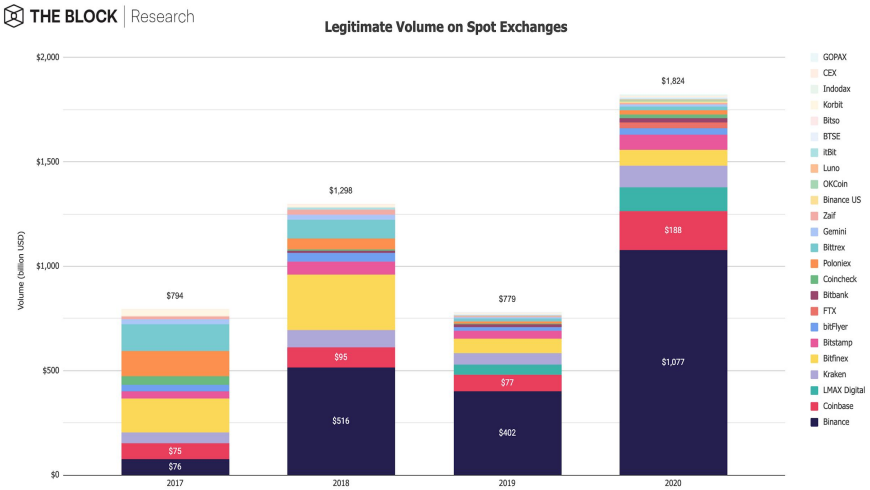
Please submit questions during the presentation through Livestorm

State of the Market

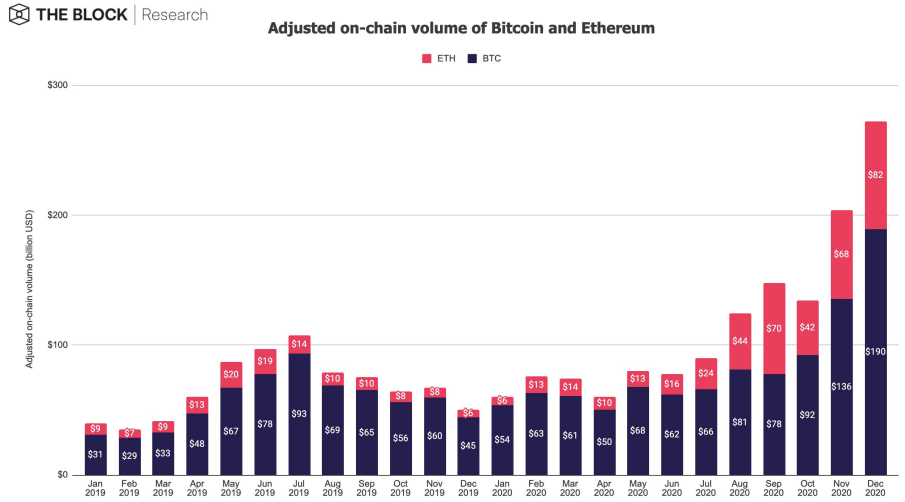
Lars Hoffmann

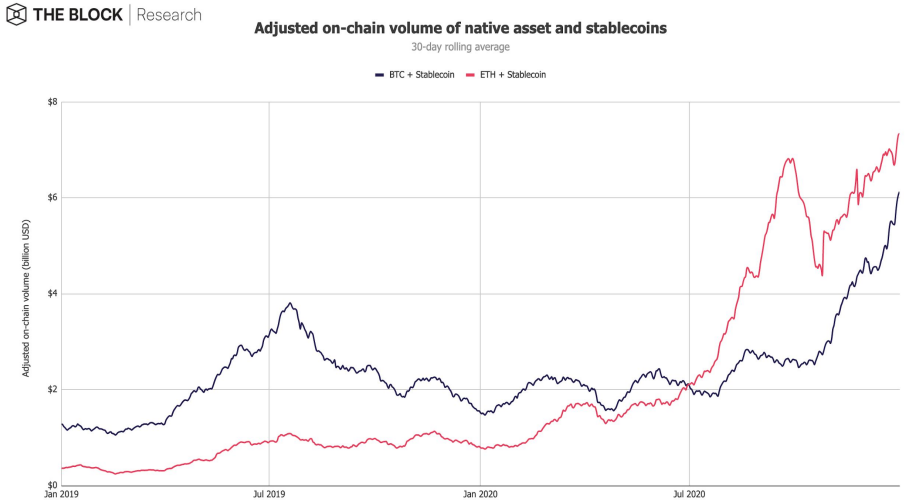
Crypto becomes a trillion dollar asset class, as several crypto metrics are now (again) measured in the trillions





Total adjusted on-chain volume increased by 351% for 2020





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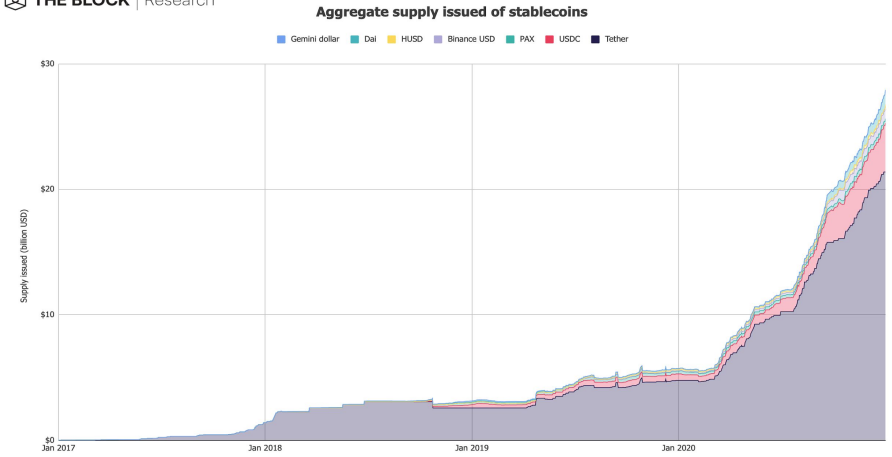

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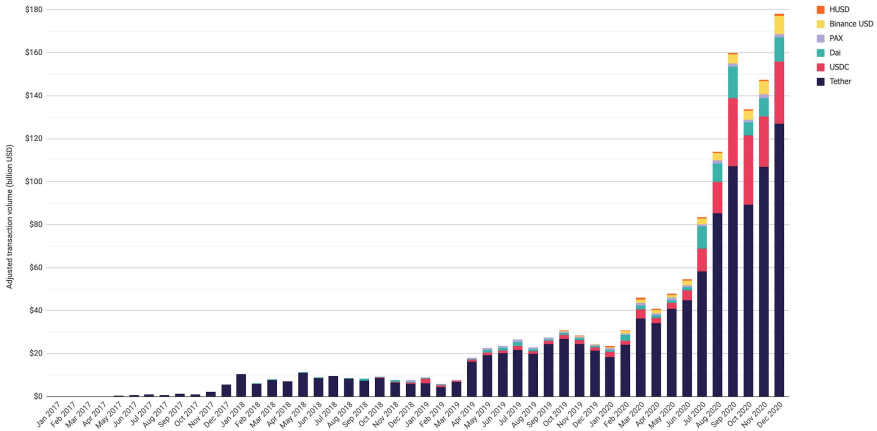

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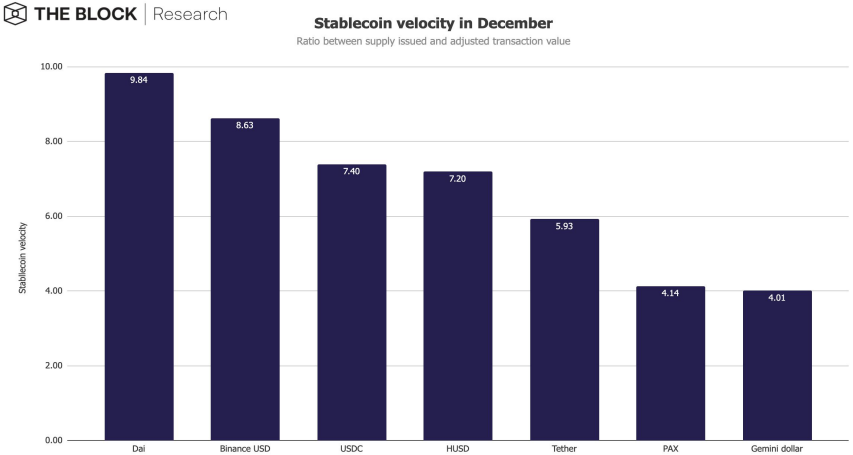

Issued stablecoin supply grew by 375% for 2020

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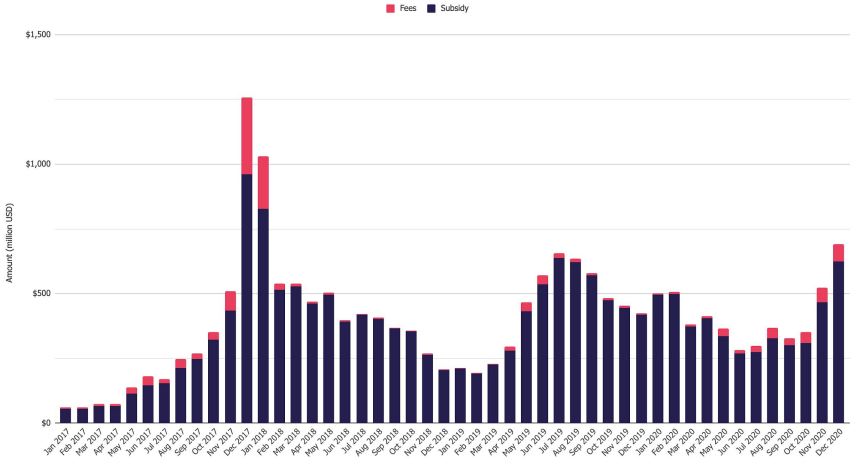
Bitcoin's miner revenue by month



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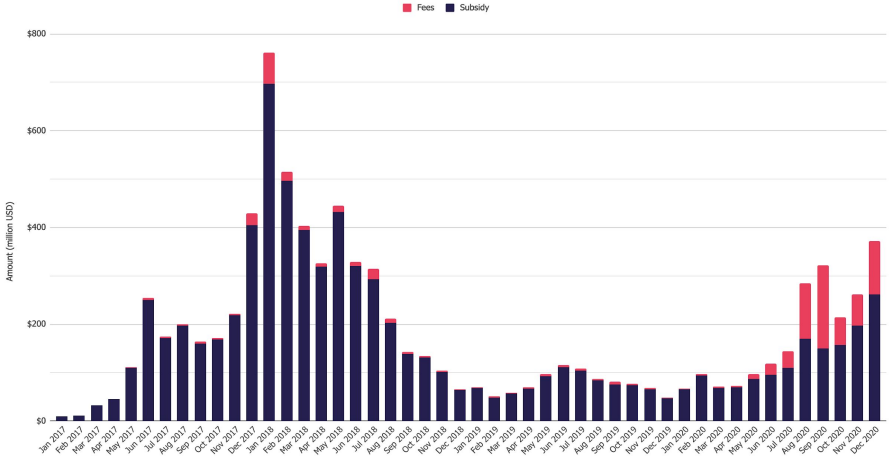
Ethereum's miner revenue by month



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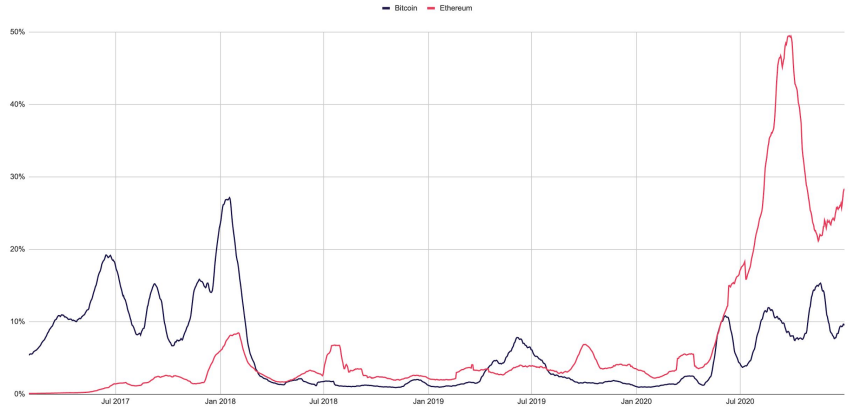
Transaction fees as % of total miner revenue

30-day rolling average



Bitcoin and Ethereum miners generated $7.1 billion in revenue together in 2020

Total web traffic for crypto exchanges came in at 1.47 billion for 2020

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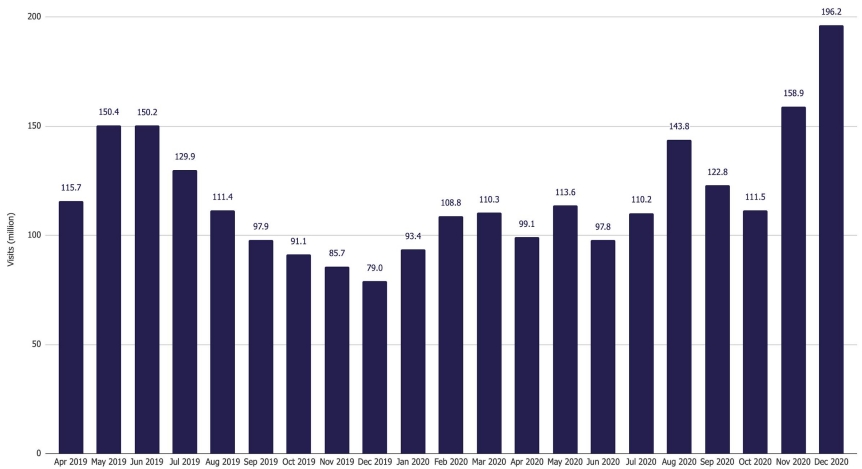

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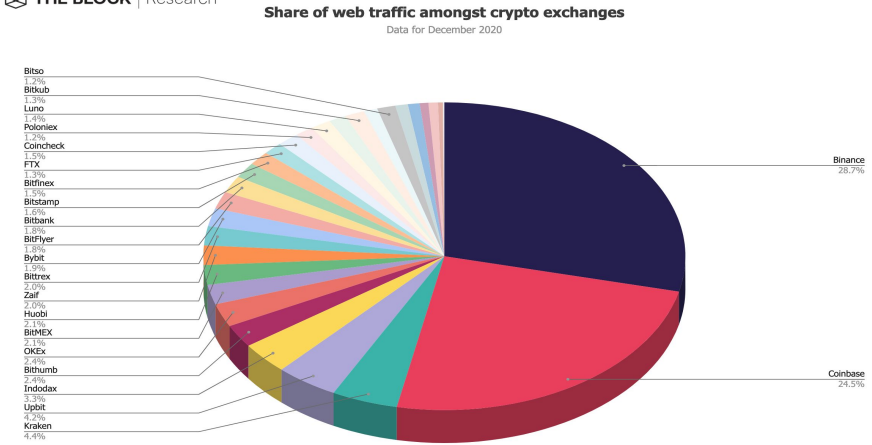

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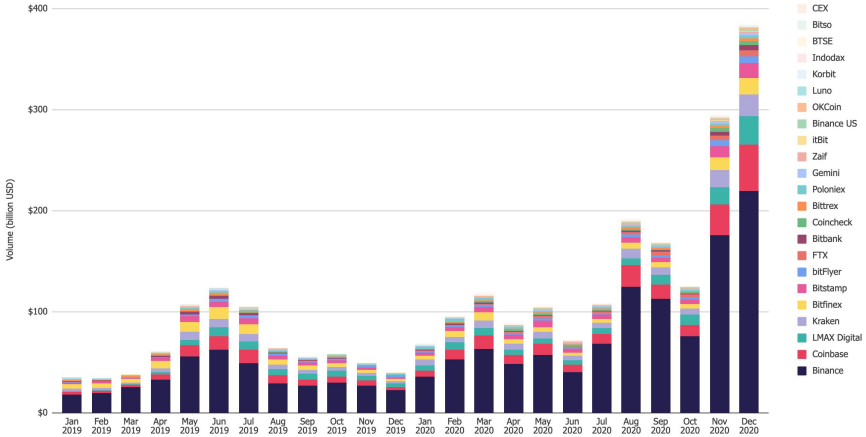
Legitimate volume on spot exchanges



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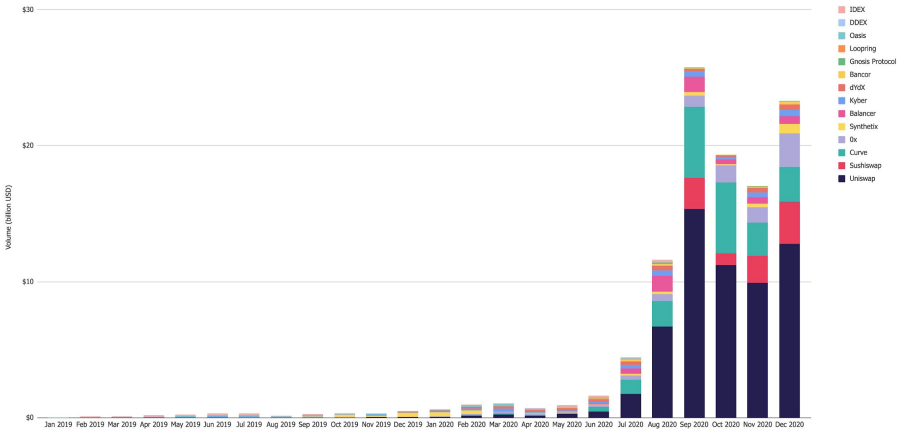
Volume on Decentralized Exchanges



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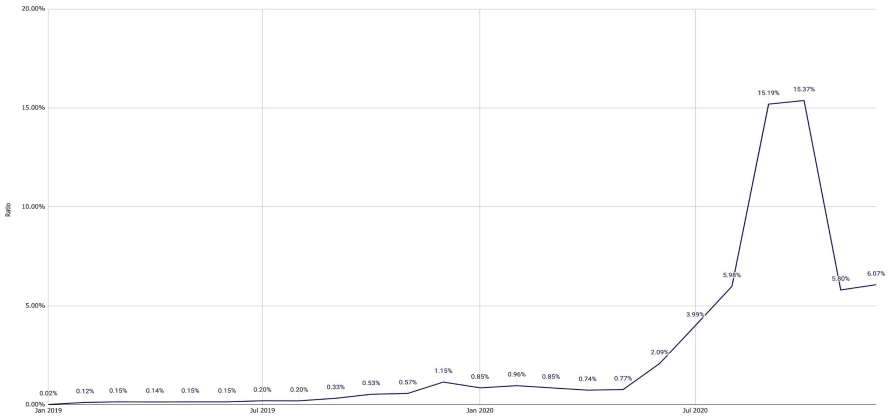
Ratio between Decentralized Exchange and Centralized Exchange Trading Volume



Spot volume surpassed the $1 trillion mark, with $1.82 trillion

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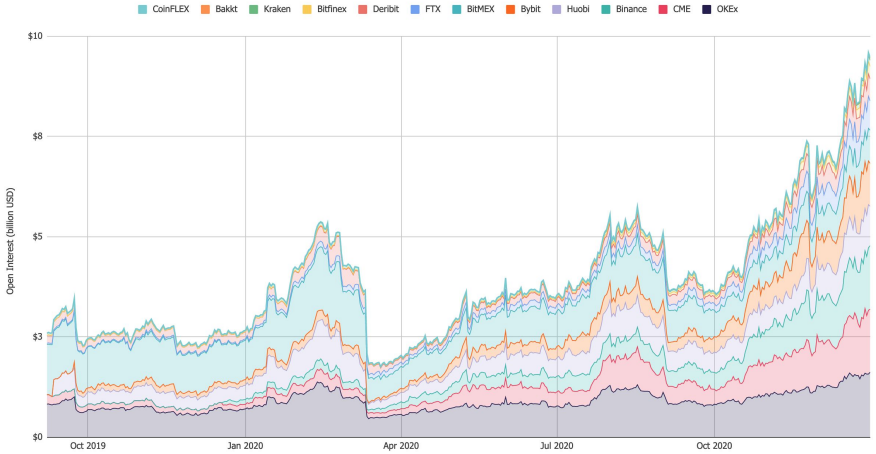
Aggregated Open Interest of Bitcoin futures



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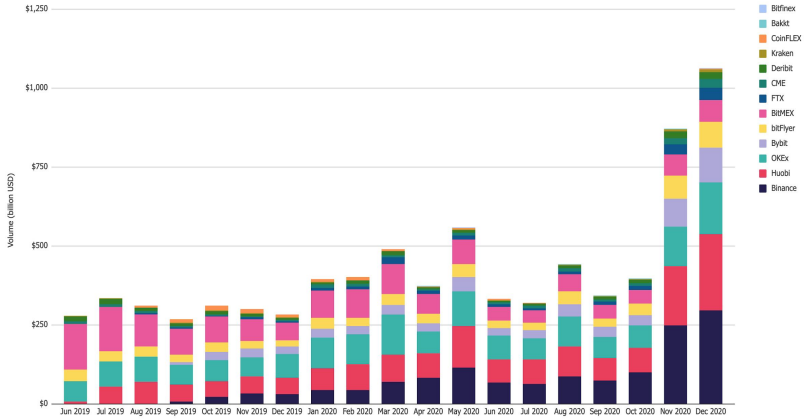
Monthly volume of Bitcoin futures



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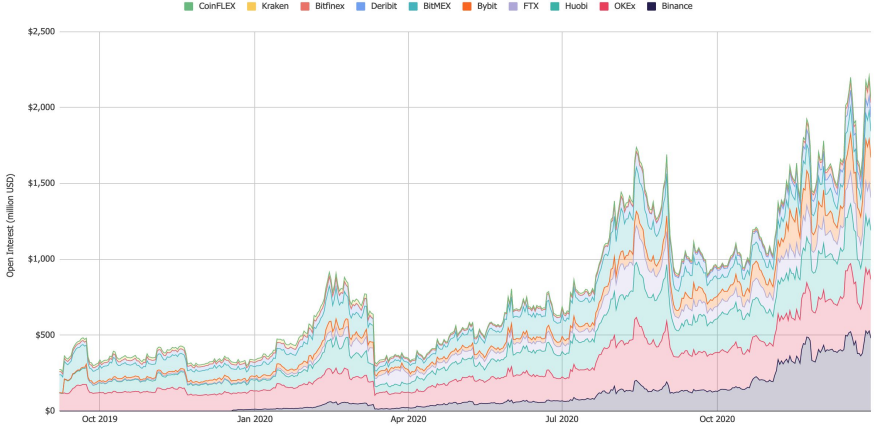
Aggregated Open Interest of Ethereum futures



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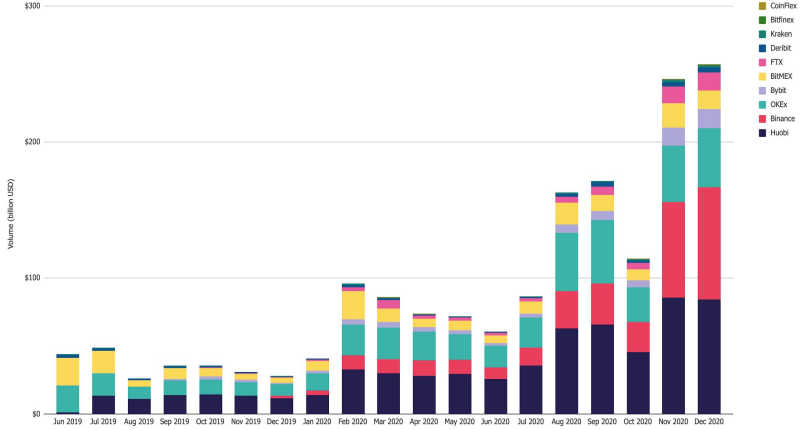
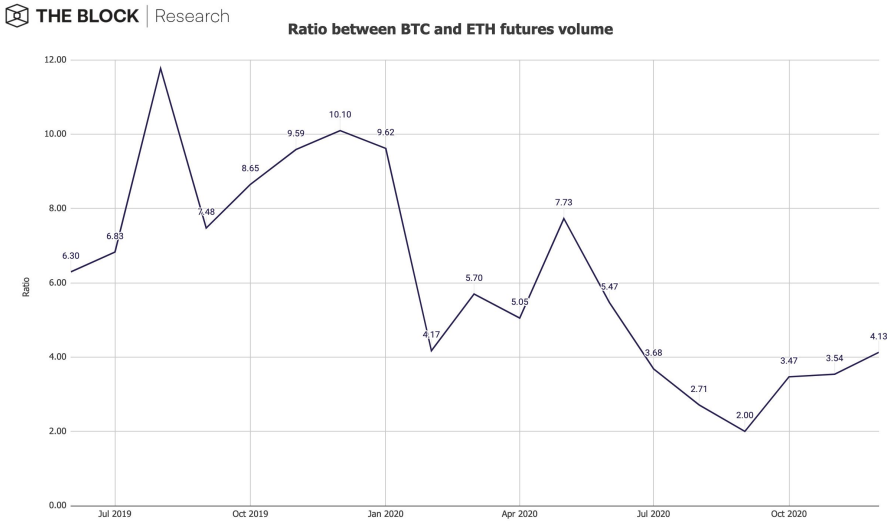
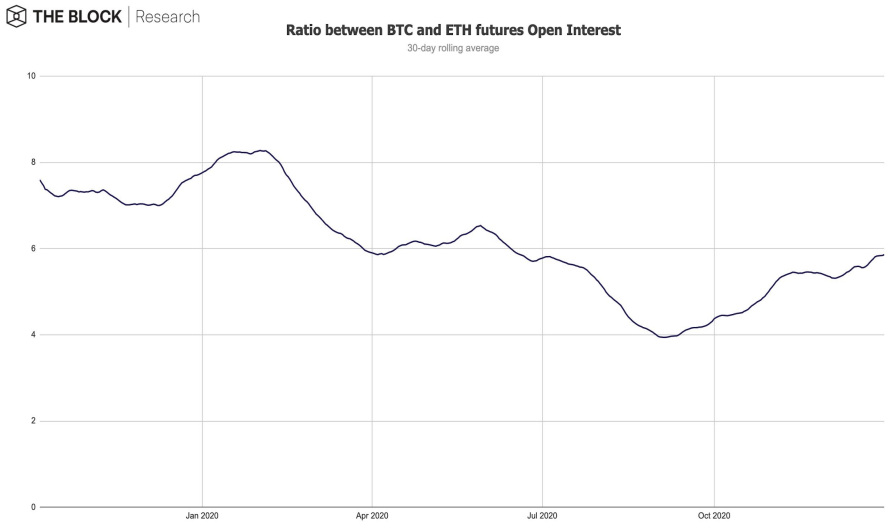
Monthly volume of Ethereum futures



Bitcoin futures continue to outperform Ethereum futures in both trade volume (4.8) and open interest (5.8) in 2020





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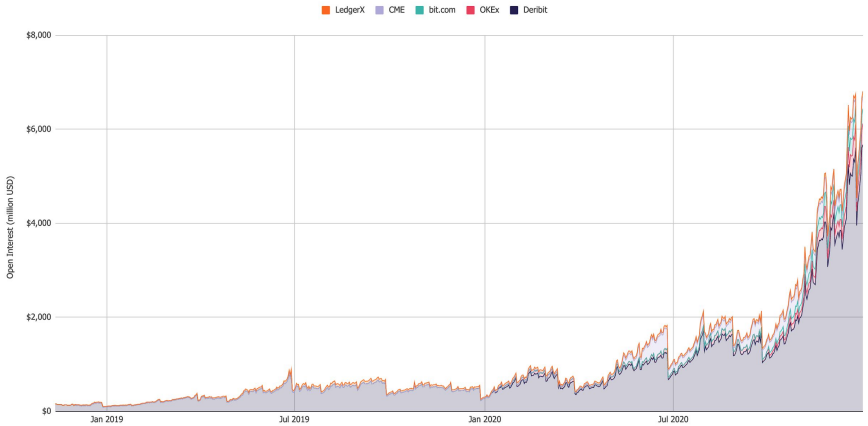
Aggregated Open Interest of Bitcoin options



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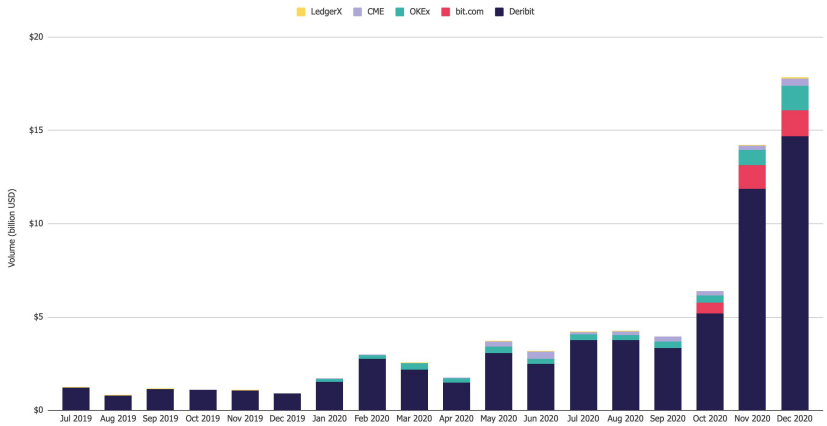

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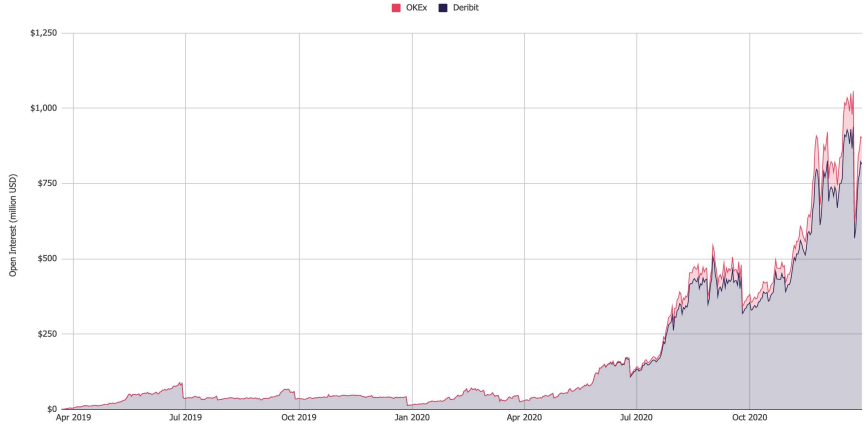
Aggregated Open Interest of Ethereum options



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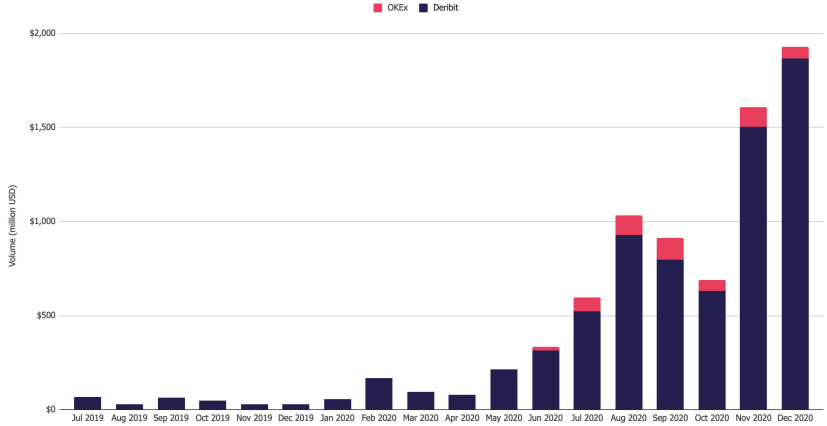
Monthly volume of Ethereum options



You can find more metrics as well as live data on The Block's Data Dashboard

Public and Private Market Activity in the Spotlight

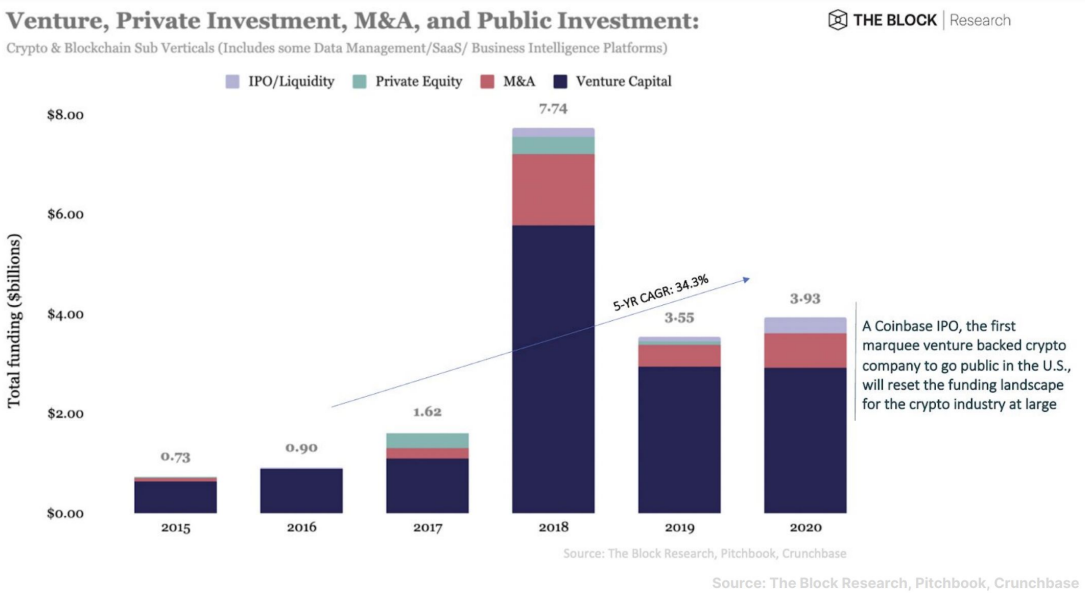
Ryan Todd

Funding Trends: 2021 positioned for record capital formation

- Roughly **$3.1 billion in venture funding** was allocated to crypto/blockchain projects in 2020

- Note funding lagged previous bull cycle in 17'/18'; even with COVID-19 putting strain on financing landscape in 1H20, **2020 saw ~10% increase in total dollar value of deals and financing**, led by an increase in M&A and secondary/public market liquidity events

- 5-year CAGR running at ~34%; Coinbase IPO, Public Markets activity, and the expectation for an uptick in M&A **have positioned 2021 for a record year in terms of financing and deal activity**



Source: The Block Research, Pitchbook, Crunchbase

Please submit questions during the presentation through Livestorm

Similar to funding trends, deal activity (M&A) lags price cycles

- Although M&A activity & corporate development are still in their infancy, **2020 recorded the most M&A transactions in the sector's history**… but in terms of top dollar sized deals, the bulk of the largest M&A deals still come from 2018/19

- To date, **Crypto Trading Firms & Exchanges have seen the most consolidation and represent one-third of the 15 largest M&A deals**. Other sub-sectors that have more than one appearance include Brokerage/Custody, Mining, and Software.

- As more traditional financial services expand crypto capabilities (buy/sell, custody, structured products, yield/rewards products, etc.) the **expectation is that firms would rather look to partner and acquire**, than build in-house

M&A ALL-TIME

DATE	TARGET	ACQUIRERS	AMOUNT ($M)	CATEGORY	TARGET: COUNTRY
10/29/2018	Bitstamp	NXMH	$400.0	Trading & Exchange	England
3/31/2020	CoinMarketCap	Binance	$400.0	Data & Analytics	United States
2/26/2018	Poloniex	Circle	$400.0	Trading & Exchange	United States
8/26/2020	Blockfolio	FTX	$150.0	Investing	United States
11/12/2019	Poloniex	Investment group led by Justin Sun	$150.0	Trading & Exchange	United States
6/1/2018	BitTorrent	Tron Foundation	$140.0	Software	United States
4/16/2018	Earn.com	Coinbase	$120.0	Software	United States
12/2/2017	BiWang Group	CollinStar Holdings	$100.0	Mining	China
2/4/2019	CF Benchmarks	Kraken	$100.0	Trading & Exchange	England
5/27/2020	Tagomi	Coinbase	$90.0	Brokerage/Custody	United States
7/10/2018	CryptoGlobal	HyperBlock	$80.4	Mining	Canada
9/26/2017	Korbit	Nexon	$79.5	Trading & Exchange	South Korea
8/30/2018	Patronics Holdings	Huobi	$75.0	Electronics	Hong Kong
5/22/2015	GoldMoney	BitGold	$60.0	Banking & Payments	Canada
8/15/2019	Xapo	Coinbase	$55.0	Brokerage/Custody	United States

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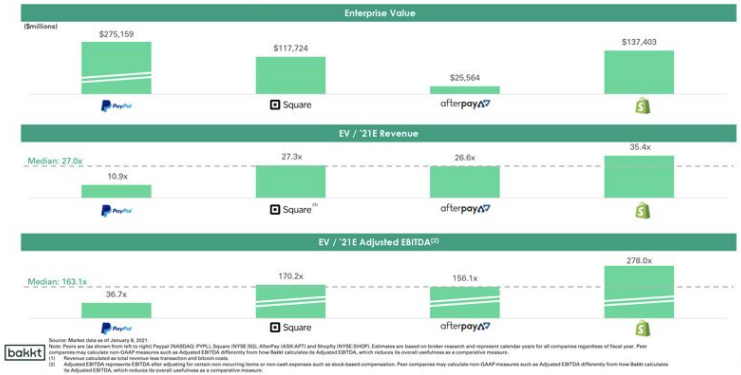
Several public market offerings (IPOs and SPACs) set to reprice the private market higher

- ICE owned Bakkt set to go public via SPAC - acquired by Victory Park Capital (VPC) at $2 billion valuation
- Pre-product, pre-revenue ("financial performance" is all projections 5 years out). Comps to the most valuable fintechs in the world - priced at 36x 21' P/S. **If this flies, what will a business that does +$100m in revenue in 2020 go for?**

Peer Valuation Perspective

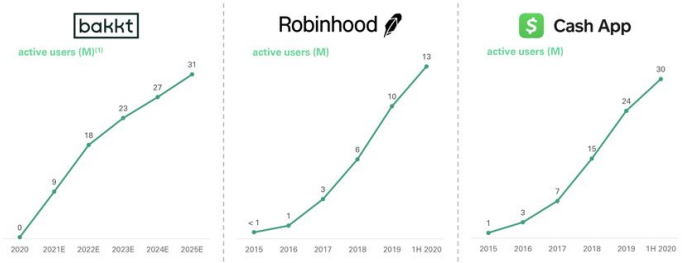


Projection Summary

($ millions)	Projected Financials 2021E	2022E	2023E	2024E	2025E	CAGR '21E - '25E
Transaction[1]	$16	$137	$234	$294	$351	
Crypto Buy/Sell[2]	849	2,863	4,413	5,410	6,206	
Subscription and Services	22	26	29	30	32	
Other	1	4	6	7	8	
Total Revenue	**$889**	**$3,030**	**$4,681**	**$5,741**	**$6,597**	**65%**
% YoY Growth		*241%*	*55%*	*23%*	*15%*	
Transaction-Based Expenses[2]	**(834)**	**(2,806)**	**(4,325)**	**(5,302)**	**(6,082)**	
Total Revenue Less Transaction-Based Expenses	**$55**	**$224**	**$357**	**$439**	**$515**	**75%**
% YoY Growth		*309%*	*59%*	*23%*	*17%*	
Operating Expenses[3]	($259)	($316)	($331)	($314)	($320)	
Operating Income	**(204)**	**(92)**	**25**	**125**	**196**	
(+) D&A	20	41	54	56	46	
						'23E - '25E
EBITDA	**($184)**	**($46)**	**$79**	**$181**	**$242**	**75%**
% YoY Growth		*N/A*	*N/A*	*130%*	*33%*	
Adjustments						
(+) Parent Equity Contribution Amortization	10	18	27	34	38	
(+) Non-Cash Compensation[3]	5	5	5	5	5	
Adj. EBITDA	**($169)**	**($23)**	**$111**	**$221**	**$285**	**60%**
% of Total Revenue Less Transaction-Based Expenses	*N/A*	*N/A*	*31%*	*50%*	*55%*	
% YoY Growth		*N/A*	*N/A*	*98%*	*29%*	

Projected User Growth

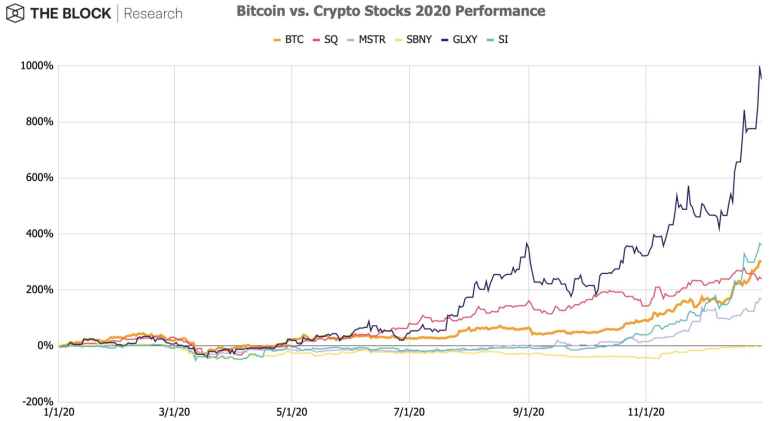
Conservative growth assumptions given increasing digital asset adoption today versus 2015



Current public pure play crypto companies had a record year

Pure play crypto equity actually outperformed bitcoin in 2020: Galaxy Digital (GLXY): 952%, Riot Blockchain (RIOT: 1,800%, Hive (HIVE): 2,500%, Silvergate (SI): 360%, Bitcoin (BTC): 330%

Bitcoin has become an investor relations (IR) tool: Led by MicroStrategy and Square, MicroStrategy has clearly seen material impact to share price as stock is trading well above NAV of bitcoin holdings. The CFO said the announcement has been "well-received by current and prospective shareholders and the general technology community...and has allowed MicroStrategy to tap into the passion of the broader crypto market and the smart sophisticated technologists...driving a notable and unexpected benefit from our investment in bitcoin in elevating the profile of the company in the broader market."



PayPal

Square

Silvergate

MicroStrategy

Bitcoin exposure products continue to set new records

Grayscale Bitcoin Trust (GBTC): Now at +600K BTC in the trust (+$20B AUM, just opened up new placements 1/12/21), top 3 OTC traded ticker in terms of volume on OTC markets. We estimate that Grayscale made nearly $30 million in revenue of suite of products in December alone

CME Bitcoin Futures: Now has the largest market share of bitcoin futures (!), more than 100 reportable large open interest holders in November, open interest at $2 billion driven by hedge funds (volume in December near $30B), CME ETH futures set to launch next month

Bitcoin ETF: 50% of The Block Investor 2021 Outlook Survey participants believe a bitcoin ETF will be approved and listed in the U.S in 2021 (27% neutral)

CME Bitcoin futures cracks Top 60 (80th Percentile) of CFTC reportable futures contracts among total # of large open interest holders in October (Avg)

Rank	Contract	October Avg Total Large Open Interest Holders	Percentile
1	CORN - CHICAGO BOARD OF TRADE	789.25	100%
2	SOYBEANS - CHICAGO BOARD OF TRADE	677.5	99%
3	S&P 500 Consolidated - CHICAGO MERCANTILE EXCHANGE	552.75	99%
4	E-MINI S&P 500 STOCK INDEX - CHICAGO MERCANTILE EXCHANGE	552.5	98%
5	MSCI EMERGING MKTS INDEX - ICE FUTURES U.S.	427.25	98%
6	COFFEE C - ICE FUTURES U.S.	392.25	98%
7	WHEAT-SRW - CHICAGO BOARD OF TRADE	385	97%
8	10-YEAR U.S. TREASURY NOTES - CHICAGO BOARD OF TRADE	376.75	97%
9	GOLD - COMMODITY EXCHANGE INC.	367.5	97%
10	LIVE CATTLE - CHICAGO MERCANTILE EXCHANGE	353	96%
11	E-MINI RUSSELL 2000 INDEX - CHICAGO MERCANTILE EXCHANGE	347.5	96%
12	CRUDE OIL, LIGHT SWEET - NEW YORK MERCANTILE EXCHANGE	331.5	95%
13	SOYBEAN OIL - CHICAGO BOARD OF TRADE	295	95%
14	EURO FX - CHICAGO MERCANTILE EXCHANGE	294.25	95%
15	NATURAL GAS - NEW YORK MERCANTILE EXCHANGE	288.25	94%
16	LEAN HOGS - CHICAGO MERCANTILE EXCHANGE	287.25	94%
17	5-YEAR U.S. TREASURY NOTES - CHICAGO BOARD OF TRADE	286.5	94%
18	SOYBEAN MEAL - CHICAGO BOARD OF TRADE	284.75	93%
19	2-YEAR U.S. TREASURY NOTES - CHICAGO BOARD OF TRADE	283.75	93%
20	NASDAQ-100 Consolidated - CHICAGO MERCANTILE EXCHANGE	281	92%
56	BITCOIN - CHICAGO MERCANTILE EXCHANGE	87.5	79%
261	EURO FX/JAPANESE YEN XRATE - CHICAGO MERCANTILE EXCHANGE	20	0%

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Grayscale Bitcoin Trust Product was the 2nd most traded OTC ticker in Sep 2020

OTC Link ATS Total Trades and Notional Value

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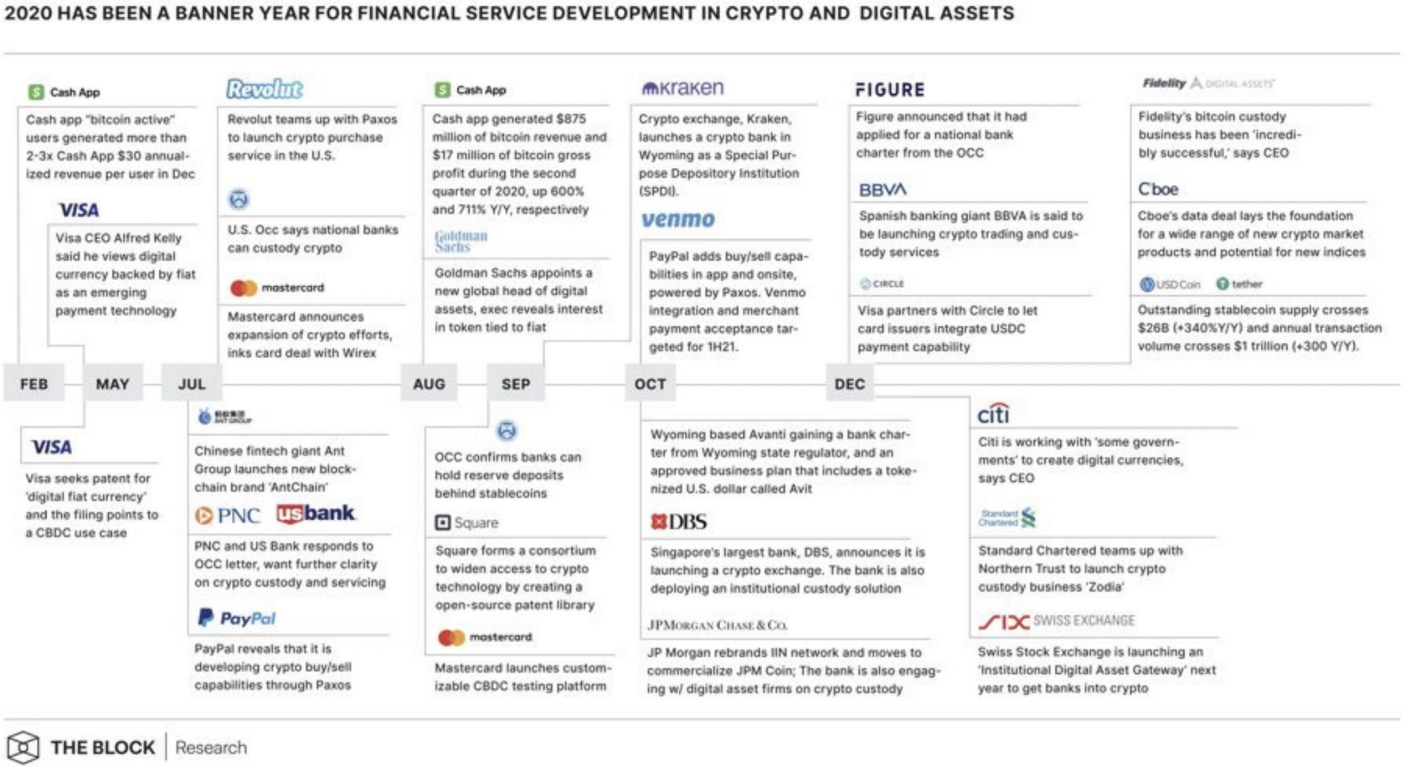
	Ticker	Description	Total Trades	Monthly Notional OTC Traded Value
1	TCEHY	Tencent Holdings Limited Unsponsored ADR Representing B Shares	24478	$900,710,329.52
2	GBTC	Grayscale Bitcoin Trust (BTC) Common Stock	24374	$219,667,005.44
3	CYDY	CytoDyn, Inc. Common Stock	15717	$58,252,013.34
4	JCPNQ	PENNEY J C CORP INC Common Stock	13616	$23,940,539.23
5	BRTXQ	BioRestorative Therapies, Inc. Common Stock	13460	$8,611,527.08
6	RLFTF	RELIEF THERAPEUTICS HLDG AG NAMEN -AKT (Switzerland)	13376	$44,453,016.16
7	LKNCY	LUCKIN COFFEE INC American Depositary Shares - Sponsored	12188	$63,270,893.36
8	GAXY	Galaxy Next Generation, Inc. Common Stock	12080	$14,488,887.42
9	NWBO	NORTHWEST BIOTHERAPEUTICS INC Common Stock	9664	$66,913,778.30
10	ALYI	Alternet Systems, Inc. Common Stock	9389	$6,355,327.66
11	OPTI	Optec International, Inc. Common Stock	8706	$8,582,762.52
12	HNCKF	Giga Metals Corp Common Shares	8148	$7,648,927.56
13	PLNHF	Planet 13 Holdings Inc Common Stock	7353	$14,366,359.83
14	ETHE	GRAYSCALE ETHEREUM TR ETH Common units of fractional undivided	5287	$40,916,016.00
15	NTDOY	Nintendo Co Ltd ADR	5104	$86,442,180.55

The net effect of all this activity is “TradFi” finally gets its first real bite out of crypto on the capital markets side



DeFi: 2020 Themes, 2021 Outlook

Mika Honkasalo

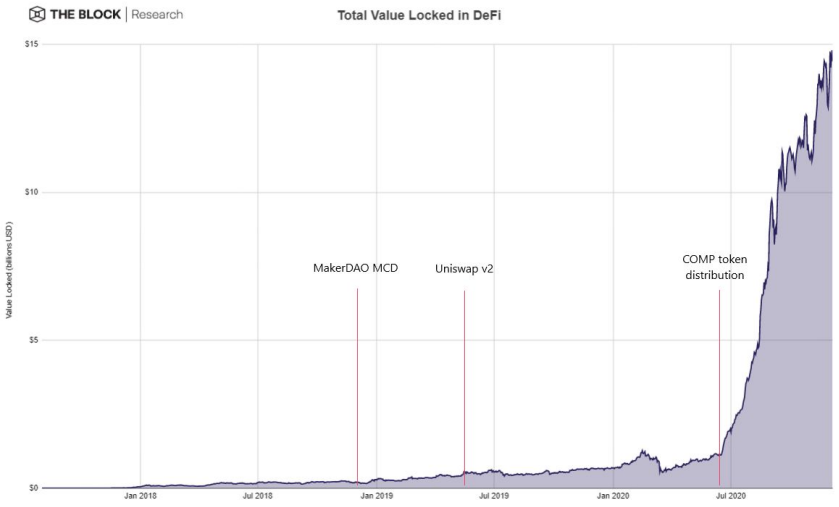
2020 Metrics: DeFi Rediscovers Traditional Finance

Cycle of DeFi discovering something from traditional finance

1. Create existing financial primitive & give it a crypto-native name (ICO, yield farming).
2. Take the idea to the extreme → ICO bubble, DeFi summer.
3. Start implementation of sensible ideas (vesting).

⇒ Most recent example: Yearn's M&A activity.

⇒ Technology improves steadily, financial innovations pour fuel on the fire.

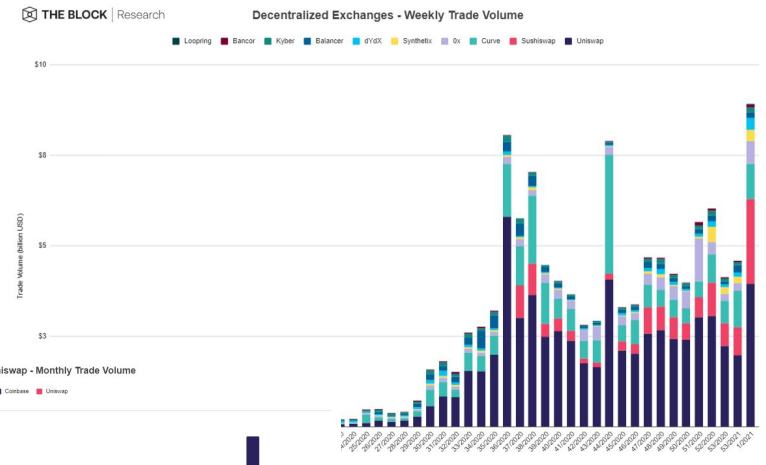


Please submit questions during the presentation through Livestorm

2020 Metrics: DeFi is Measured in Billions (1)

DEXs (Decentralized Exchanges)

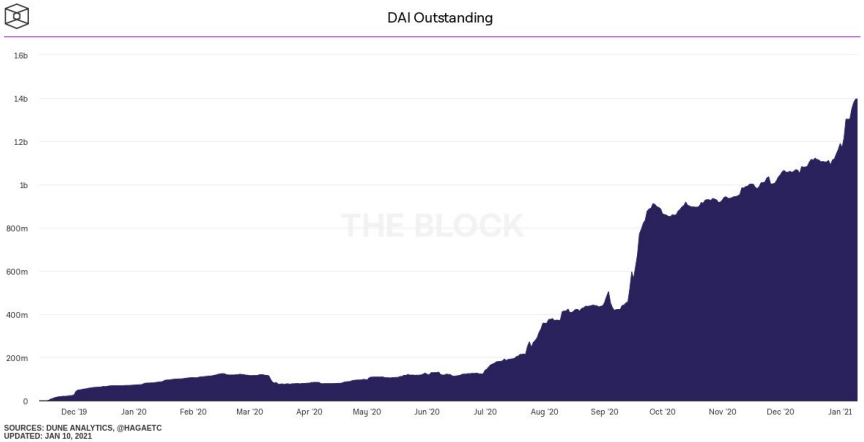
- $3 billion trade volume in 2019. $116 billion in 2020.
- AMMs make up ~88% of the market.
- Uniswap passed Coinbase in September volume.
- DEX aggregators responsible for ~10% of volume.
- L2 (Loopring & DeversiFi) < 1% of total volume.



2020 Metrics: DeFi is Measured in Billions (2)

Lending

- Lending boom started with yield farming, but traffic has stayed after calmed down.
- Demand comes primarily to leverage trade.
- $3.3 billion in outstanding loans (+3,000% YoY)
- DAI traded > $1 for a few months, but now peg restored.
- Compound dominated by DAI borrows (due to yield farming).

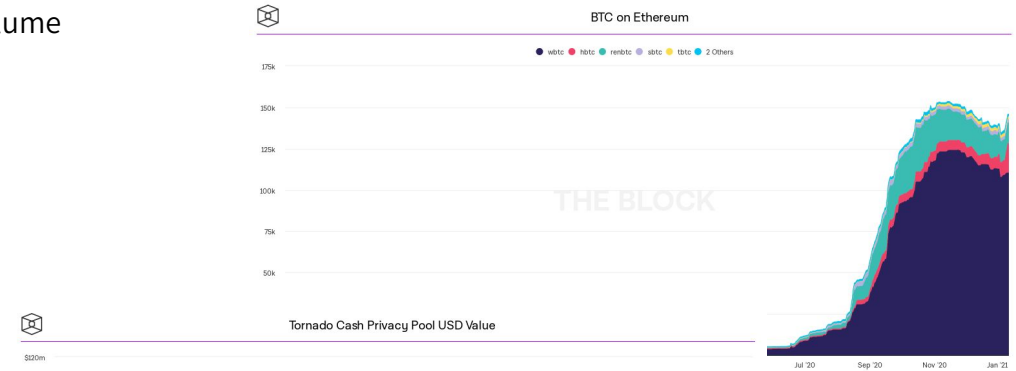


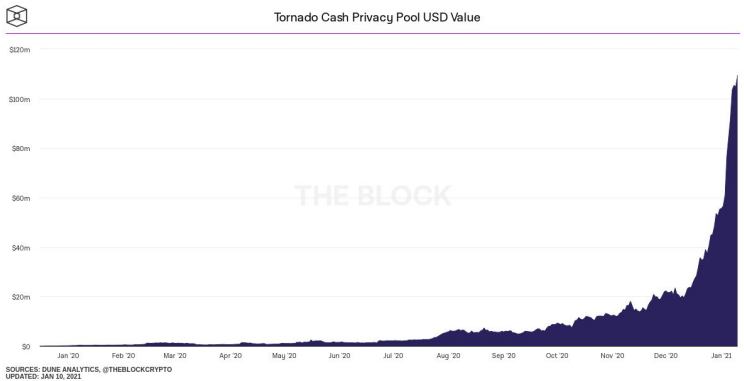
2020 Metrics: numbers from other categories

Prediction markets: Polymarket at $28 million trade volume in top 2020 election market.

Privacy: Tornado Cash reaches $100 million TVL in ETH privacy pool, growth triggered by TORN token.

BTC in DeFi: $4.8 billion of BTC on Ethereum. BTC-denominated growth stopped when yield farming ended.





2021: L2 + Derivatives

1. **L2 is coming (for real).**

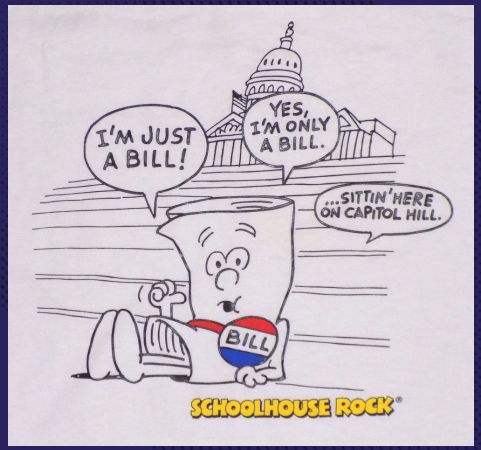
⇒ Optimism launch on January 15th. Polymarket = Matic. Perpetual Protocol = xDai.

⇒ Fragmentation between sidechains, zk-Rollups & Optimistic Rollups.

2. **Decentralized derivatives.**

⇒ Which implementation grabs liquidity?

The Stablecoin Tethering and Bank Licensing Enforcement (STABLE) Act



Mike Rogers

Prologue to the STABLE Act

- The Block Research's Year-End Report broke down:
  - Q1, 2020's historic decline across asset markets.
  - The unprecedented scale of the Fed's monetary policy response.

- The 'Automatic Boost to Communities Act' (ABC Act)
  - Otherwise known as the "Mint the coin" proposal.
  - The Fed isn't the only authority that sought unconventional solutions last spring.

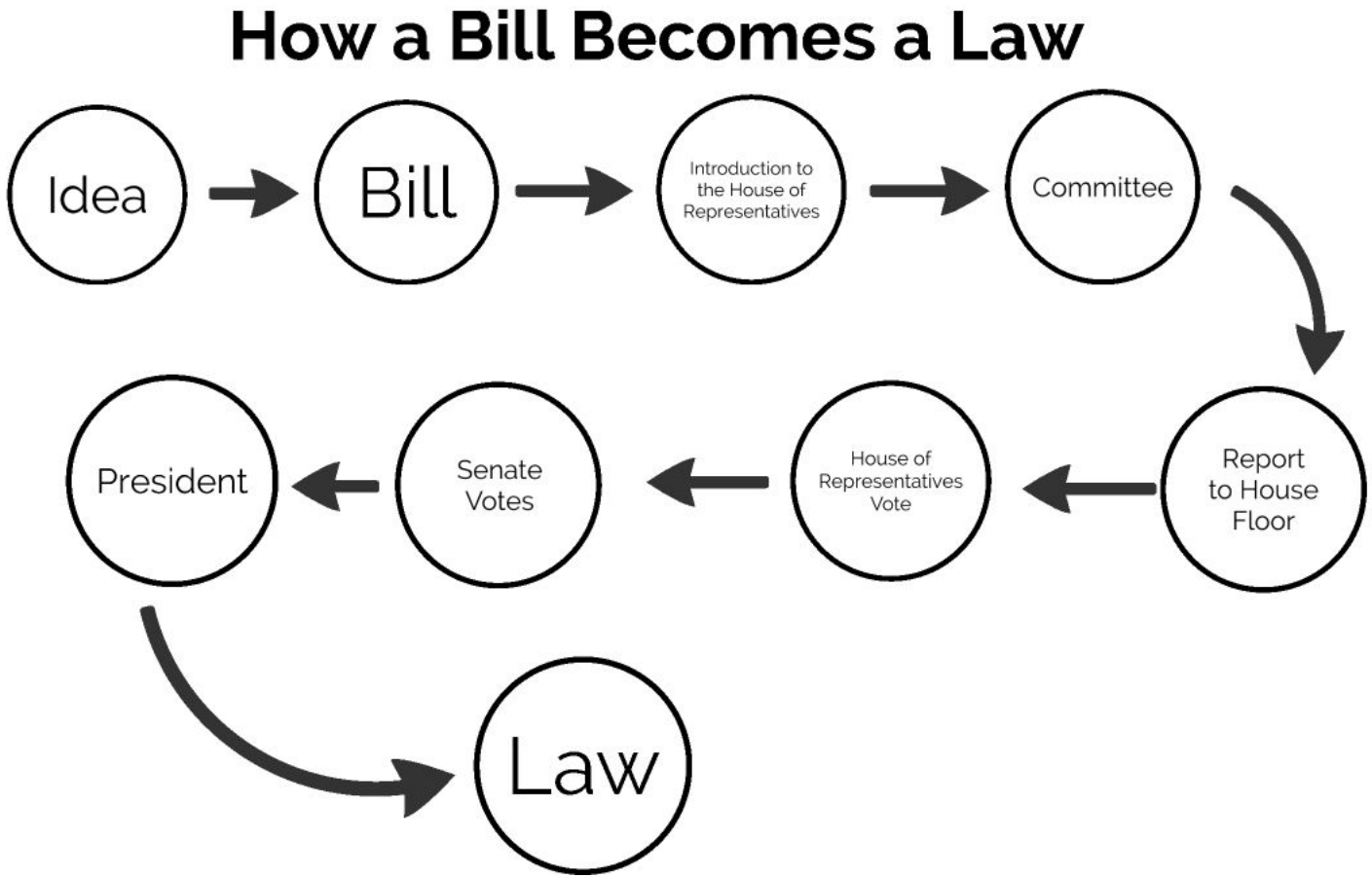
- Spat between lawmakers and the US Office of the Comptroller of the Currency (OCC)
  - Lawmakers pushed back after the OCC published two interpretive letters related to digital assets in the second half of 2020.

THE ABC Act Proposal

- On April 16th, Rep. Rashida Tlaib and Rep. Pramila Jayapal announced the ABC Act.

- Made headlines for proposing the use of a “digital dollar” to distribute economic stimulus.
  - In reality, the stimulus distribution mechanism was merely through digital cash cards.
  - However, left it open for the card infrastructure to be converted into a permanent solution over the long term.
    - CBDC?

Review Time


How a Bill Becomes a Law
Idea
Bill
Introduction to the House of Representatives
Committee
Report to House Floor
House of Representatives Vote
Senate Votes
President
Law

ABC Proposal becomes H.R. 6553 Bill

- On April 17th, Rep. Tlaib introduced the ABC Act proposal to the U.S. House of Representatives as H. R. 6553.

- The bill was co-sponsored by Jesús G. “Chuy” García [IL-04]; Alcee Hastings [FL-20]; Eleanor Holmes Norton [District of Columbia]; Alexandria Ocasio-Cortez [NY-14]; Ilhan Omar [MN-05]; Ayanna Pressley [MA-07]; Bobby Rush [IL-01]; Jan Schakowsky [IL-09]; and Nydia Velázquez [NY-07].

- H.R. 6553 was referred to
  - House Committee on Ways and Means
    - Oversees government budgets and is the chief tax-writing committee.
  - House Financial Services Committee
    - Responsible for administering government financial aid.

- H.R. 6553 never made it to the House floor for a vote, so the bill died in the 116th session of Congress.

The OCC's Interpretive Letters

- On July 22nd, released 'Authority of a National Bank to Provide Cryptocurrency Custody Services for Customers.'
  - Concluded that national banks were able to custody digital assets on behalf of their customers.

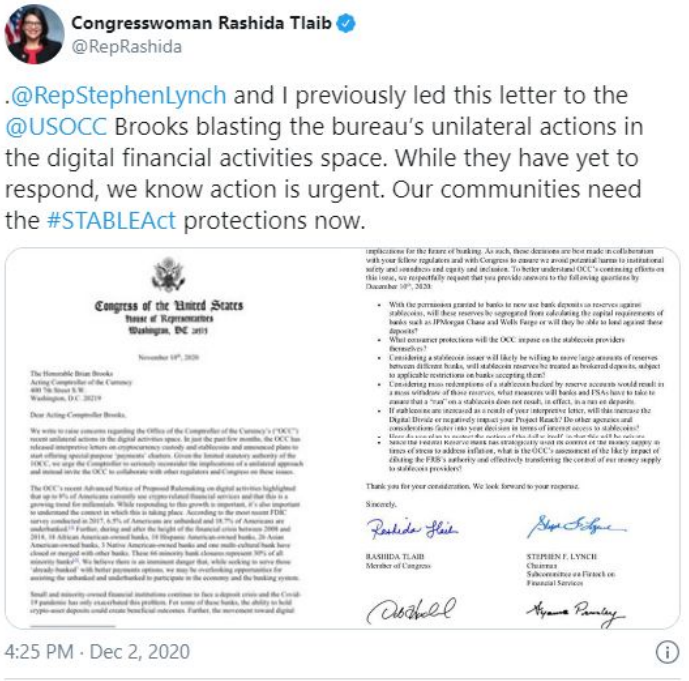
- On September 21st, released 'OCC Chief Counsel's Interpretation on National Bank and Federal Savings Association Authority to Hold Stablecoin Reserves.'
  - The guidance addressed national bank legal authority for holding stablecoin reserve accounts in the name of their customers.
  - Such accounts "could be structured as either deposits of the stablecoin issuer or as deposits of the individual stablecoin holder if the requirements for pass-through insurance are met."

Members of Congress Strike Back

- On Nov. 10th, lawmakers sent a letter to the OCC criticizing its interpretive letters.
  - Digital assets too important for future of banking.
  - Asked the OCC to answer a set of 8 questions by December 10th.
    - Mere formality.

- On December 4th, Rep. Waters sent a letter to President-elect Joe Biden that criticized the OCC.
  - Under a header titled 'Digital Banking,' Rep. Waters recommended that both OCC decisions regarding digital assets be reversed.

- On January 4th, OCC issued a 3rd interpretive letter.
  - Banks may may use new independent node verification networks (INVNs) and related stablecoins, to perform bank-permissible functions, such as payment activities.



The STABLE Act Proposal Unveil

- On Dec. 16th, Rep. Rashida Tlaib, Rep. Jesús “Chuy” García, and Rep. Stephen Lynch unveil proposal the STABLE Act proposal.

- Consumer Protection Bill
  - Protect low-to-moderate income (LMI) communities from exploitation by stablecoin issuers and service providers.

- COVID-19 Pandemic exposed financial services infrastructure inefficiencies.
  - Big Tech taking advantage of LMI consumers in lawmakers’ minds.

The Common Denominator

- Rohan Grey, Assistant Professor of Law at Willamette University, attributed quotes to both the ABC Act press release and the STABLE Act press release.
    - Grey is the common denominator when looking for overlap.

- Lawmakers are usually the public face for legislative proposals, while respective experts in their field more often than not create the foundations for bills.
    - Grey was likely heavily involved in the creation of the STABLE Act draft.

STABLE Act's 4 Main Requirements

- Any prospective issuer of a stablecoin to obtain a banking charter;
- That any company offering stablecoin services must follow the appropriate banking regulations under the existing regulatory jurisdictions;
- That any company or bank issuing a stablecoin to notify and obtain approval from the Fed, the FDIC, and the appropriate banking agency 6 months prior to its issuance and maintain an ongoing analysis of potential systemic impacts and risks;
- That any stablecoin issuers obtain FDIC insurance or otherwise maintain reserves at the Federal Reserve to ensure that all stablecoins can be readily converted into United States dollars, on-demand.

Digital Asset Community Reaction

- The bill would significantly benefit the incumbents in the financial services sector, specifically the legacy financial institutions.
- Appears to be a way to block technology companies, such as Facebook, from executing on their stablecoin visions, at least per Tyler Winklevoss, Co-Founder & CEO of Gemini.
- Likely the motivation behind the latest influx of applications by digital asset firms, such as Paxos, to become regulated as banks.

Questions