

2021 Outlook Going Mainstream



FSInsight
150 East 52nd St, 3rd floor
New York, NY 10022



David Grider, CFA
Lead Digital Strategist
Inquiry@FSInsight.com
twitter: @david_grid

Thomas J. Lee, CFA
Head of Research
twitter: @fundstrat

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Market Recap

2021 Outlook

Crypto Thesis

Bitcoin Cycles

Macro Trends

Flows & Catalysts

Fundstrat 2020 Forecast Predicted >100% Crypto Returns

Bitcoin halvening, geopolitical risk & election were catalysts we saw

- Our outlook last year called for crypto returns in 2020 to exceed 100% based on several positive convergences we saw unfolding.

Figure: Fundstrat 2020 Crypto Outlook Report Cover



**Our 2020 outlook
forecast >100%
returns for crypto
driven by halving,
geopolitical risk,
& 2020 election**

Source: FSInsight

Bitcoin Reached Our Upwardly Revised Targets Several Times

Issued official \$13.5k target in March & raised it to \$40k by December

- We issued an official price target in March following the market sell off. We have since raised that target four times over the year as we saw continued fundamental improvement. Bitcoin quickly reached our most recent target of \$40k before pulling back. The last move happened quite fast, but the pause is healthy, and we think upside remains.

Bitcoin Price & Fundstrat Bitcoin Price Target

Date: 1/1/2020 to 1/24/2021



Source: FSInsight, Bloomberg, Coinmarketcap

Bitcoin Best Performing Among Global Assets 9 of 11 Years

On pace to be best performing for the 10 of 12 thus far YTD in 2021

- Bitcoin and crypto have been the best performing asset for 9 out of the last 11 years and it's on pace YTD in 2020 to make that track record 10 out of 12 years if the trend continues.

Figure: Global Asset Class Annual Returns

Date: 1/1/2010 to 1/24/2021

Best FY-2010	Best FY-2011	Best FY-2012	Best FY-2013	FY-2014	Best FY-2015	Best FY-2016	Best FY-2017	FY-2018	Best FY-2019	Best FY-2020	Best YTD 2021
Bitcoin 39171%	Bitcoin 1471%	Bitcoin 187%	Bitcoin 5286%	Dollar 13%	Bitcoin 34%	Bitcoin 126%	Bitcoin 1337%	Dollar 4%	Bitcoin 94%	Bitcoin 305%	Bitcoin 11%
Gold 30%	Gold 10%	MSCI EM 15%	S&P 500 30%	S&P 500 11%	Dollar 9%	Oil 45%	MSCI EM 34%	US Treasuries 1%	Oil 34%	Gold 25%	MSCI EM 8%
Commodities 17%	US Treasuries 10%	MSCI World 13%	MSCI World 20%	US Bonds 6%	US Treasuries 1%	Commodities 12%	MSCI World 22%	US Bonds 0%	S&P 500 29%	S&P 500 16%	Oil 8%
MSCI EM 16%	Oil 8%	S&P 500 13%	Oil 7%	US Treasuries 5%	US Bonds 1%	S&P 500 10%	S&P 500 19%	Gold -2%	MSCI World 24%	MSCI EM 16%	MSCI World 3%
Oil 15%	US Bonds 8%	Gold 7%	Dollar 0%	MSCI World 2%	S&P 500 -1%	MSCI EM 9%	Gold 14%	S&P 500 -6%	Gold 18%	MSCI World 14%	S&P 500 2%
S&P 500 13%	Dollar 1%	US Bonds 4%	US Bonds -2%	Gold -1%	MSCI World -4%	Gold 8%	Oil 12%	MSCI World -11%	MSCI EM 15%	US Treasuries 8%	Commodities 1%
MSCI World 10%	S&P 500 0%	US Treasuries 2%	US Treasuries -3%	MSCI EM -5%	Gold -10%	MSCI World 6%	US Bonds 4%	Commodities -11%	US Bonds 9%	US Bonds 8%	Dollar 0%
US Bonds 7%	MSCI World -9%	Dollar -1%	MSCI EM -5%	Commodities -17%	MSCI EM -17%	Dollar 4%	US Treasuries 2%	MSCI EM -17%	Commodities 8%	Commodities -3%	US Bonds -1%
US Treasuries 6%	Commodities -13%	Commodities -1%	Commodities -10%	Oil -46%	Commodities -25%	US Bonds 3%	Commodities 2%	Oil -25%	US Treasuries 7%	Dollar -7%	US Treasuries -1%
Dollar 2%	MSCI EM -20%	Oil -7%	Gold -28%	Bitcoin -56%	Oil -30%	US Treasuries 1%	Dollar -10%	Bitcoin -74%	Dollar 0%	Oil -21%	Gold -2%

Source: FSInsight, Bloomberg

Worst

Worst

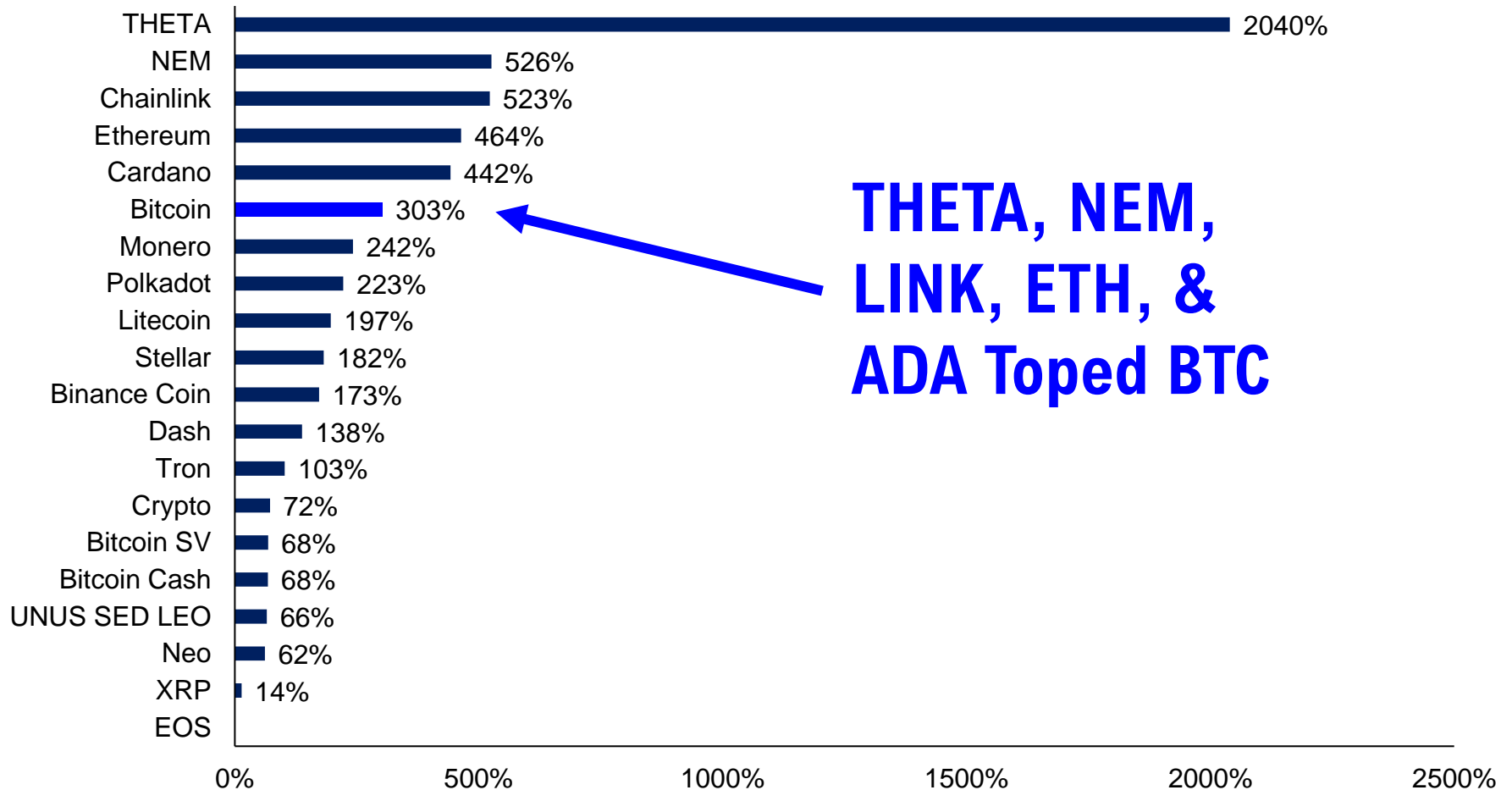
Bitcoin Performed Very Well But Didn't Top Crypto Returns

Among the top 20, THETA, NEM, LINK, ETH, & ADA outperformed BTC

- Although Bitcoin outperformed most global assets and performed towards the top of the pack within crypto, several other crypto assets outperformed it during 2020, notably the second largest asset, Ethereum, which we continue to hold an overweight on. A reason why we remain bullish on the asset class and not just Bitcoin.

Figure: Top 20 Crypto Asset Returns

Date: 2020



Source: FSInsight, Coinmarketcap

Global Crypto Market Cap Broke ATHs & Hit \$1 Trillion

Many (not us) saw crypto as a fad in 2017 but 2020 proved otherwise

- Largely considered a fad sure to fade in 2017, crypto strongly rebounded in 2020 and made new all-time highs in 2021 passing \$1T in market value. We think this marks a turning point where crypto is large enough that investors can't as easily dismiss it anymore and they must now pay attention.

Figure: Global Crypto Market Cap (Assets Ever Exceeding 5% Market Share)

Date: 1/1/2016 to 1/24/2021



Source: FSInsight, Coinmetrics

Crypto Economy Public Market Value 16th Largest Globally

Crypto Emerging Markets (EMs) are new global digital economies

- We view crypto as a digital emerging market economy. Looking at the crypto market cap in comparison to the public stock market caps of other global economies reveals that the crypto EM now sits as the 16th largest by value.

Figure: Global Crypto Market Cap (assets ever exceeding 5% share)

Date: Crypto (1/24/21), U.S. (12/31/20), Others (Latest: 2018 or 2019)

#	Economy	Stock (Crypto) Market Value (\$T)
1	United States	\$50.00
2	China	\$8.52
3	Japan	\$6.19
4	European Union	\$5.77
5	Hong Kong SAR, China	\$4.90
6	Saudi Arabia	\$2.41
7	France	\$2.37
8	India	\$2.18
9	Germany	\$2.10
10	Canada	\$1.94
11	Switzerland	\$1.83
12	Australia	\$1.49
13	Korea, Rep.	\$1.41
14	Brazil	\$1.19
15	South Africa	\$1.06
16	Crypto EM	\$1.00
17	Spain	\$0.80
18	Singapore	\$0.70
19	Russian Federation	\$0.58
20	Thailand	\$0.57

**Crypto EM 16th
Largest Globally**



Source: FSInsight, Coinmetrics, World Bank, Bloomberg, Sibilis Research

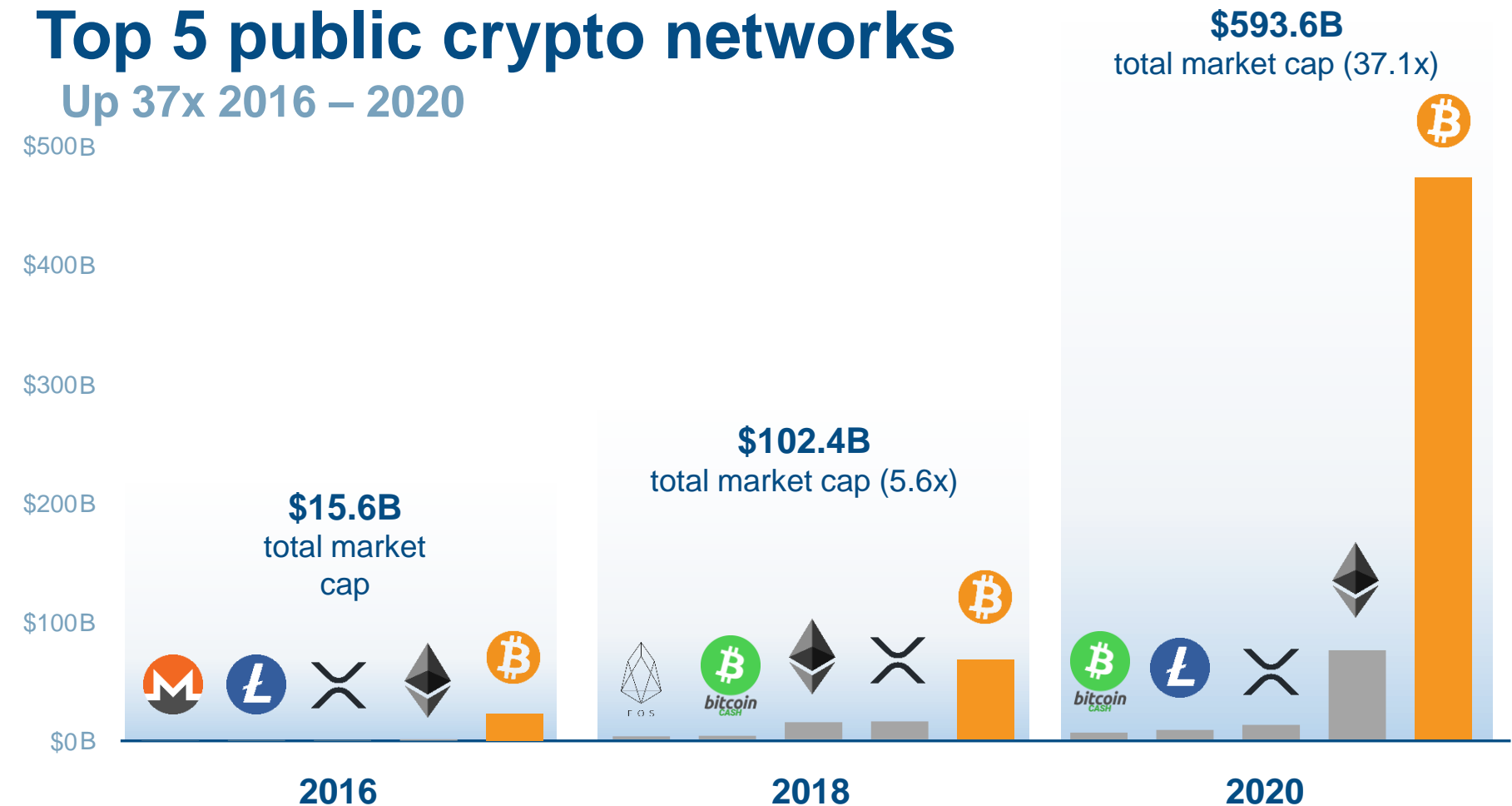
Top 5 Crypto Networks Broke \$500B In Value During 2020

From 2016 to 2020, top 5 crypto networks value increased by 38X

- Crypto is known for being volatile, and some may still see the recent rise as an unsustainable move, but looking through the market swings every other year, the largest 5 crypto assets have continued to accrue substantial value.

Figure: Top 5 Crypto Asset Market Caps

Date: 2016 to 2020 (December Year End Values)



Source: FSInsight, Coinmarketcap

Reaching Milestone 3X Faster Than Top 5 Cloud Companies

From 2018 to 2020, top 5 cloud companies value increased by 44X

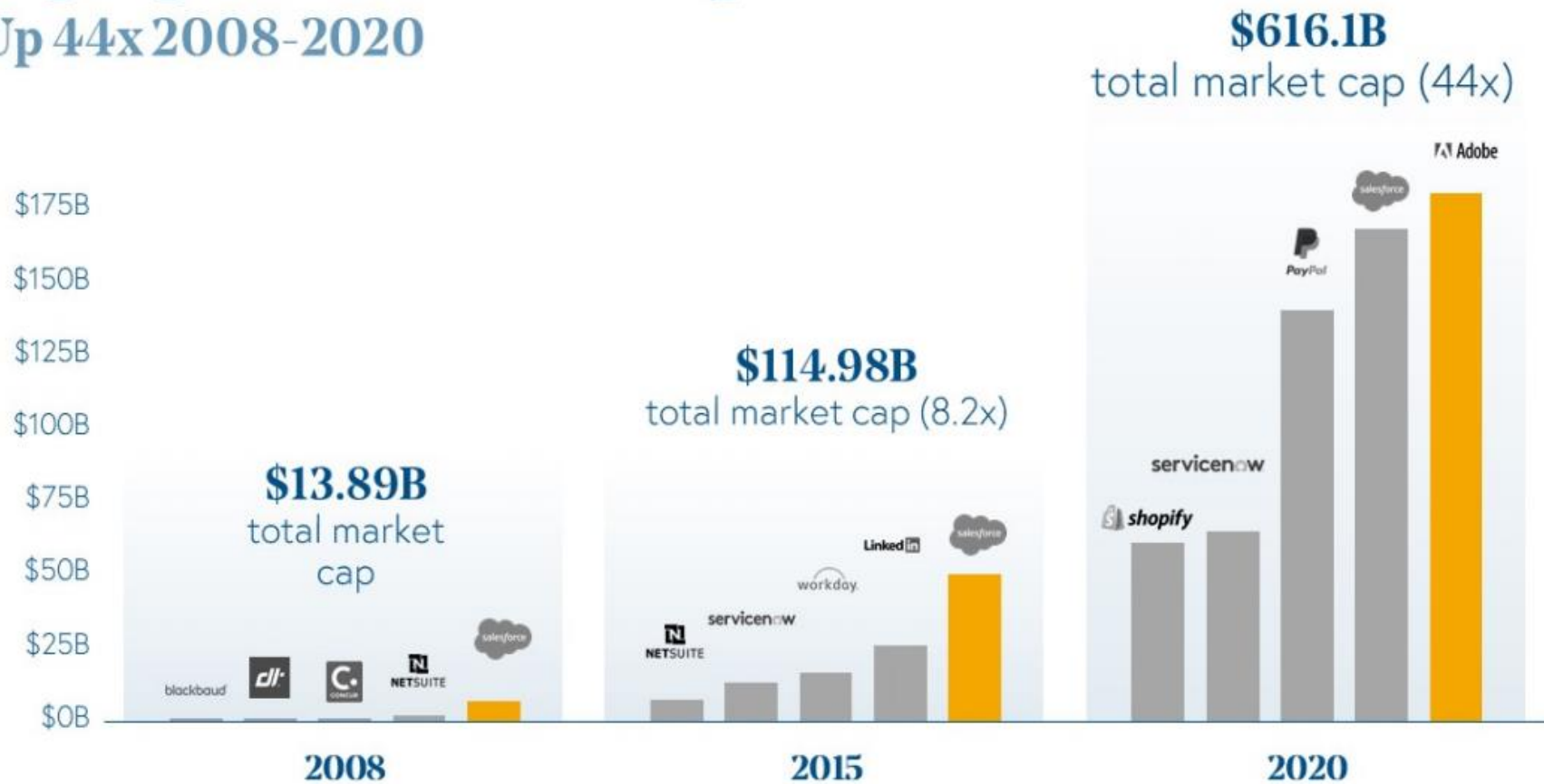
- One reason we believe crypto is here to stay is because we see it as an evolution of the internet and cloud computing. While the cloud has risen to impressive heights, crypto has been following and quickly gaining share.

Figure: Top 5 Public Cloud Companies Market Cap

Date: 2008 to 2020

Top 5 public cloud companies

Up 44x 2008-2020



Source: FSInsight, Bessemer Ventures 2020 Cloud Report

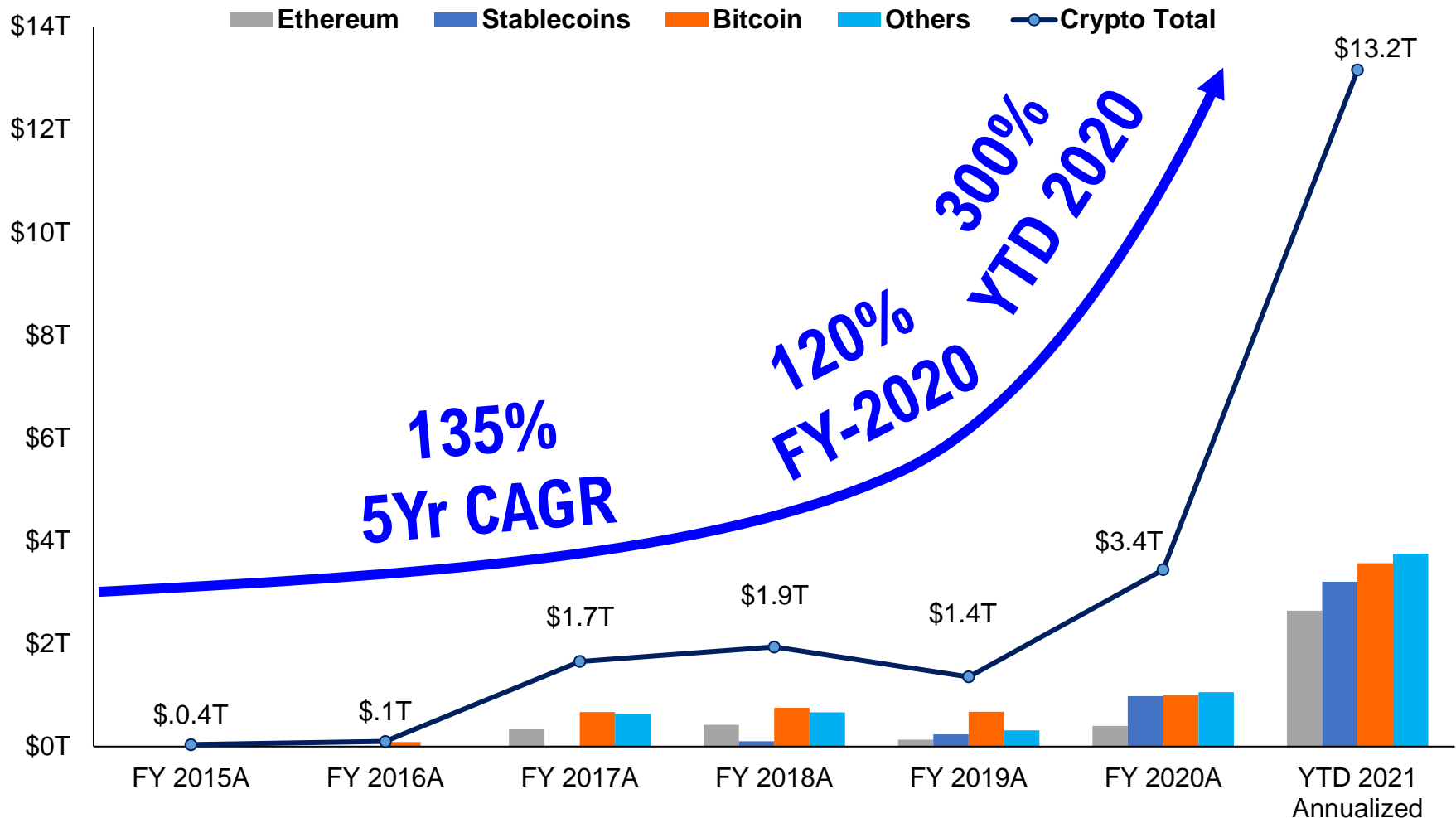
Crypto Payment Transaction Volume Hit \$3.4T During 2020

Growing at 135% 5-yr CAGR & YTD on pace to hit \$13.2B in FY-21

- We think the fundamental utility of crypto and its disruption potential is evidenced in part by its impressive payment transaction growth story. Extrapolating YTD trends, crypto is on pace to record \$13T in volume during FY-21.

Figure: Crypto Payment Transaction Volume USD (On-Chain Adjusted)

Date: 1/1/2015 to 1/24/2021



Source: FSInsight, Coinmetrics

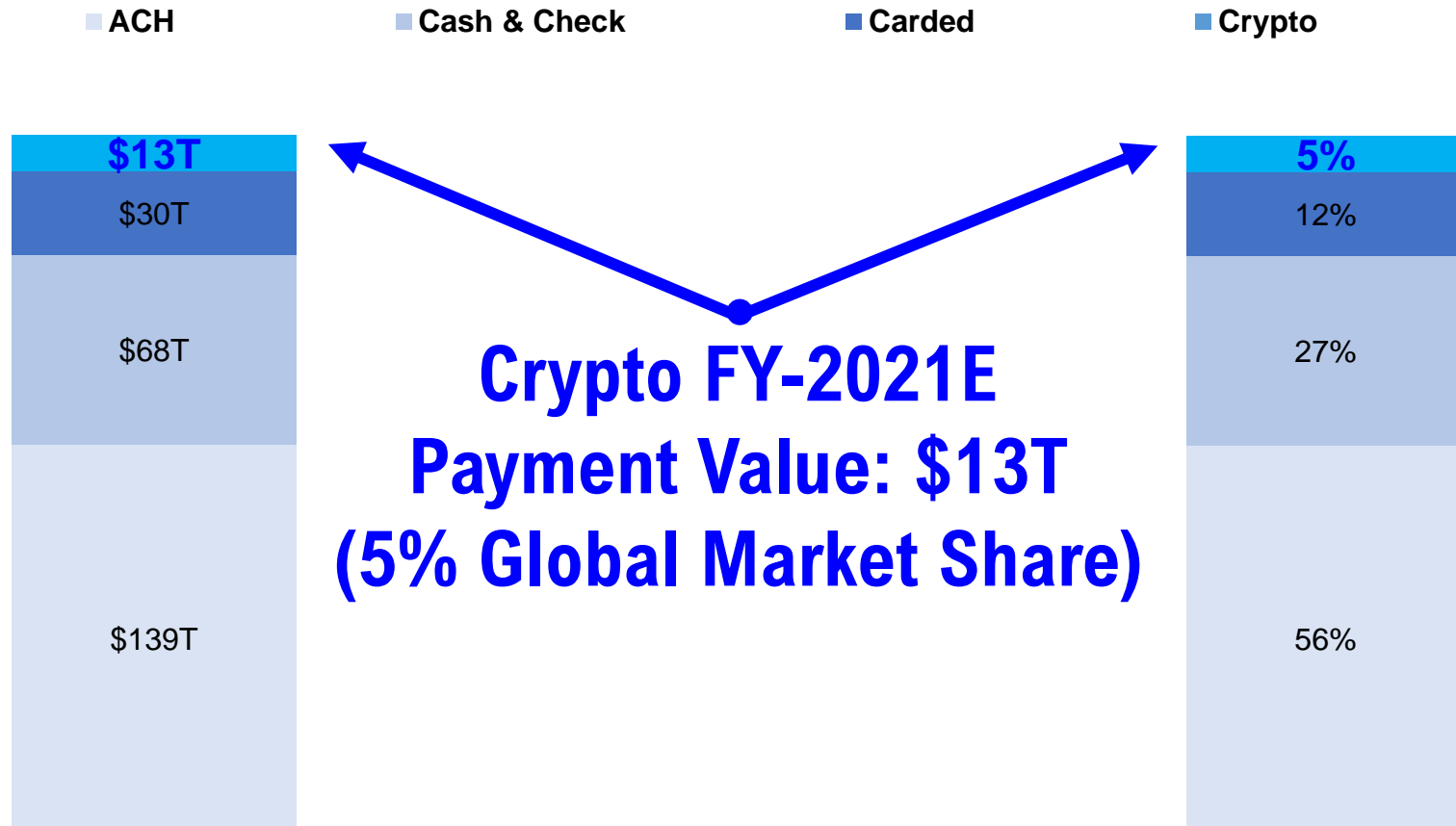
Crypto Payment Volume Approaching 5% Global Market Share

If YTD trend continues crypto payments could be ~1/2 card volume

- Putting these \$13T in perspective, if the current trend continues, crypto will reach 5% global payments market share this year! Said differently, it would have captured half the payments volume of the card networks. How has this been largely ignored for this long?

Figure: Annual Global Payment Volume By Type

Date: 2020 (Traditional) & YTD 1/24/2021 Annualized (Crypto)



Source: FSInsight, Credit Suisse

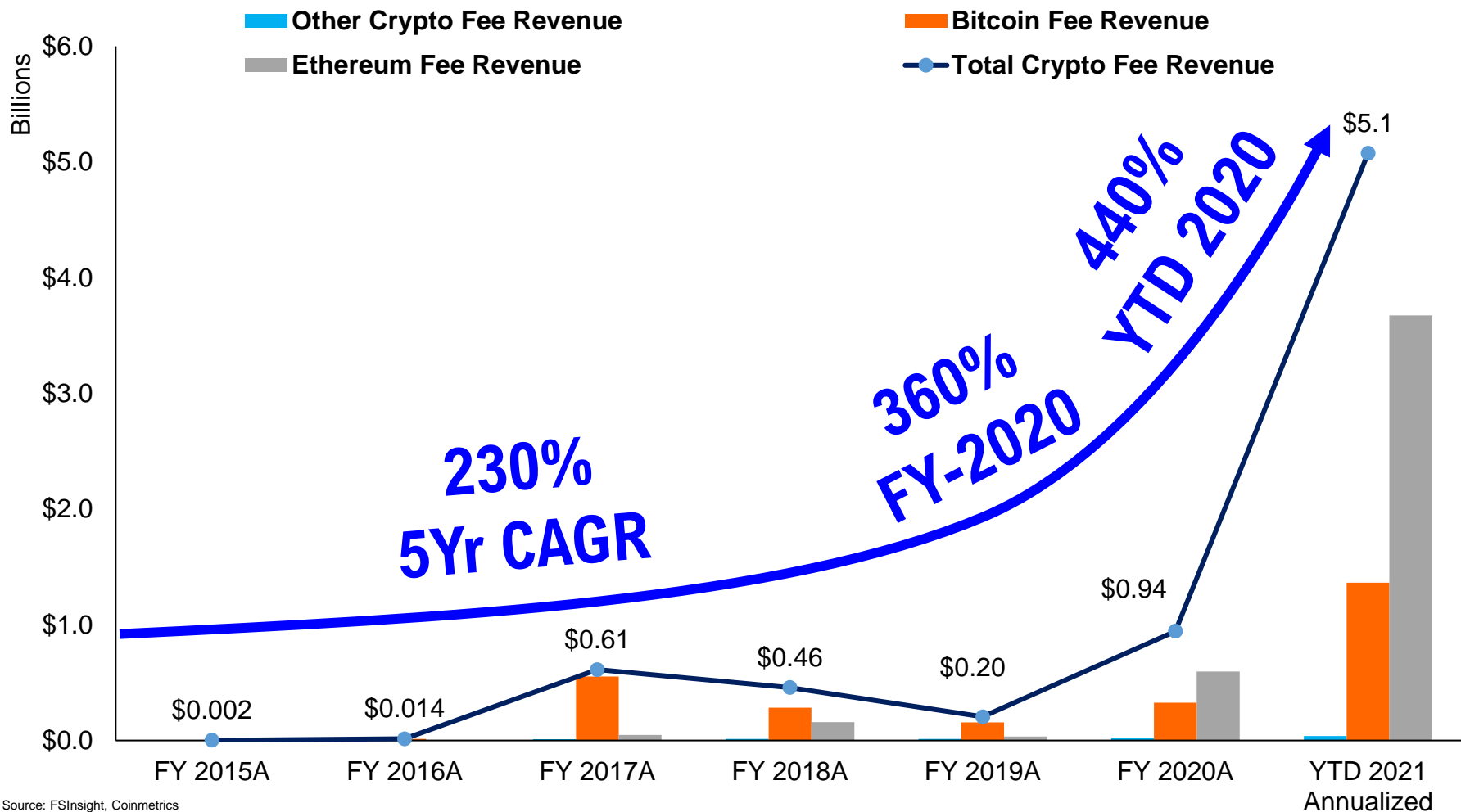
Crypto Transaction Fee Revenue Hit ~\$1B During 2020

Growing at 230% 5-yr CAGR & YTD on pace to hit \$5.4B by FY-21

- Users paid crypto networks roughly \$1B in transaction fee revenue during 2020.
- Even more impressive, is the accelerating pace at which fees have been growing.

Figure: Crypto Annual Transaction Fee Revenue

Date: 2015A to 2021E (YTD 1/24 Annualized)



Source: FSInsight, Coinmetrics

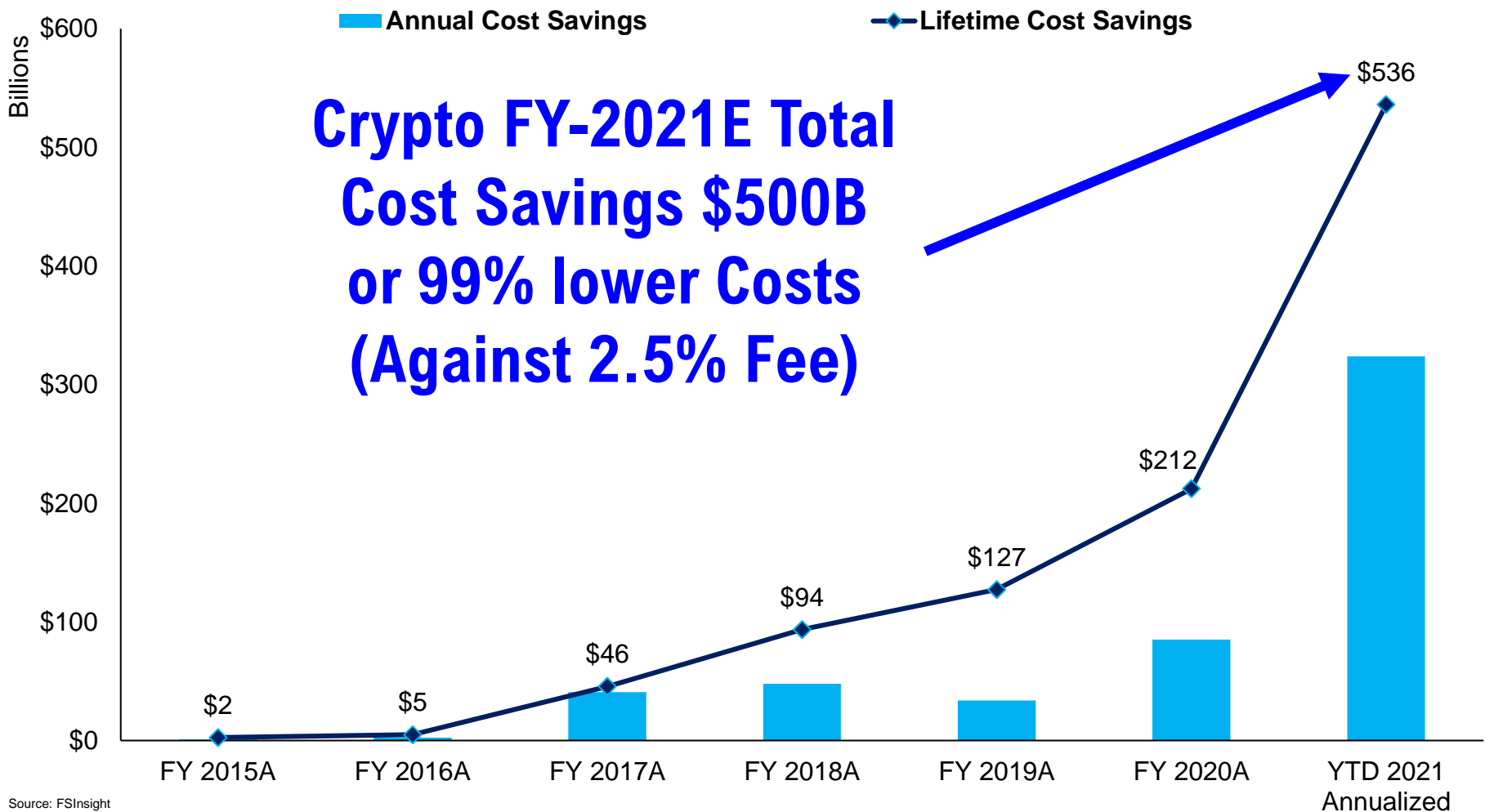
Crypto Lifetime Payment Cost Savings Reached \$200B

Assuming industry standard take rates of 2.5%, crypto fees 99% lower

- Comparatively, \$1B of revenue may not sound large against many traditional industries. But its important to note that based on the transaction volume crypto facilitated, if you assume industry standard fees are 2.5%, crypto undercut those costs by 99% and saved users ~\$85B in 2020. A reason we see crypto as disruptive to finance.

Figure: Implied Crypto Payment Cost Savings Against 2.5% Fee

Date: 2015A to 2021E (YTD Annualized)



Source: FSInsight

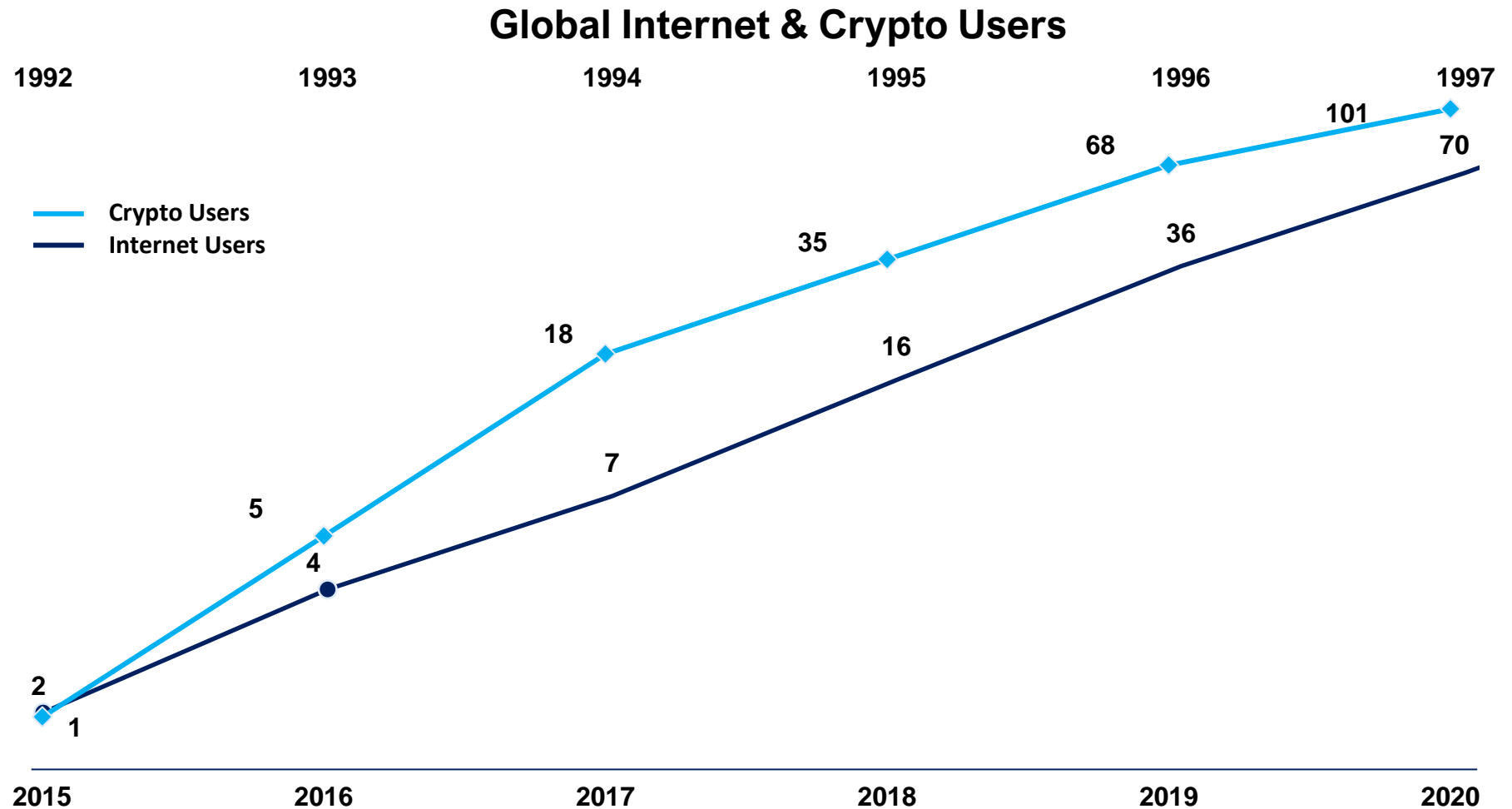
Crypto Worldwide Users Passed 100M

Crypto Users Tracking Internet Growth & Value Following

- As mentioned, we see crypto as the next wave of the internet. Comparing crypto user adoption to early internet user growth shows that crypto is on a similar path and currently sits about where the internet was in the late 1990's. We expect value to continue following user growth, as it did for the internet companies that came before.

Figure: Global Internet & Crypto Users By Year

Date: Internet (1992 to 1997) & Crypto (2015 to 2020)



Source: FSInsight, Internet World Stats, Cambridge University, Coinmetrics, Coinmarketcap

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Flows & Catalysts

2021 Outlook: Three Big Crypto Forecasts

Bitcoin = \$100k

Ethereum = \$10.5K

Crypto Market = \$5T

Source: FSInsight

2021 Outlook: 20 Reasons We're Remaining Bullish

We see several reasons to remain bullish on crypto during 2021

#	Category	Factor	Explanation
1	Bitcoin Cycle	Price	Fourth bull market cycle uptrend
2		Technical	Bitcoin above 200 DMA = bullish
3		Valuation	Valuations higher but not a bubble
4		Fundamentals	Increasing economic model estimates
5	Macro Trends	Monetary	Money supply growth & dry powder
6		USD trend	Expect dollar weakening & EM strength
7		Credit trend	Low rates & negative yielding debt
8		Equities trend	Strong S&P 500 & EM equity trend
9		Fiscal policy	Government stimulus expected
10		Geopolitical	Tension domestic & abroad
11		T.I.N.A.	There Is No Alternative
12	Capital Flows	Asset Class Size	Now large enough for institutions
13		Institutional interest	Crypto fund starts & AUM growing
14		Exchange traded fund flows	GBTC generated \$3B Q4 demand
15		Retail crypto on-ramp demand	PayPal & Coinbase demand surging
16		Corporate crypto buyers	Treasury & fundamental usage reasons
17		Consensus to bearish	Market pricing 10% chance BTC>\$100k
18		Coinbase equity IPO	Equity investors will be looking at crypto
19		Institutional FOMO	Underperformance risk (Tesla)
20		Regulatory	More clarity=lower discount rate

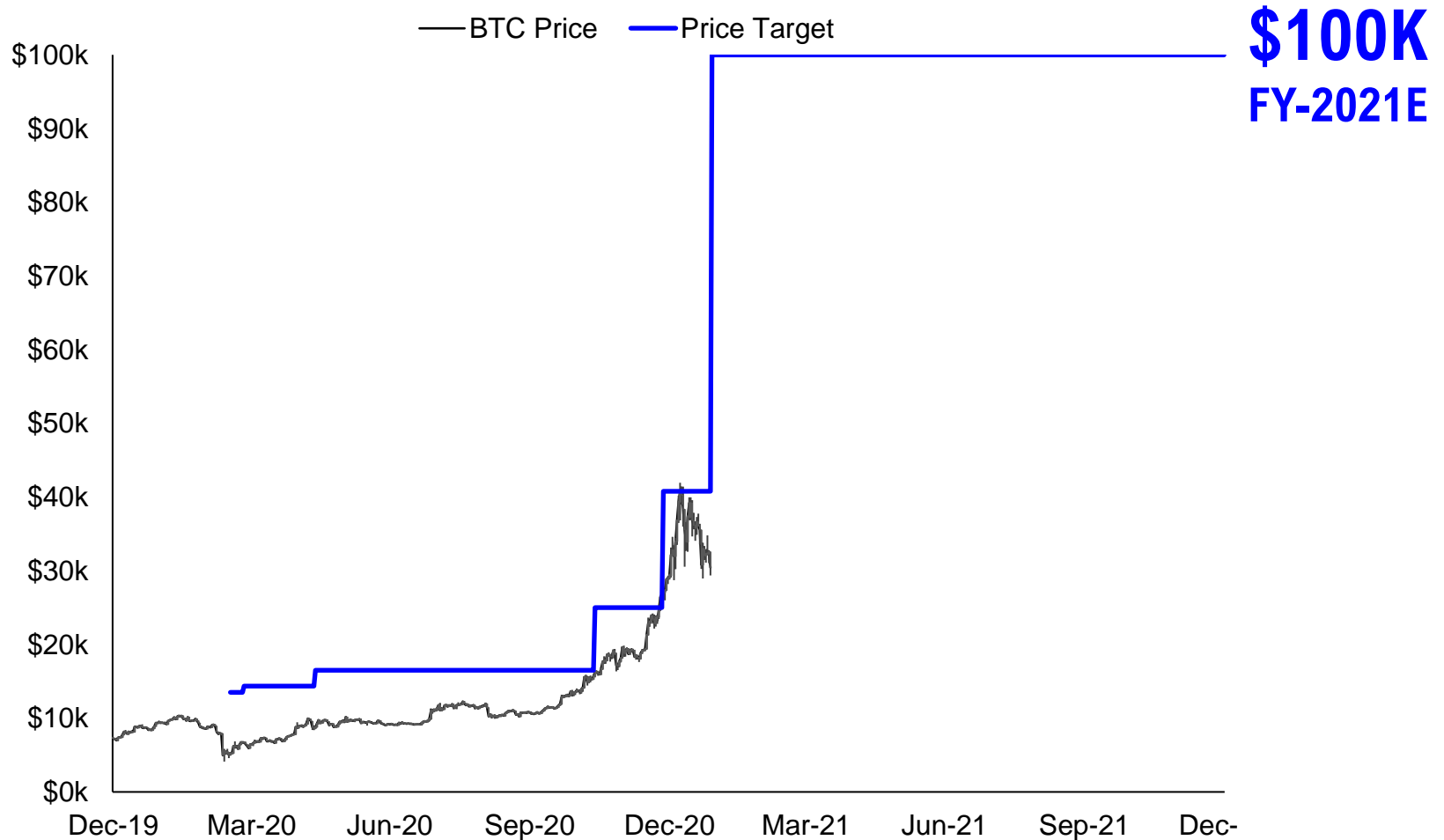
Source: FSInsight

Bitcoin Outlook: Increasing Bitcoin Price Target \$100K

Expecting a pause and lots of volatility but ending year higher

- See revised economic model estimates later in report for price and valuation explanation.

Figure: Bitcoin Price & Fundstrat BTC Target



Source: FSInsight

Ethereum: Revaluing ETH Against Cloud Index Implies ~\$10.5k

Applying cloud PSG multiples to FY 21E implies \$10.5k ETH or +650%

- By revaluing Ethereum at the same growth adjusted PSG multiple as cloud peers, we derive an implied value of \$10,481 per ETH tokens, or ~650% upside from the current price of ~\$1,400.

Figure: Ethereum cloud index growth adjusted implied value

	Ethereum Implied Value
Cloud PSG	0.55x
ETH Revenue Growth	554%
Implied PS Multiple	306x
ETH Annualized Revenue (\$B)	\$3.90
ETH Implied Market Cap (\$B)	\$1,195
ETH Supply Outstanding (M)	114

<u>Ethereum Implied Price</u>	<u>\$10,481</u>
Current ETH Price	\$1,400
Implied Return	649%

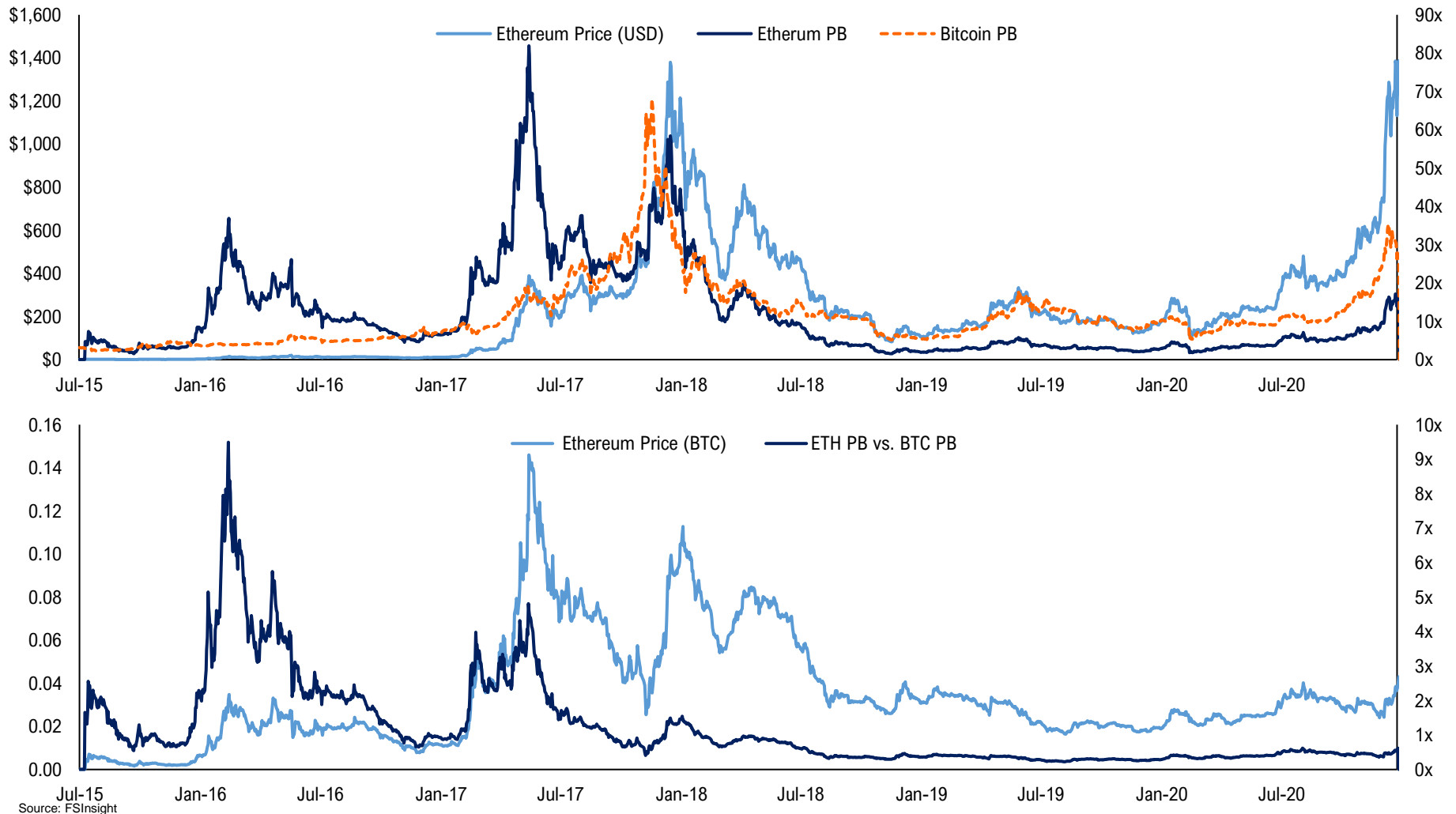
Source: FSInsight

Catalyst: ETH Has Been Rising But Looks Underpriced vs. Bitcoin

Capital flows from Bitcoin following its rapid rise offers a price catalyst

- ETH 1.0 still a minable store of value commodity like BTC. We value Bitcoin and ETH 1.0 using the Grider Price to Book multiple, which is the market cap divided by the cumulative mining costs, which shows ETH is ~2x cheaper.

Figure: Ethereum and Bitcoin price to book ratio and price



Source: FSInsight

Crypto Economy Payment Volume Could Imply Total Value \$5T

Useful proxy but flows > fundamentals & alts go if BTC/ETH hit targets

- We think there is real economic activity taking place in the crypto economy and believe the payment volume may be a proxy for gaging the value and using global proxies may be a useful gage of value. But we think flows matter more than fundamentals and if BTC & ETH hit our targets many other alts will outperform.

Figure: Crypto Economy Valuation Based On Payment Volume & Implied GDP

	World	United States	Crypto	
Annual Payment Volume (\$T)	\$235.0	\$50.0	\$13.2	\$13.2B 2021E Payment Value
Gross Domestic Product (\$T)	\$80.0	\$21.4	\$4.5	GDP Assumes World Velocity
Payment Velocity	2.9x	2.3x	2.9x	
Stock Market Value (\$T)	\$90.0	\$50.0	\$5.0	\$5T @ World Value / GDP%
Stock Value GDP%	113%	233%	113%	

Source: FSInsight, World Bank, Credit Suisse, Bloomberg, Coinmetrics

Risks: What are the risks?

List of things that can go wrong...

- Crypto is a risky asset and a lot could go wrong, a few key risks we see are below

Figure: Downside Risks To Thesis

- Technology may not meet its anticipated disruptive expectations and adoption
- Cryptocurrency users, usage, new applications and fee growth could not meet expectations
- Large wallets which have not sold crypto in past few years begin to liquidate their holdings
- Investors may move away from high growth tech investments in favor of more traditional assets
- Regulators get anti-crypto on areas like off-shore exchanges, defi, ICOs, tech developers, etc.
- Favorable global macro environment trends could reverse course and cause a bear market
- Sentiment may turn negative and bullish capital inflow may reverse
- Hack or a bug could undermine the technology

Source: FSInsight

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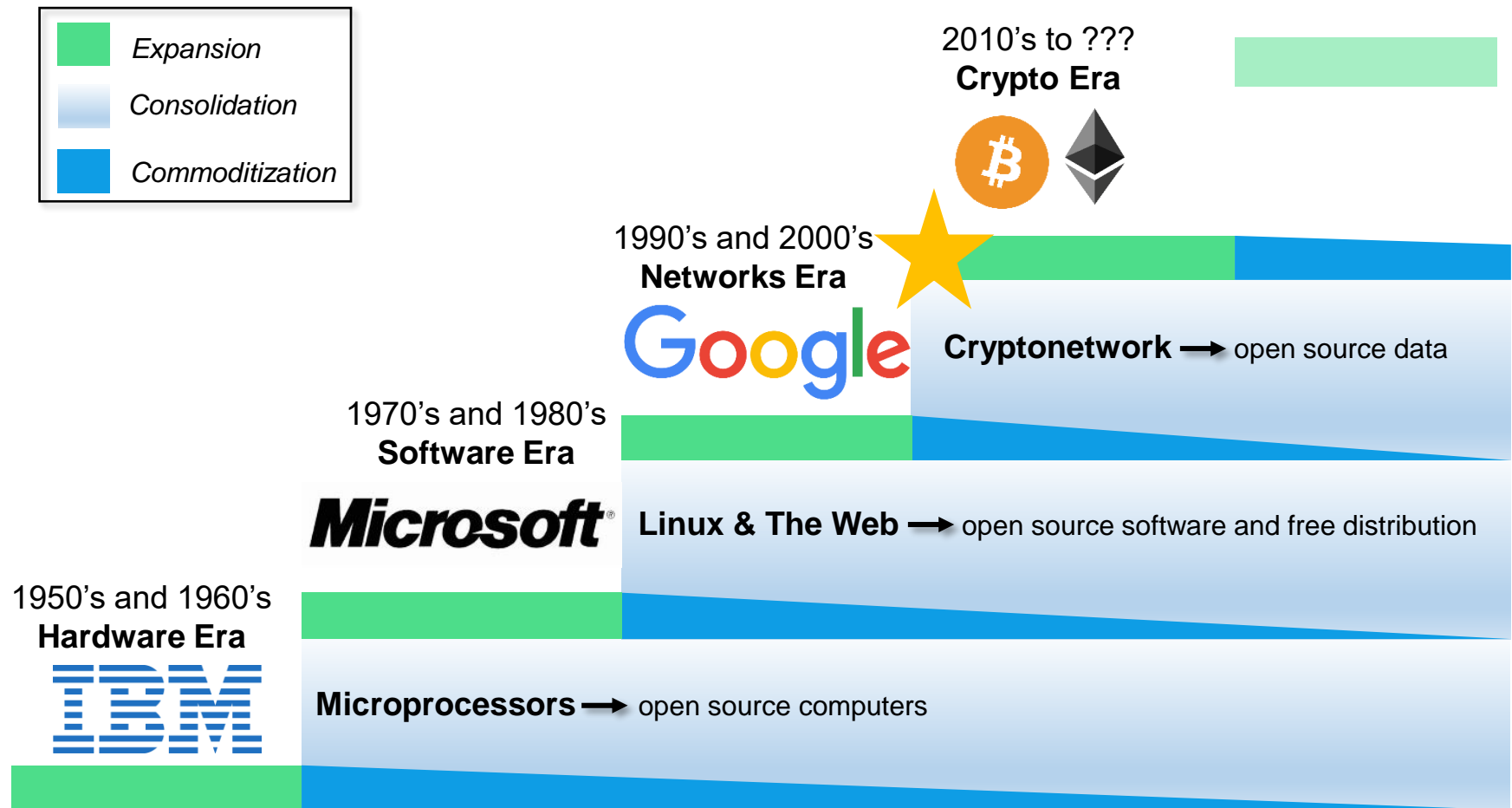
Flows & Catalysts

Crypto Offers Next Wave Of Tech Innovation & Growth

New tech stack layers commoditize prior layers & capture value

- As new layers of the technology stack were developed, they went on to capture value from the layers below. Cryptonetworks are building upon the Networks Era and replacing many applications that fall under the category of “information networks,” which include many of the largest companies, with decentralized protocol alternatives.

Figure: Evolution of Tech Innovation



Source: FSInsight, Placeholder Ventures

Big Tech Has Been Growing By Absorbing Legacy Industries

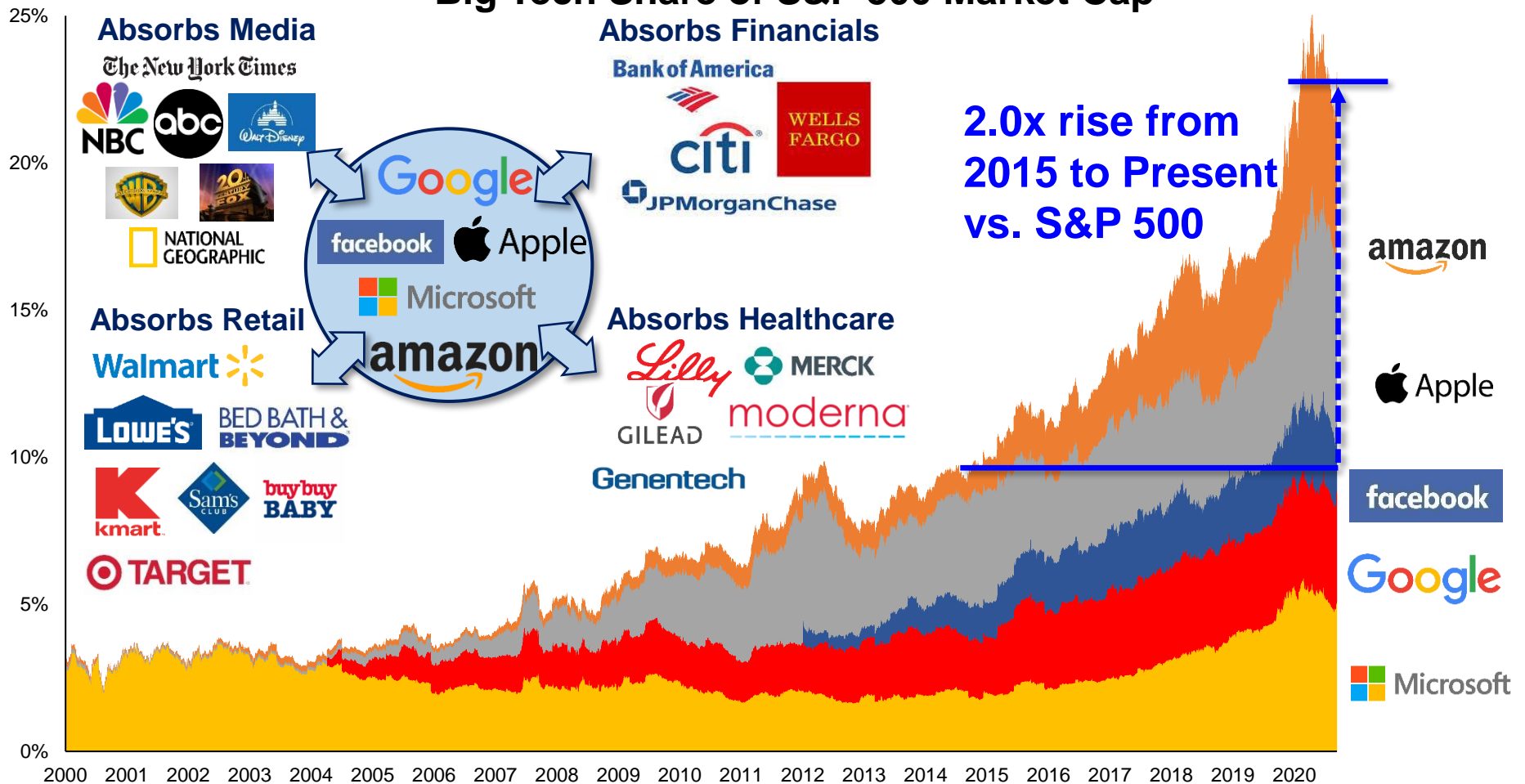
FAAMG more than doubling to above 20% of S&P 500 market value

- FAAMGs have risen to capture 22% of the S&P 500 by disrupting other industries. No business paradigm has lasted forever, and as time goes on, we're increasingly more likely to see a shift. As Big Tech sits at new heights, it's worth asking – will these same platforms remain dominant a decade from now?

Figure: Top 5 Big Tech companies share of S&P 500 Market Cap

Date: 2000 – 2020

Big Tech Share of S&P 500 Market Cap



Source: FSInsight, Bloomberg

Early Innings Of Crypto Tech Absorbing Big Tech

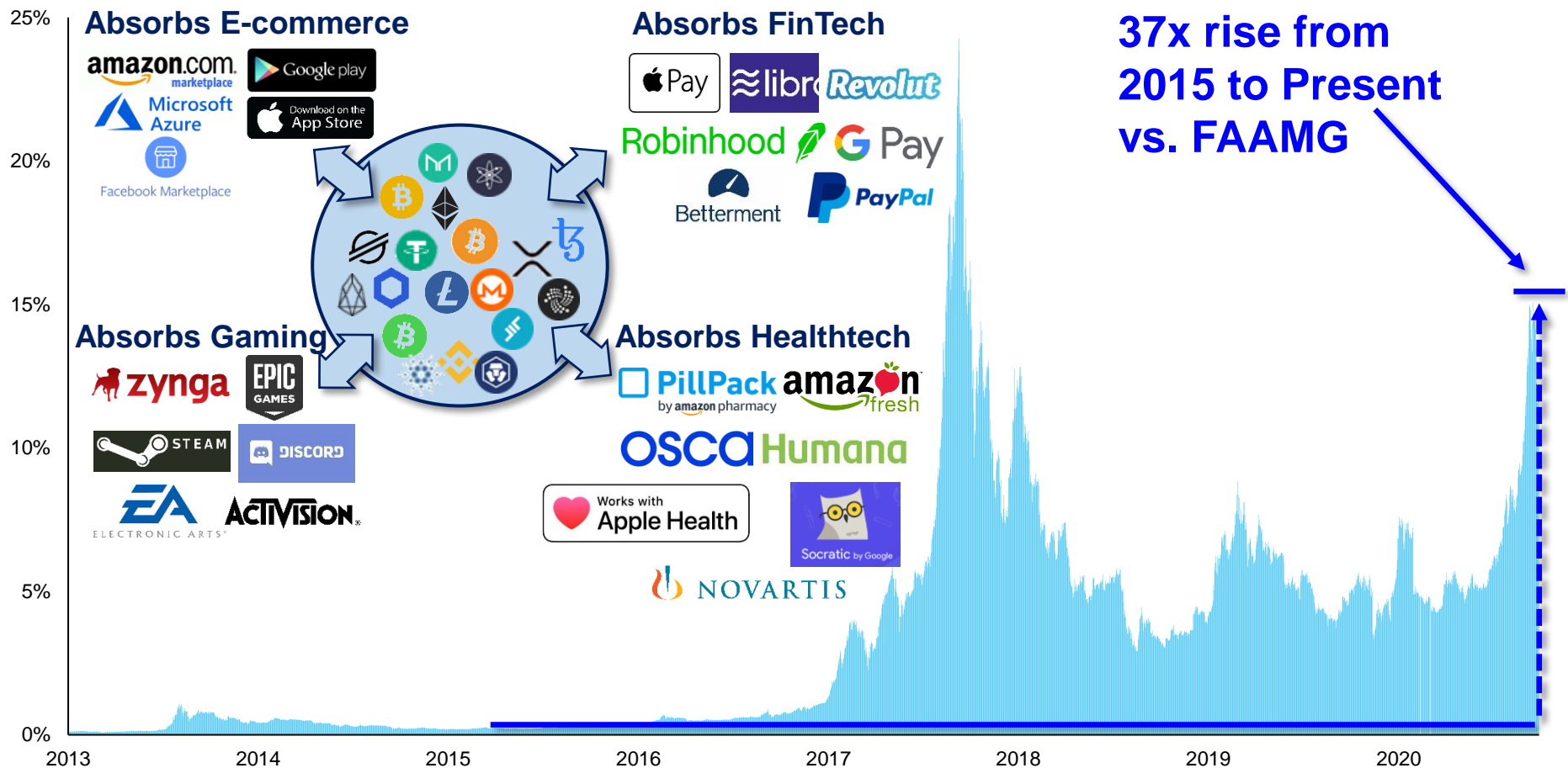
Crypto networks rising 37x over same time against FAAMG

- Cryptonetworks resemble the early internet era. Over the same 5-year time period that big tech companies grew in dominance, the market cap of cryptonetworks grew even faster, rising 37x vs. FAAMG.

Figure: Cryptonetworks share of Top 5 Big Tech Market Cap

Date: 2010 – 2021

Crypto Share of Big Tech Market Cap



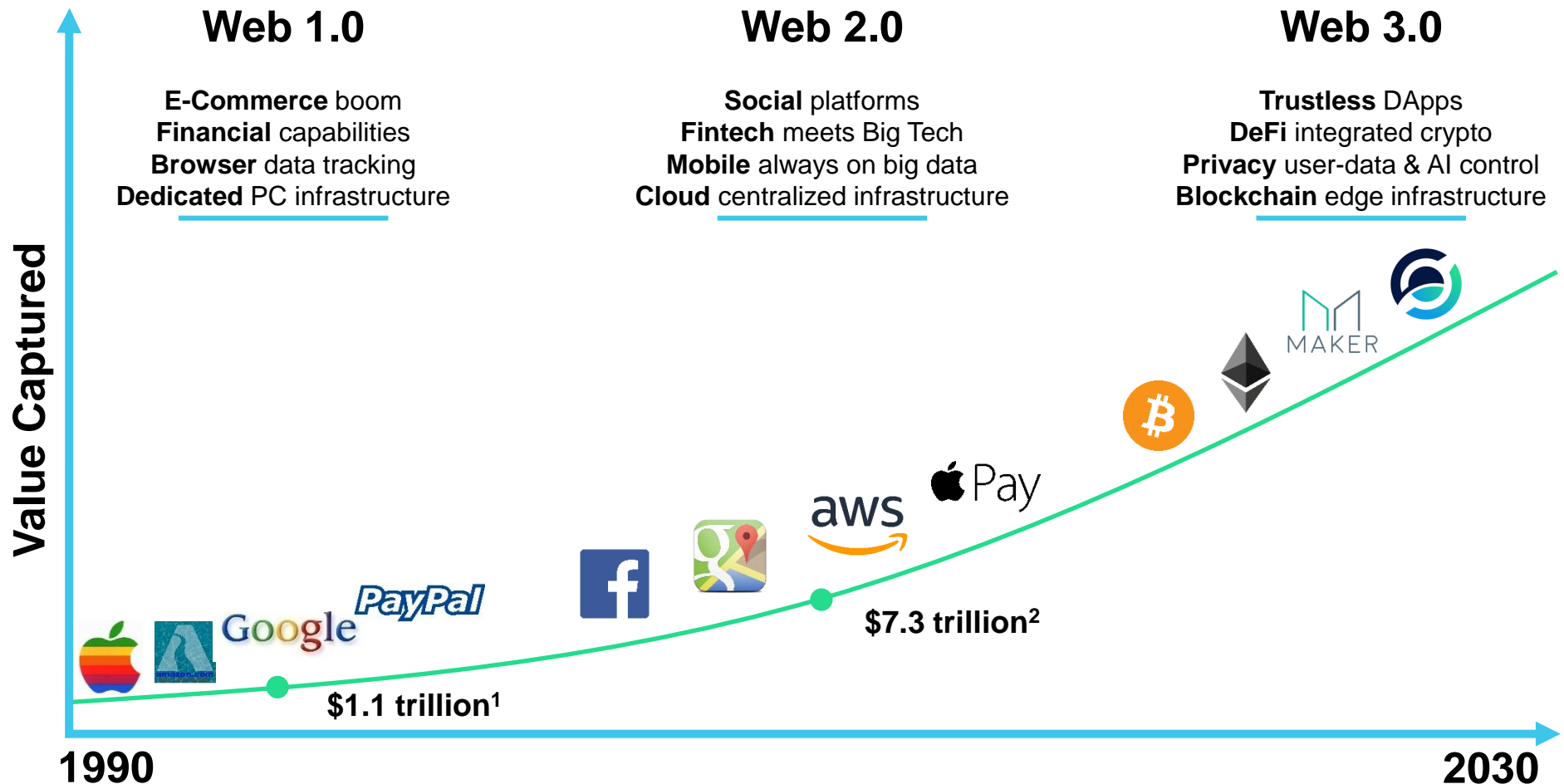
Source: FSInsight, Bloomberg, Coinmarketcap, Coinmetrics

Platforms For The Next Era Of The Web

Aiming to reinventing the internet experience using crypto protocols

- Web 3.0 blockchain networks give us connected edge computing, trustless protocols give us community-owned platforms, privacy tech gives us control over data and AI, crypto gives us DeFi natively imbedded into the internet.

Figure: Evolution of the Web



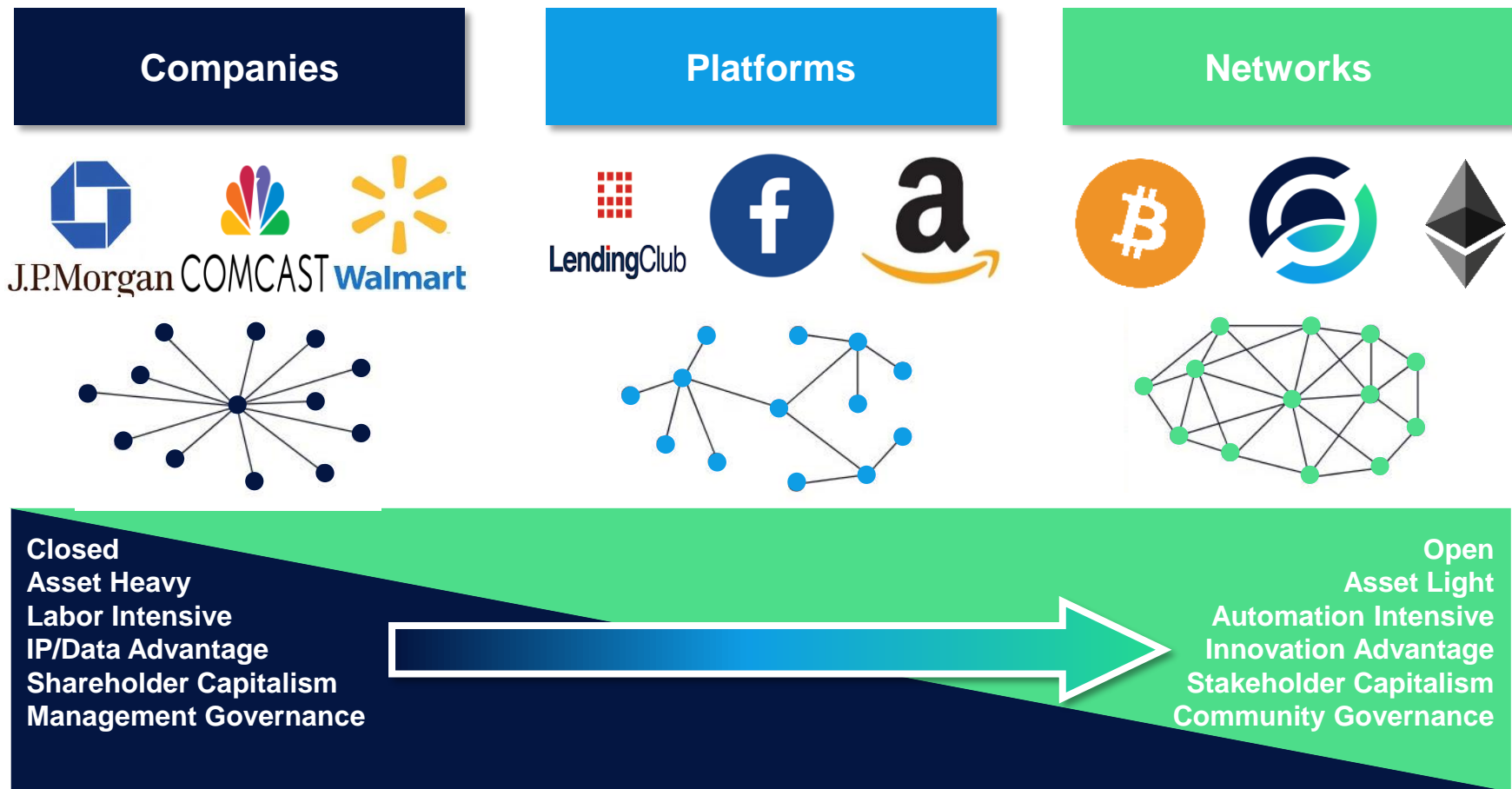
Source: FSInsight, Fabric Ventures Inspired, (1) Internet companies market cap as of 2000, (2) Big Tech market cap as of 8/25/2020

Next Generation Organizational Tech Business Models

Natural evolution to crypto: from companies to platforms to networks

- Cryptonetworks are a natural evolution of many tech platform business models today; as Facebook changed media, FinTech-banking, Amazon-retail, Uber-transportation, Airbnb-lodging, we believe cryptonetworks will do the same.

Figure: Transition from companies, to platforms, to cryptonetworks



Source: FSInsight

Web 3.0 Alternative Internet Architecture

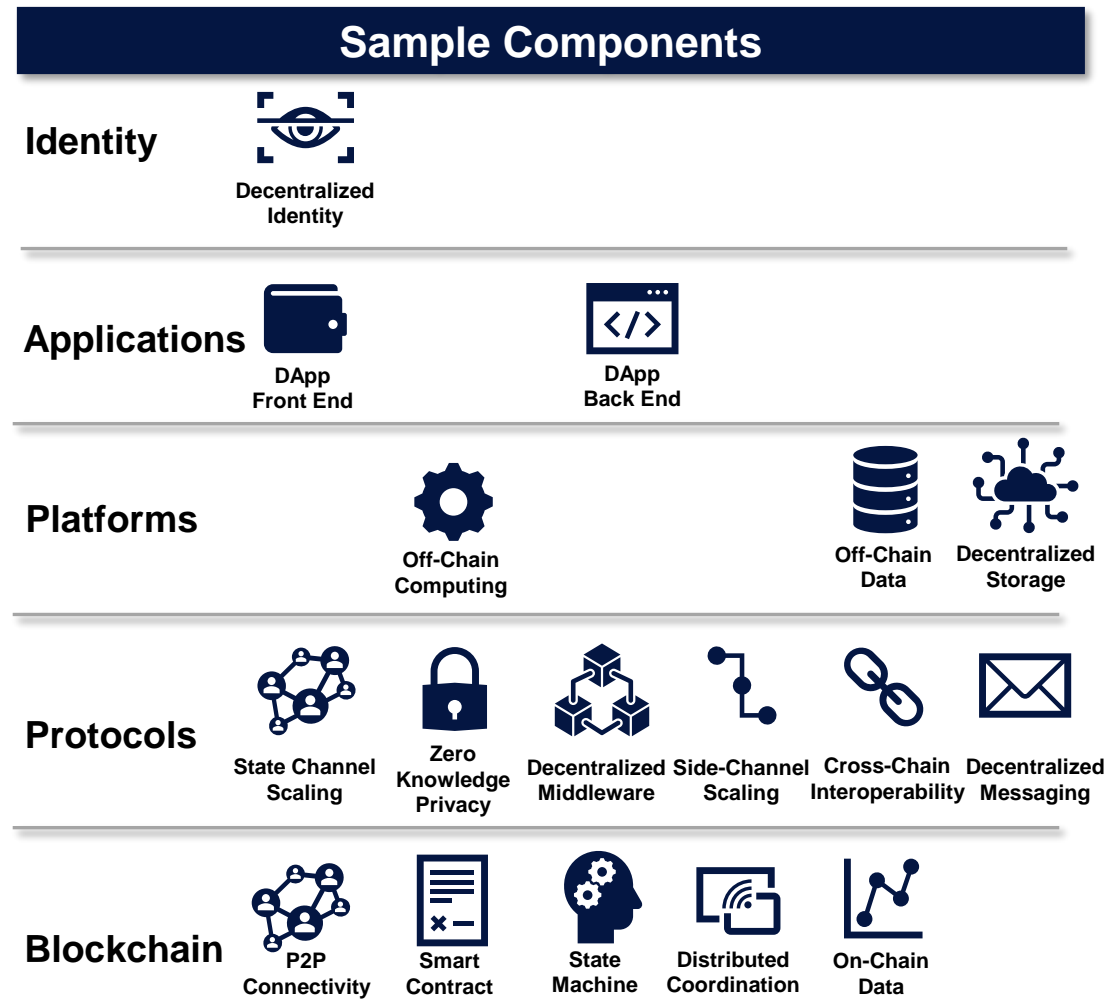
Crypto is more than blockchain it's a suit of collective technologies

- Web 3.0 is a vision for a better internet that replaces: application gatekeepers with unstoppable DApps on community protocols, dominant cloud providers with an edge computing architecture, data-monopolies with user-owned identity.

Figure: Example of Decentralized Web Stack

Web 3.0 Internet Features:

- Users are in control of their data & identity
- Displaces platform intermediated interactions (Amazon, Facebook, Google, Uber, etc.).
- Build on blockchain technologies:
 - Trust verification
 - Privacy-preserving and interoperable protocols
 - Decentralized infrastructure and application platforms
 - Decentralized identity



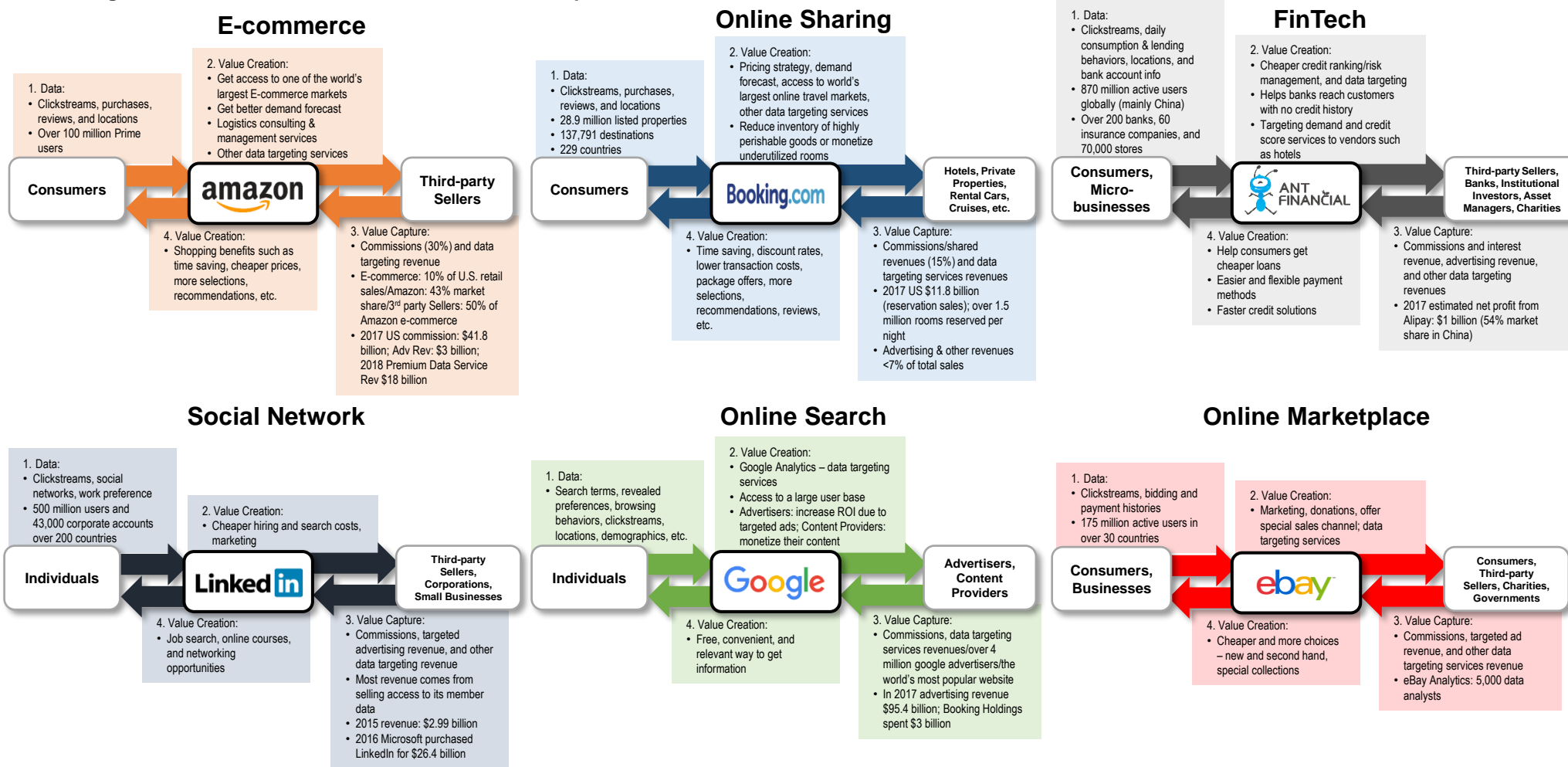
Source: FSInsight, Gartner

Data-Based Platform Company Business Disintermediation

Web 3.0 crypto ideal for replacing information network applications

- We're living in an information economy where data is the new oil. Business models for many of the largest companies today across a range of industries involve brokering information. Web 3.0 cryptonetworks are being built to disintermediate data-based information network application providers.

Figure: Data-based internet business model examples



Source: FSInsight, Bureau of Economic Analysis (BEA)














Although Blockchain Companies Have Accrued Substantial Value

Currently, 15 Private Crypto Company Unicorns Estimated As \$125B

- Most, including us, believe blockchain technology will have many impactful and disruptive applications. The “blockchain not bitcoin” crypto skeptic view has been that companies will capture the technology’s value. Thus far, we estimate private blockchain company unicorns represent ~\$125B and another \$25B for public ones.

Figure: Private Blockchain Company Unicorns

Date: Latest Available

#	Company	Estimated Valuation (\$B)
1	 coinbase	\$70.0
2	BITMAIN	\$12.0
3	 ripple	\$10.5
4	 DIGITAL CURRENCY GROUP	\$8.0
5	 kraken	\$4.0
6	 BitMEX	\$3.6
7	 BINANCE	\$3.0
8	 CIRCLE	\$3.0
9	 EBANG	\$3.0
10	 bakkt	\$2.1
11	 block.one	\$2.0
12	FIGURE	\$1.2
13	 BITFURY	\$1.0
14	 Liquid	\$1.0
15	 CHAINALYSIS	\$1.0
Total		\$125.4

Total Value \$125B

Source: FSInsight, FTX Coinbase Futures, Hurun Report, Internal Estimates

Crypto Networks Have Captured Majority Value Thus Far











Over twice as many public crypto asset unicorns' worth ~\$900B

- Public crypto networks have thus far captured the greatest identifiable share of the technology value created from blockchain technology. There are 32 crypto network unicorns' worth ~\$900B today. Public and private leading blockchain companies (~\$150B) represent ~1/6th the value of public crypto network unicorns.

Figure: Publicly Traded Crypto Network Unicorns

Date: 1/26/2021

Total Value \$900B

#	Crypto Asset	Ticker	Market Cap	#	Crypto Asset	Ticker	Market Cap
1	 Bitcoin	BTC	\$600,888,568,010	17	 THETA	THETA	\$1,951,568,156
2	 Ethereum	ETH	\$159,184,556,292	18	 TRON	TRX	\$2,151,247,382
3	 Polkadot	DOT	\$16,268,654,954	19	 NEM	XEM	\$1,931,684,350
4	 XRP	XRP	\$12,418,387,933	20	 VeChain	VET	\$1,970,079,718
5	 Cardano	ADA	\$11,010,118,427	21	 Synthetix	SNX	\$2,006,589,973
6	 Chainlink	LINK	\$9,942,734,313	22	 Neo	NEO	\$1,726,263,041
7	 Litecoin	LTC	\$9,387,244,668	23	 Cosmos	ATOM	\$1,724,896,717
8	 Bitcoin Cash	BCH	\$8,201,974,858	24	 Crypto.com Coin	CRO	\$1,660,314,206
9	 Binance Coin	BNB	\$6,472,081,160	25	 Maker	MKR	\$1,447,987,046
10	 Stellar	XLM	\$6,000,202,935	26	 UNUS SED LEO	LEO	\$1,328,374,435
11	 Uniswap	UNI	\$3,450,685,059	27	 Celsius	CEL	\$1,265,159,636
12	 Bitcoin SV	BSV	\$3,260,068,492	28	 IOTA	MIOTA	\$1,266,536,082
13	 Aave	AAVE	\$3,251,074,104	29	 Huobi Token	HT	\$1,126,008,369
14	 EOS	EOS	\$2,551,291,496	30	 Dogecoin	DOGE	\$1,117,773,115
15	 Monero	XMR	\$2,449,982,301	31	 Dash	DASH	\$1,055,206,545
16	 Tezos	XTZ	\$2,306,657,466	32	 Filecoin	FIL	\$1,039,149,046

Source: FSInsight, Coinmarketcap

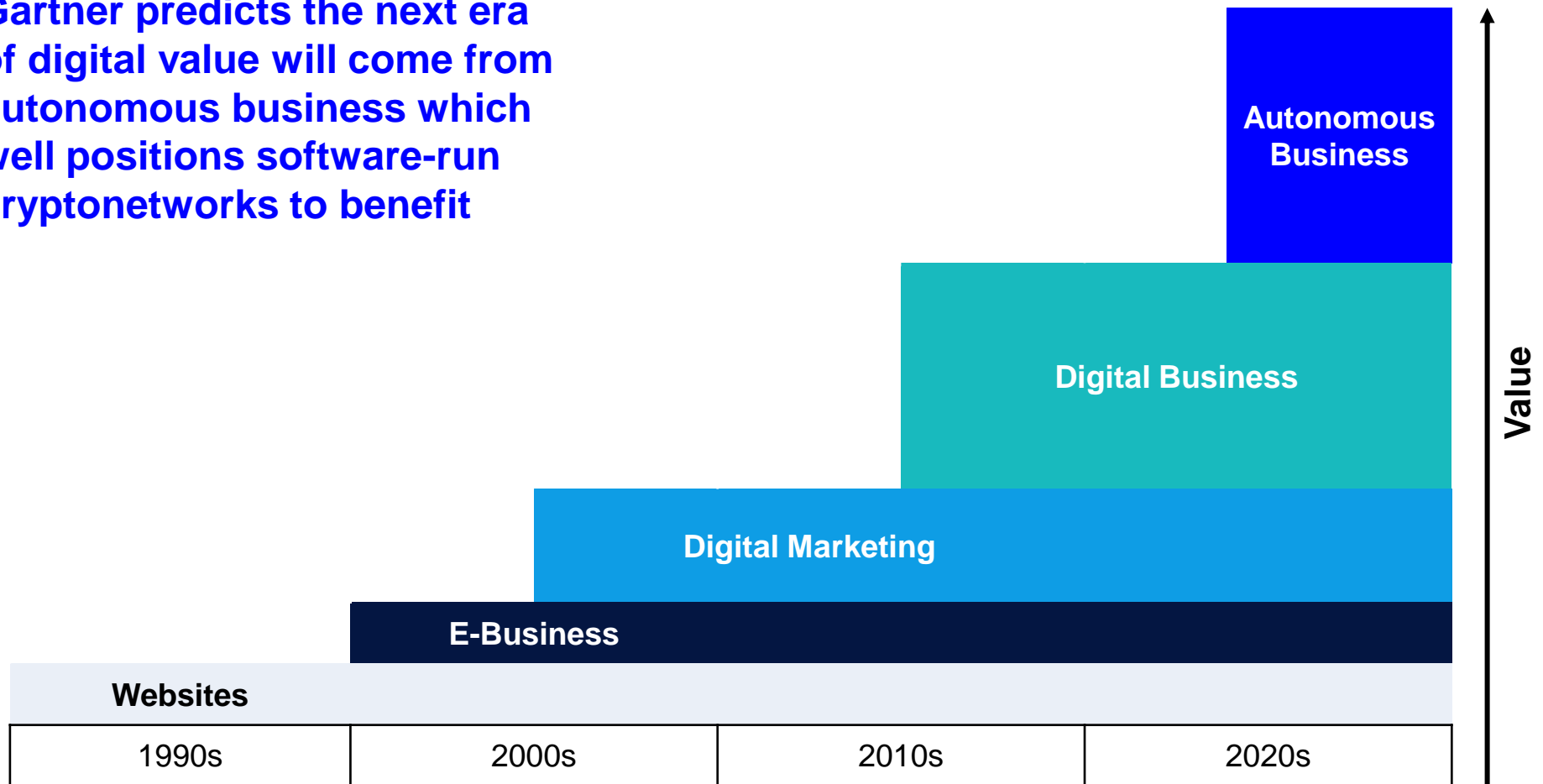
Crypto Network Digital Autonomous Software Businesses

New types of distributed autonomous organizations are emerging

- Cryptonetworks take us from cloud companies to companies in the cloud operating as autonomous software entities. Processes built into consensus programming of users across the network are what enable them to coordinate in a decentralized permissionless manner and deliver innovative software-based business solutions on a global scale.

Figure: Gartner Digital Innovation

Gartner predicts the next era of digital value will come from autonomous business which well positions software-run cryptonetworks to benefit



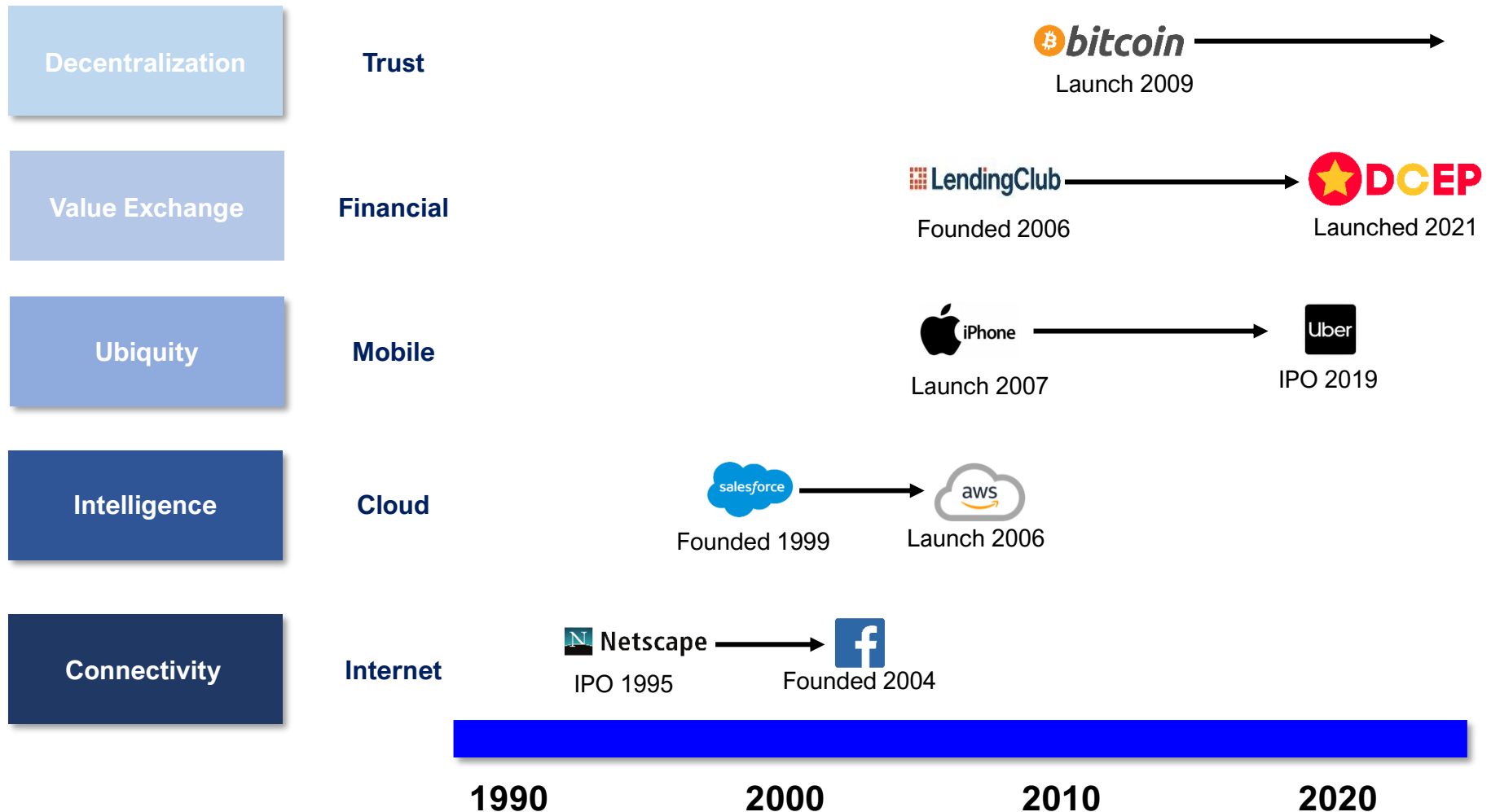
Source: FSInsight, Gartner

The New Technology Stack

Bitcoin created a new layer of the internet financial tech stack

- As prior tech stack layer did, the new trust layer first enabled by Bitcoin and being used by other crypto networks will open new internet applications.

Figure: The New Technology Stack



Source: FSInsight, Bain Capital Ventures Inspired

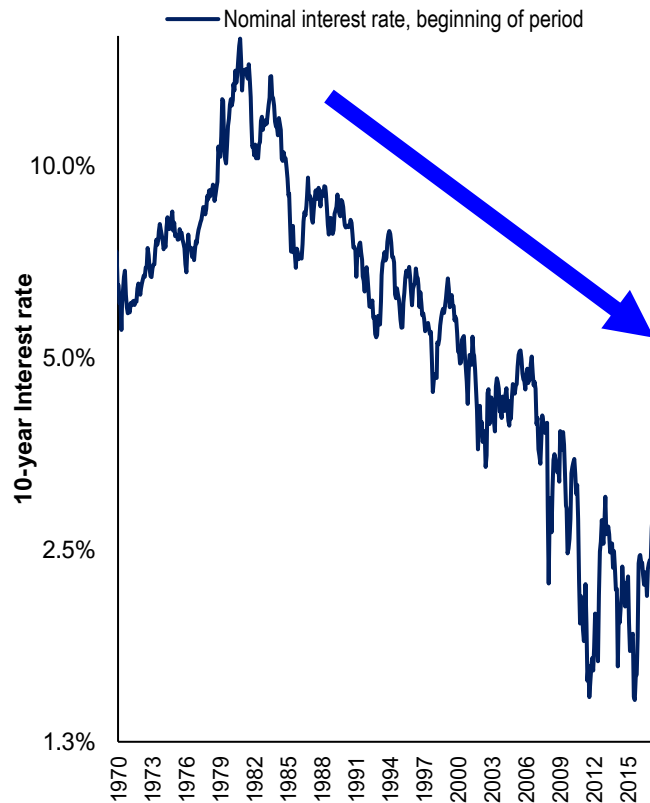
DLT's Lowering Banking Costs & Reshaping Financial Sector

Banking ripe for technological disruption

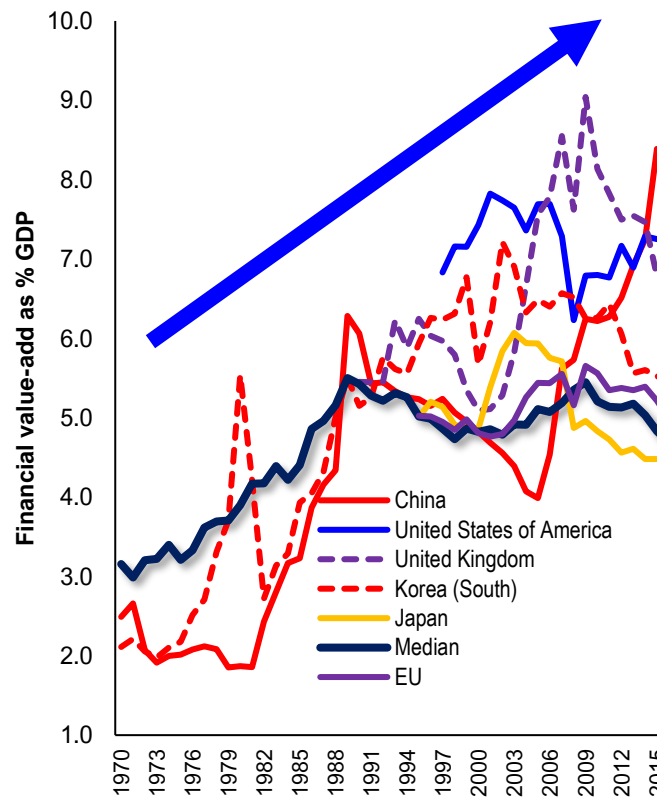
- Banks continue to make money regardless of rates and occupy a large share of GDP
- Reasons they have been targeted by emerging fintech players. Crypto may be about to eat into their market share.

Figure: Interest Rate & Financial Sector GDP Share Trends
Since 1970

Since 1970, interest rates have generally been falling...



But the Financial sector has grown despite this...



Banking value capture is **6%** of all GDP.

The average person spends almost **a month** per year (~3.5 weeks) to pay for “right to use” financial system.

Facebook rev per user (ad sales) **~\$25 per year**. For banks, **\$860-\$1,000 annually** (global).

Source: FSInsight, Bloomberg

Replacing Trust Enables Disruptive Fintech Use Cases

Real utility of crypto lower costs and capturing increased productivity

- Value capture replacing “Trust” from traditional financial systems—**Blockchain decentralizes trust**
- Productivity—**replace workforce as “trust” entities on blockchain**
- Optimize working capital—averages 14% GDP, **\$11 trillion**
- Store of Value—\$280T market, less than **0.5% share**

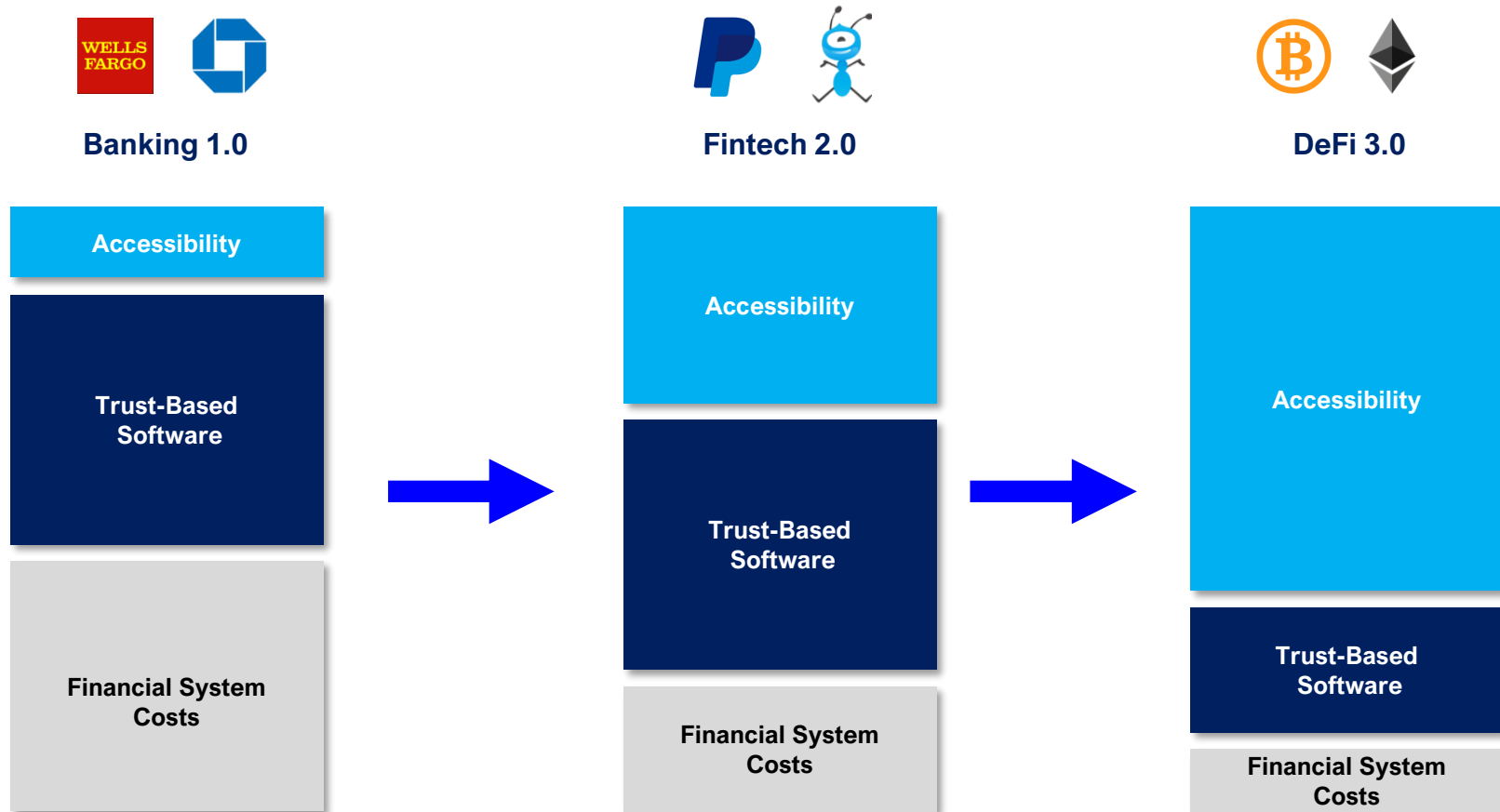
Source: FSInsight

As Fintech Eats Finance, Crypto Is About To Eat Fintech

Replacing trust-based systems with crypto software = value creation

- From banking to fintech and now from fintech to crypto, financial services may be about to change.

Figure: Evolution of Banking



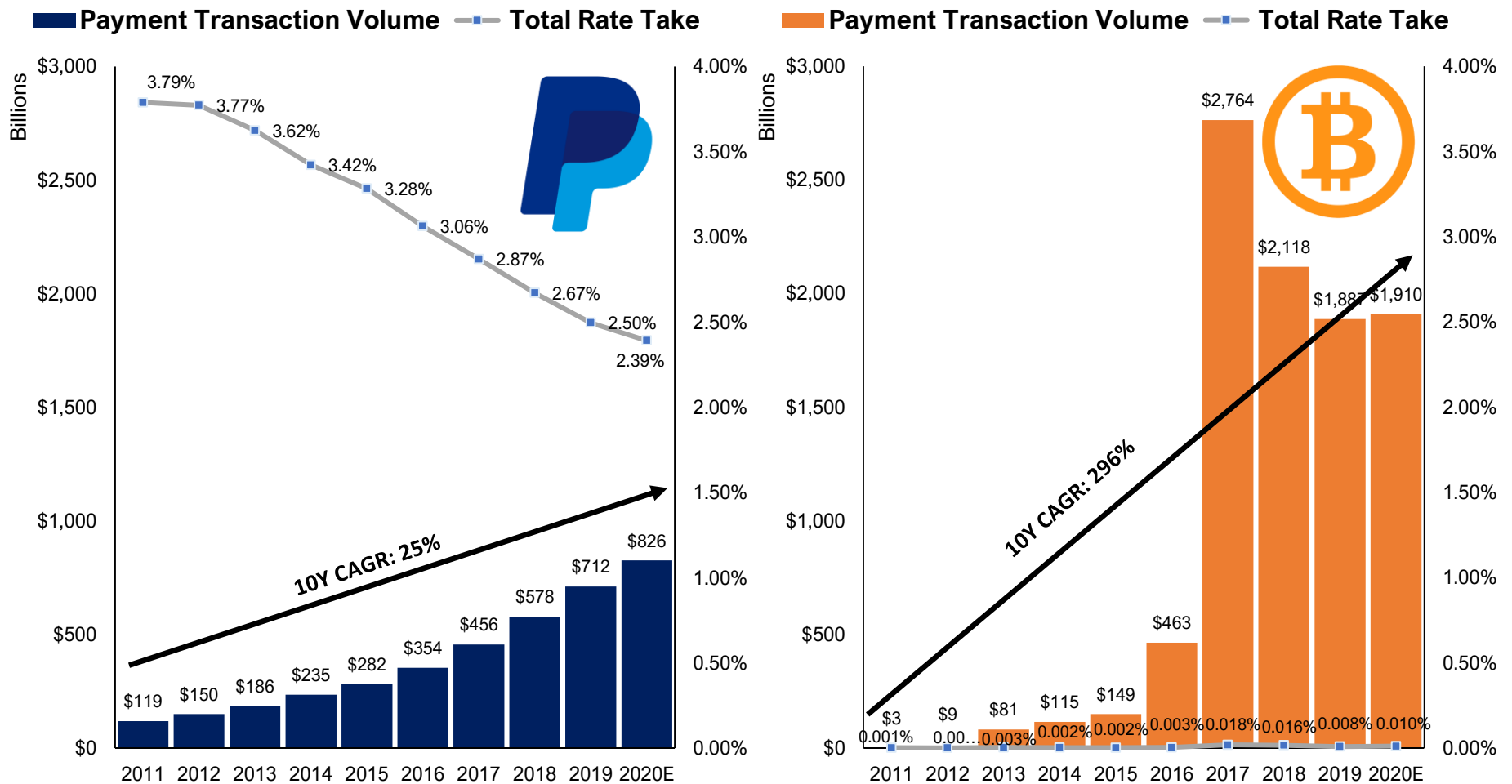
Source: FSInsight

BTC payments 3x larger, 99% cheaper, growing 12x faster vs PYPL

How is this not talked about more? How is this not disruptive?

- PayPal now supports crypto for its customers and merchants but still charges its current take rates.
- What happens when PayPal customers realized they can lower their costs by just using crypto?

Figure: PayPal vs. Bitcoin Payment Volume & Fee Take Rates



Source: FSInsight, PayPal, Date: 2011 (2020A: PayPal Q2 Annualized, Crypto Q3 Annualized)

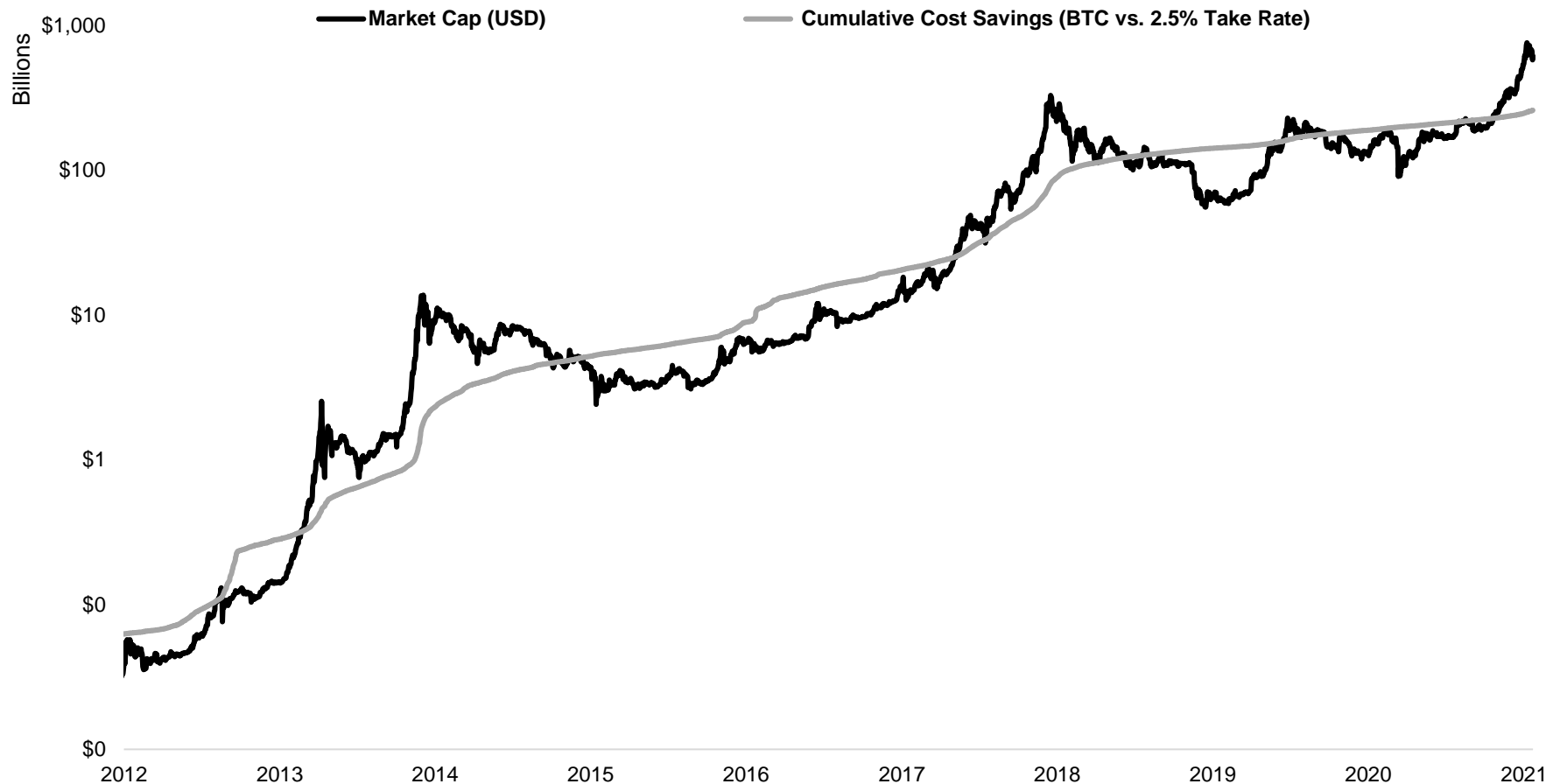
What's An Asset That Saves Billions Of Dollars Worth?

Disruption Value: Lifetime Cost Savings vs. Typical Payment: \$260B

- Central Banks have thrown out playbook with low rates and negative yielding debt: why aren't savings cash flows?
- Asset is hedge against price inflation for consumers & technology driven deflationary disruption for incumbents.

Figure: Bitcoin Market Cap & Estimated Total Transaction Fee Cost Savings

Date: 1/22/2021



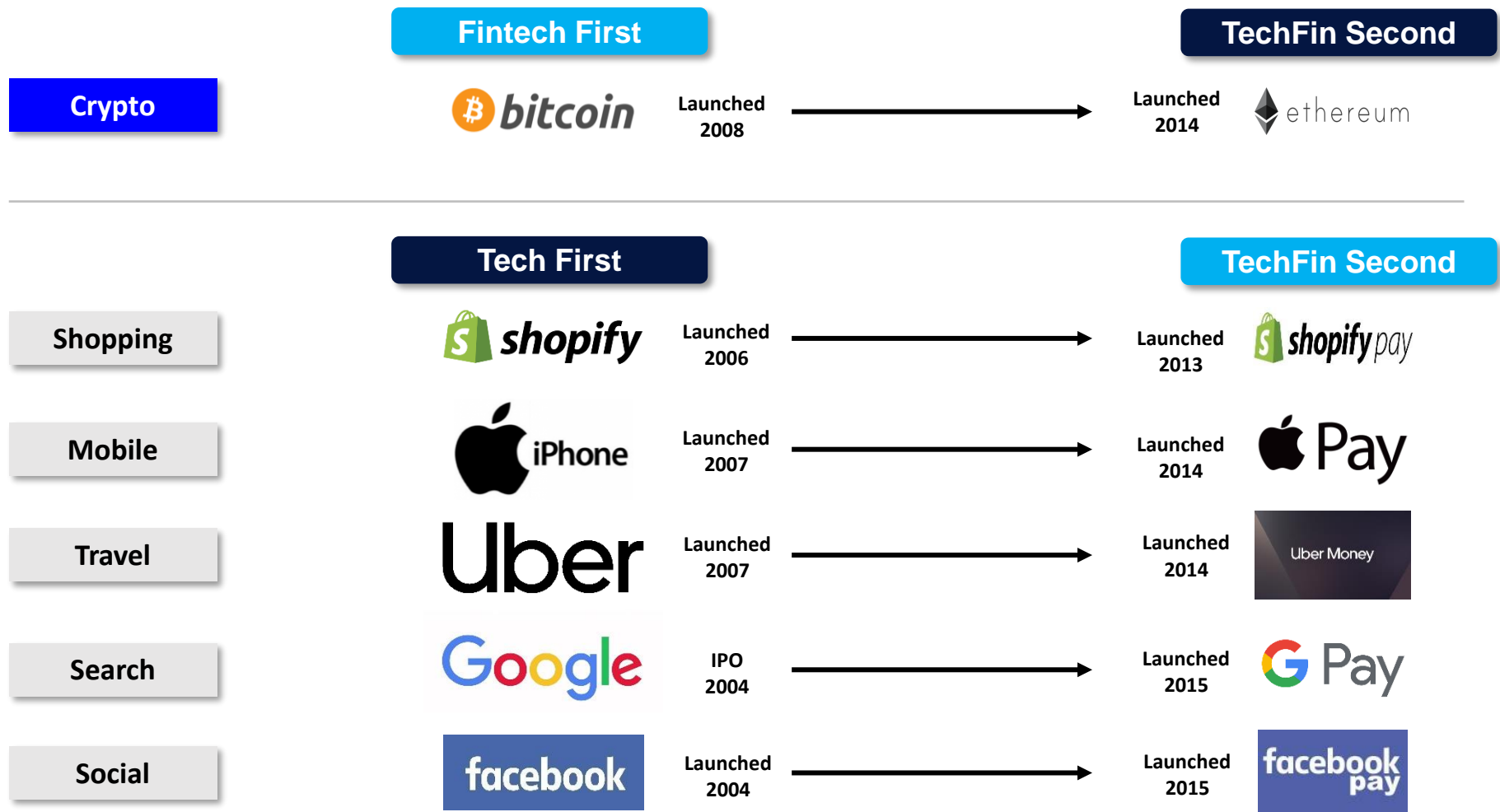
Source: FSInsight

Fintech Natively Integrated As First But Not Last Crypto Killer App

Big tech players all looking to enter fintech but crypto stated there

- Natively imbedded crypto Decentralized Finance (DeFi) moves legacy fintech beyond “doing radio on TV” and allows internet financial services to reach their full potential through integration within crypto app ecosystems.

Figure: Tech and fintech convergence



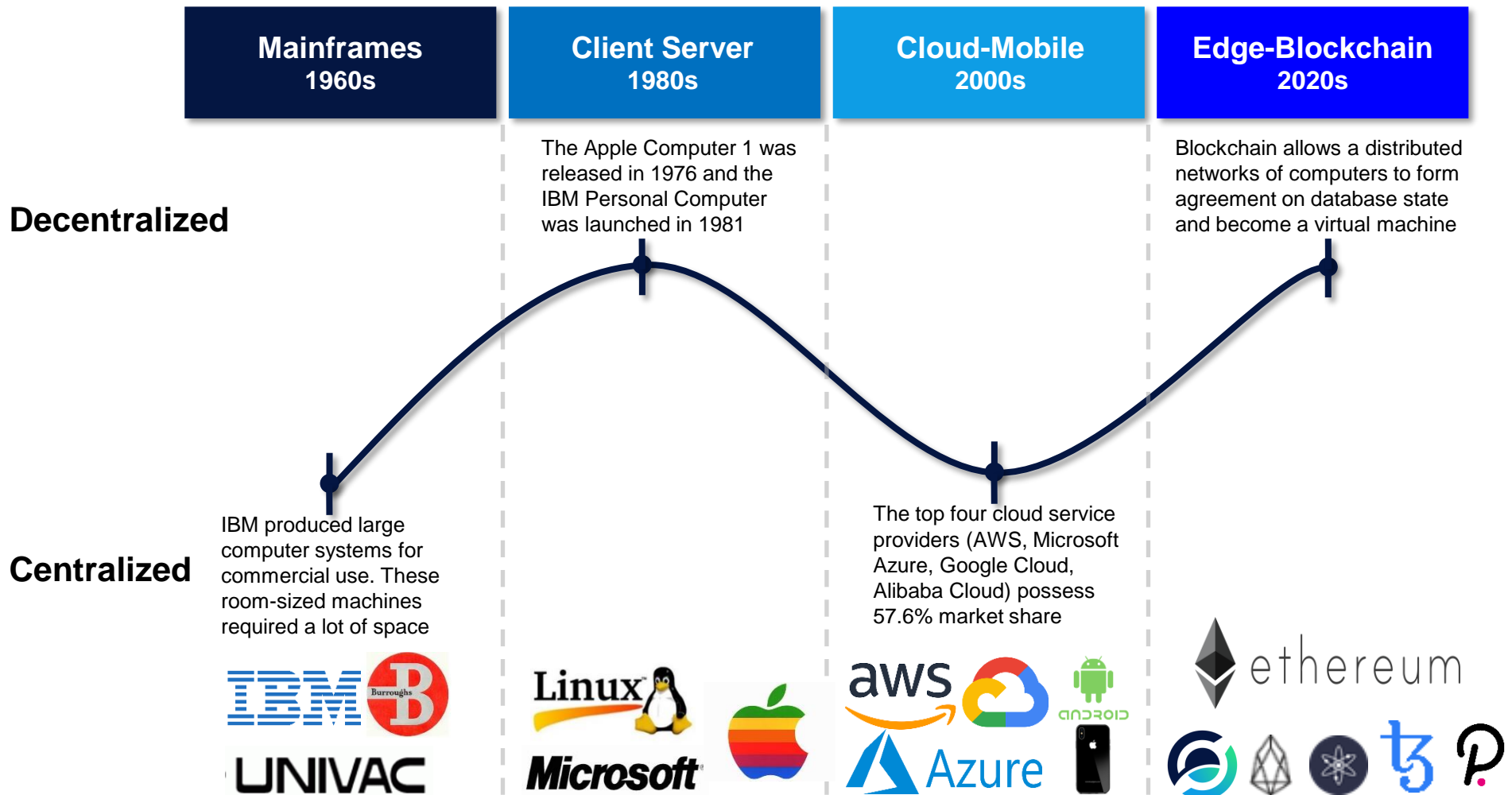
Source: FSInsight

Crypto Network Platforms Advance Cloud Computing

Computing trends have shifted from centralized to decentralized

- Computing platforms moved in cycles from centralization to decentralization as new innovations emerged, with the dominant platform lagging the prior by ten years; furthering this trend, we're entering the blockchain computing era.

Figure: Historical Computing Trends



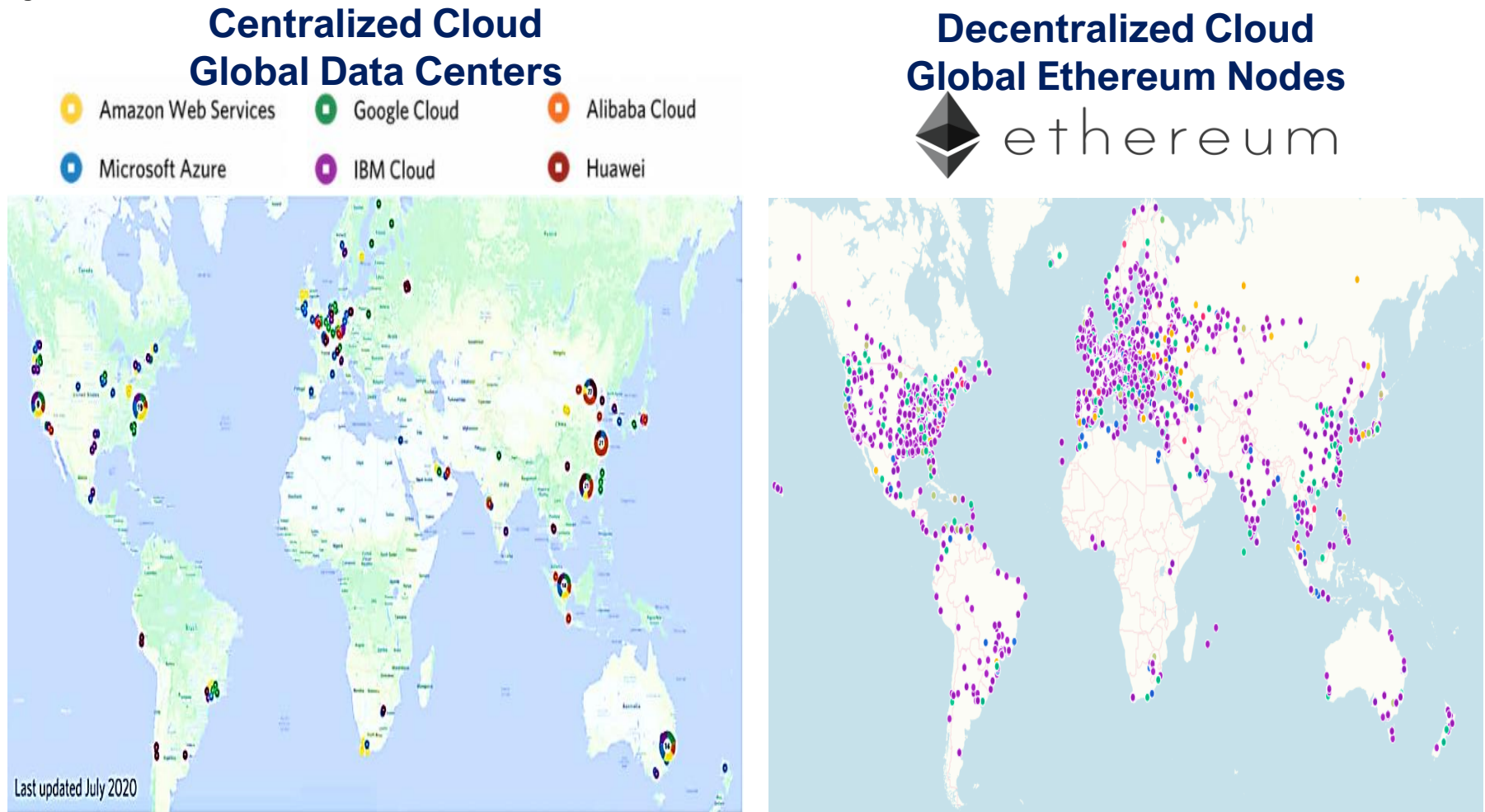
Source: FSInsight

Decentralized Cloud Replacing Centralized Data Centers

Data centers ran by big cloud providers being replaced by crypto nodes

- Blockchain protocol software is run atop global networks of computers forming them into a unified distributed autonomous cloud organization for building, hosting and deploying new types of decentralized applications (DApps).

Figure: Global Data Centers & Ethereum Nodes



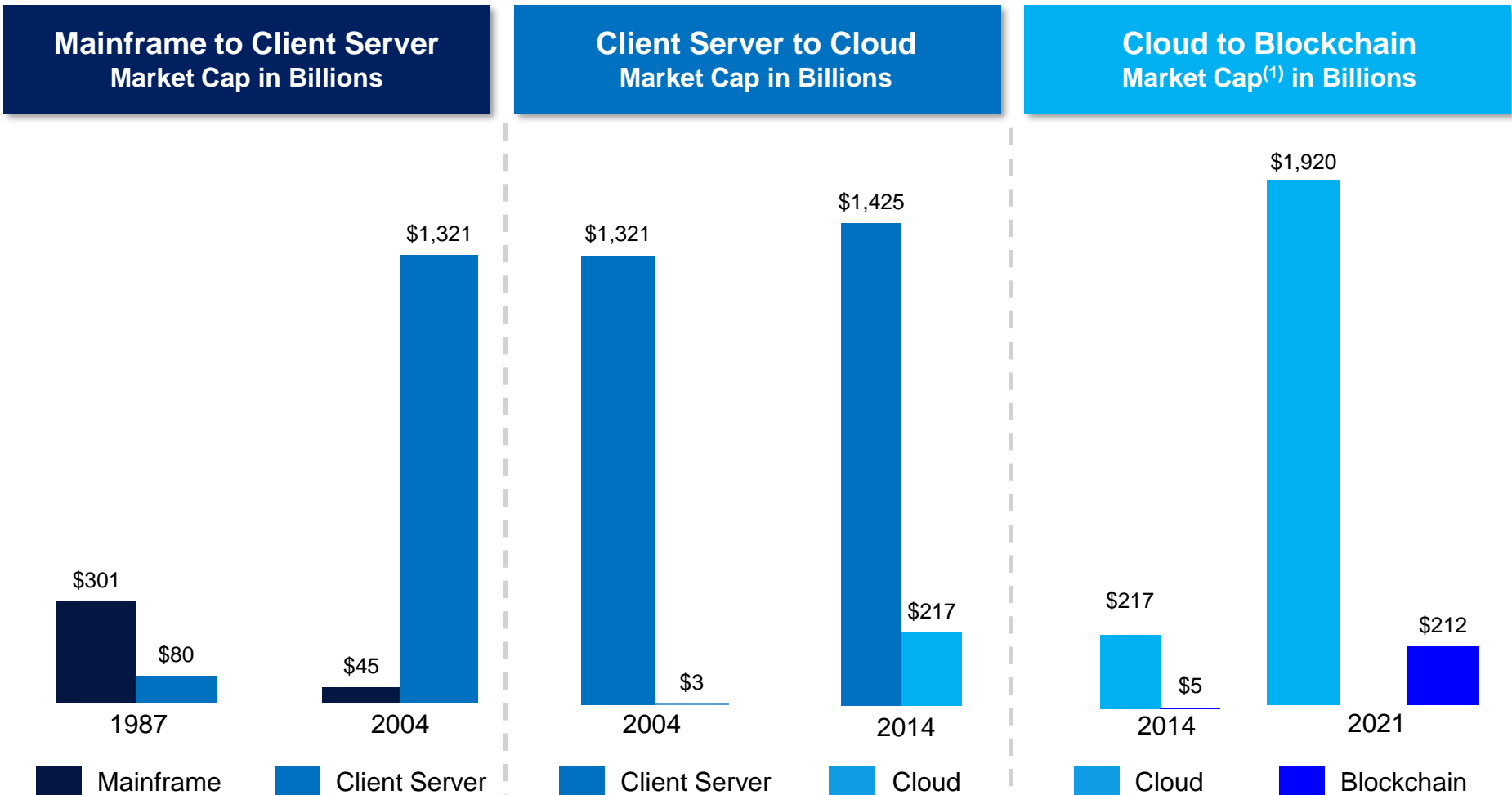
Source: FSInsight

Cloud to Blockchain Platform & Value Shift Underway

Shifts create value as value shifts from one generation to the next

- Many investors are focused on the meteoric rise of the cloud as COVID has driven digital transformation. Yet, looking at history, as computing platforms moved from mainframe to client server to cloud, shifts created value and resulted in value transfer from one generation to the next. Blockchain computing looks to be replacing cloud.

Figure: Historical Computing Platform Market Value Shifts



Source: FSInsight, Salesforce, Bessemer Cloud Index, (1) 1/19/2021 Blockchain Market Cap represents Messari Smart Contract Platforms; 2014 Blockchain Market Cap represents total crypto market cap, Coinmarketcap.

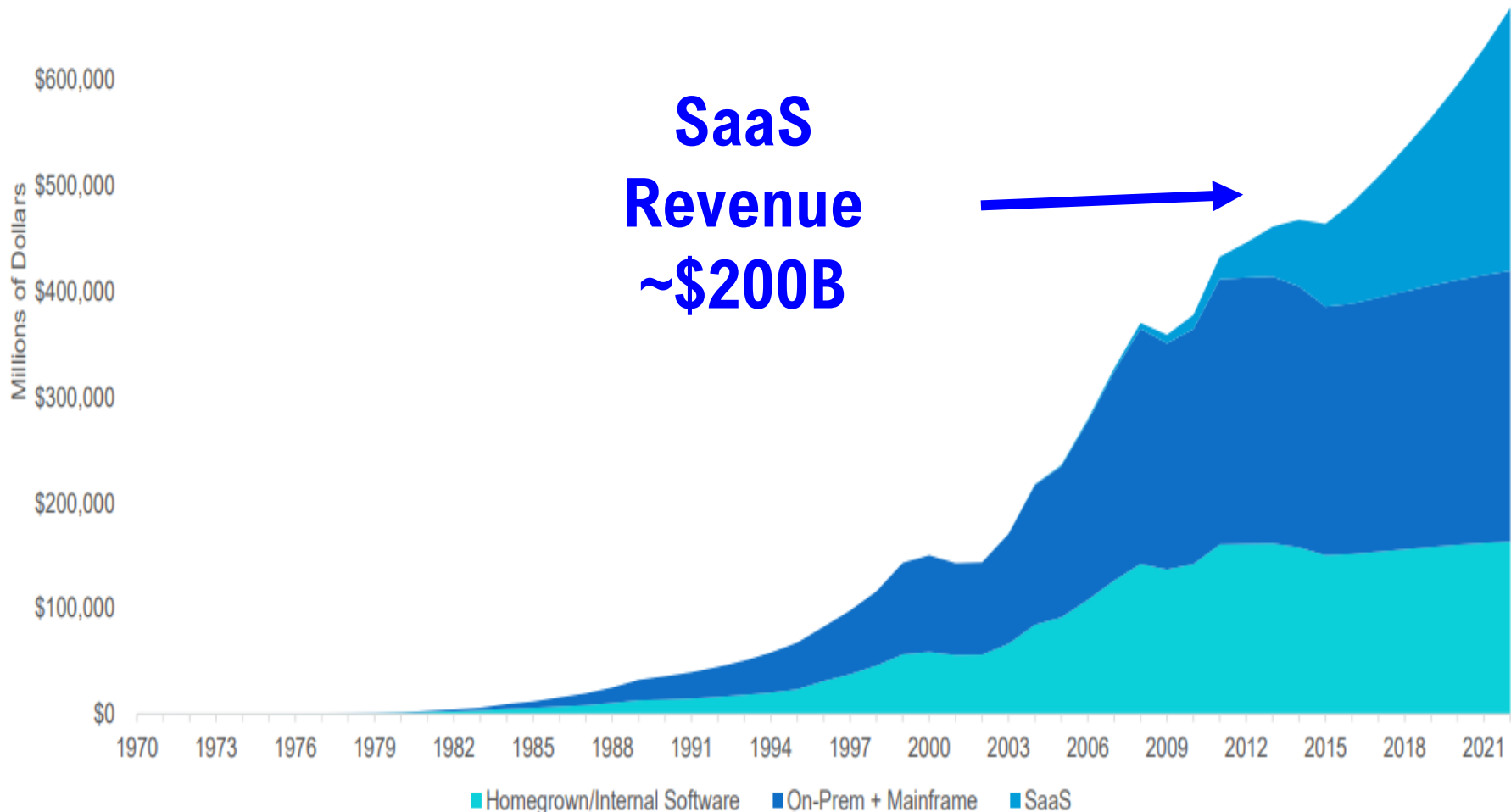
As Cloud SaaS Has Been Eating Software

The evolution of software distribution models is ongoing

- As software has evolved from physical on-premise to web-based subscription – it has unlocked new markets and grown the overall software market. Over the past 10yrs, Cloud Software-as-a-Service (“SaaS”) has enabled business to benefit from software innovation without having to bear infrastructure costs and grown to ~35% of the market.

Figure: Evolution of Software Delivery Business Models

Date: 1970 to 2021



Source: FSInsight, Gartner, Battery Ventures

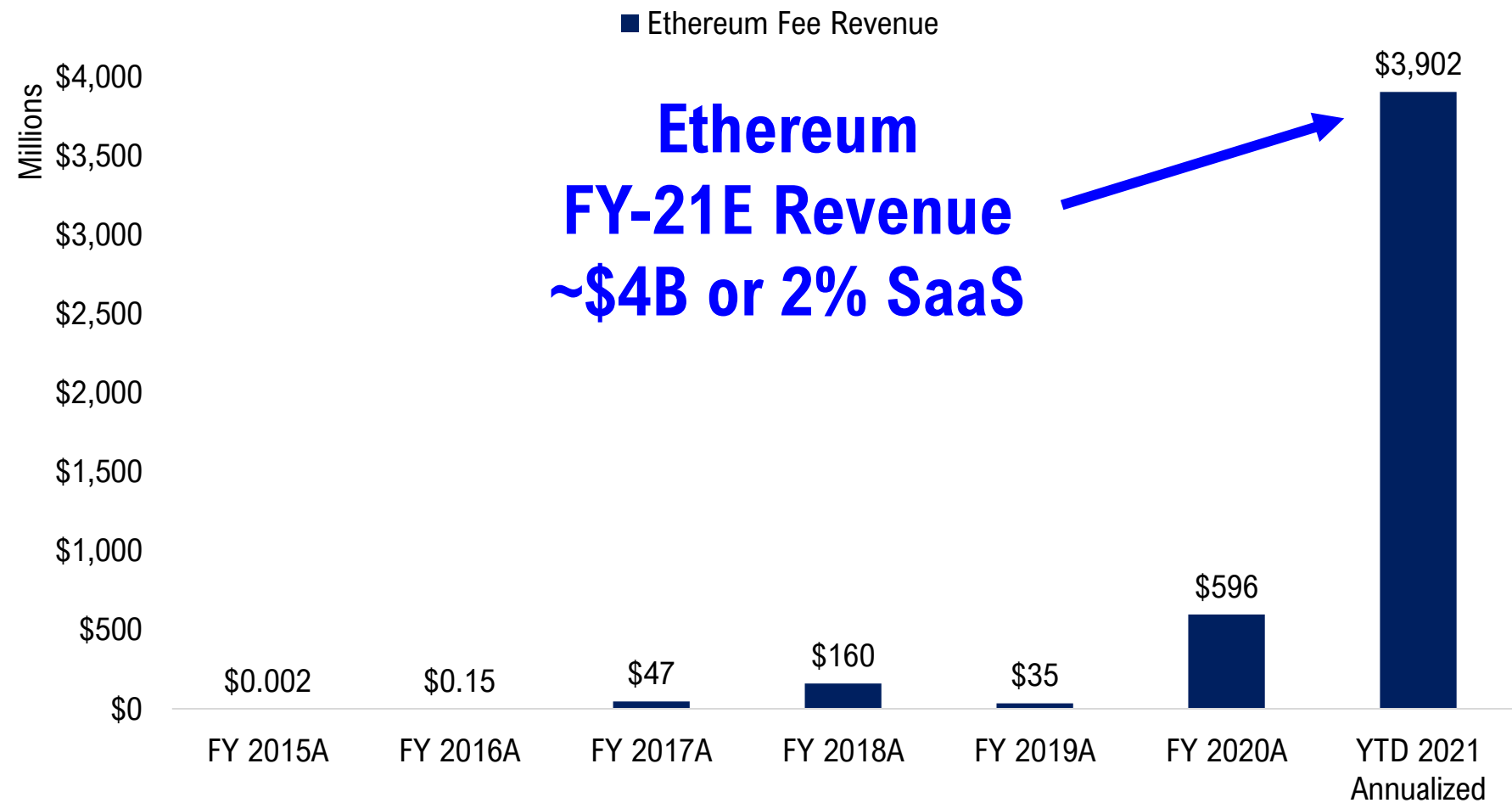
Decentralized Apps Drove \$600M FY-20 Ethereum Revenue

YTD (1/18) \$180M in fee revenue already implies \$3.9B by FY 2021

- Decentralized finance activity atop Ethereum generated ~\$600M in transaction fee cloud revenue during 2020.
- During the first 18 days of 2021, Ethereum generated \$180M in fee revenue, putting it on pace for \$3.9B during 2021.

Figure: Ethereum Annual Cloud Fee Revenue

Date: 2015 to YTD 2021 (1/24/2020)



Source: FSInsight

Large & Growing Decentralized Finance (DeFi) Ecosystem

Smart contract apps built atop the ETH network hold ~\$25B in value

- Ethereum has become the crypto industry leading platform for decentralized finance (DeFi) applications offering software enabled borrowing & lending, exchange, payments, and asset management services atop the network.

Figure: Ethereum DeFi total value locked

Date: 1/20/2021

Total Value Locked in DeFi (USD)



Lending



Exchange



Derivatives



Payments



Asset Mgmt.



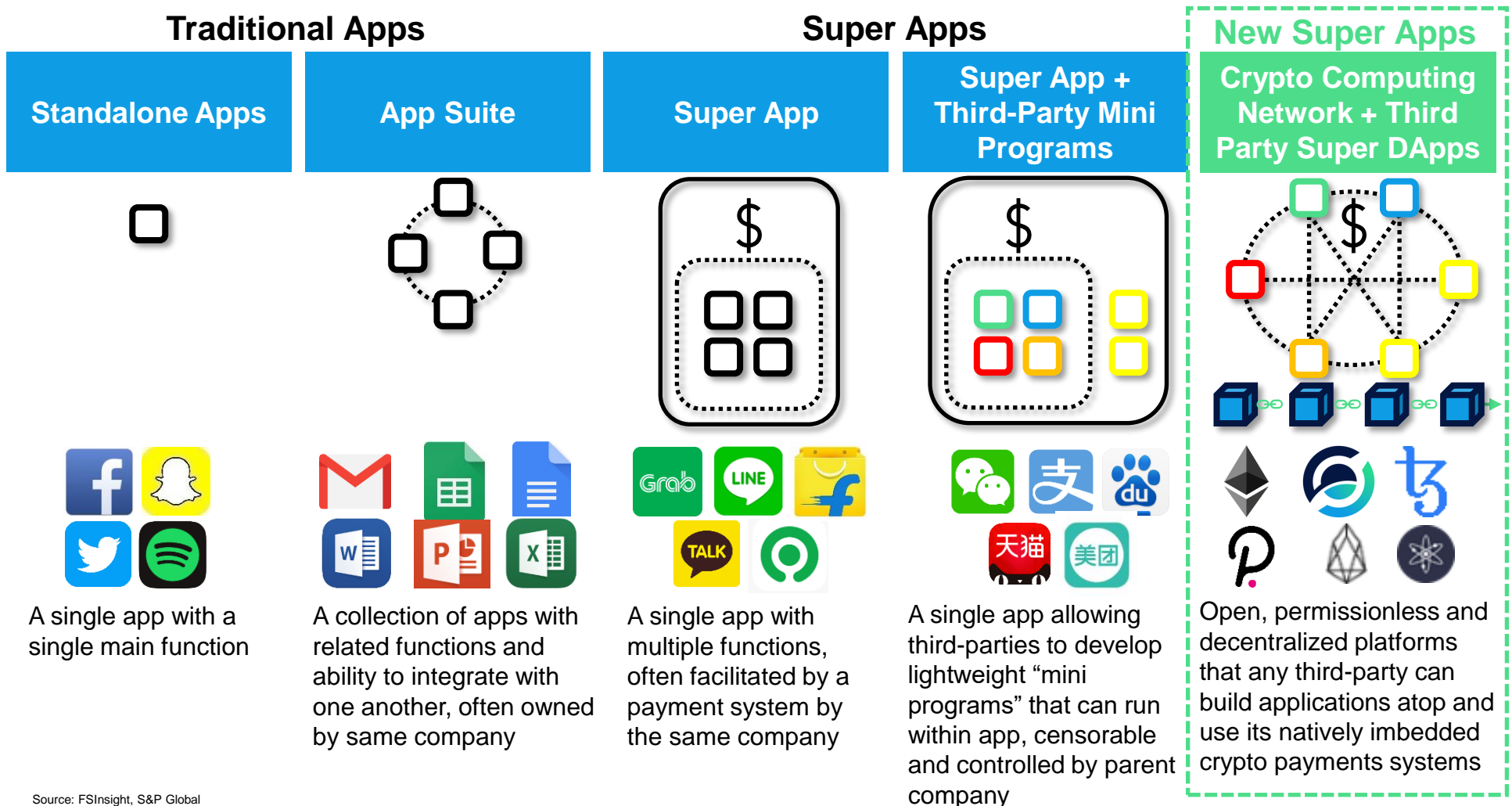
Source: FSInsight, Defi Pulse

Fintech & E-commerce Crypto Super App Platforms Emerging

General purpose computing smart contracting platform for new apps

- Crypto computing networks look capable of becoming new super app platforms, enabling versatile app products atop an open, permissionless and decentralized architecture, with natively imbedded financial capabilities.

Figure: Traditional & New Crypto Super App Platforms



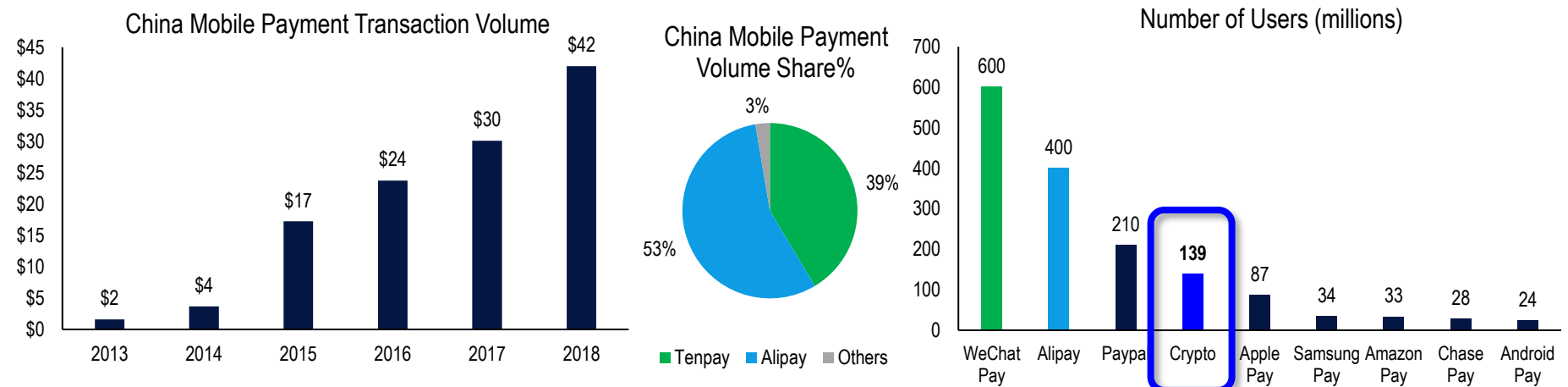
Source: FSInsight, S&P Global

Crypto "currencies": Alipay & WeChat Pay Internet Economies 2.0

Computing platforms & app ecosystems with built in payments = crypto

- Cryptonetworks' imbedded "currencies" offer payment interoperability within their application ecosystems, much like Alipay and WeChat Pay, but using a natively digital form of value tied to that economy.

Figure: WeChat & Alipay Internet Ecosystems











Source: FSInsight, Financial Times, Octopus Media, iResearch, Bloomberg, Cambridge Global Crypto Benchmarking Study 2018

Crypto App Ecosystems Resembling Global Tech Giants

Daaps are early but have been evolving and maturing rapidly

- As with the early internet, crypto challengers are still maturing. Many parts of crypto today are slow and clunky, difficult to use, not feature rich, and only appealing to highly technical users - but so was the early internet. Today, we can already see blossoming ecosystems of innovation emerging across many segments dominated by Big Tech.

Figure: Big Tech & Crypto Super App Product Offerings

Businesses Application	Big Tech App Example	Crypto DApp Example
Digital Media Publishing Messaging Online Games Search Advertising Content Distribution		
E-Commerce App Store Marketplaces		
Cloud Services Developer Training Software Tooling Cloud Infrastructure		
Fintech Services Digital Wallet Digital Payments Saving & Investing Borrowing & Lending Digital Insurance		

Source: FSInsight






FAAMG enterprise value essentially ~70% users, data & IP

Why can't a network capture that intangible value?

- The real value of a blockchain is in its network value – as users on the network grow, the value of the network should rise exponentially. FAAMG value is approximately 68% intangibles (excluding brand 18%) which one could argue are largely related to users, data & IP, demonstrating the opportunity for disruption and value capture by cryptonetworks.

Figure: FAAMG Intangibles Ex-Brand

\$ millions

Company	EV	Tangible Assets					Intangible Value Estimates		Users, data & IP value estimates		
	Enterprise Value	PP&E	Prepaid Expenses	Deferred Tax Assets	LT Assets	Current Assets ex-Cash	Intangible Value	Intangibles EV%	Brand Value	Intangibles ex-brand	Intangibles ex-brand EV%
 facebook	800,412	44,783	1,852		-	47,146	706,631	88%	189,000	517,631	65%
 Apple	1,879,350	37,378			105,341	113,975	1,622,656	86%	352,000	1,270,656	68%
 amazon	1,611,458	97,846			-	60,242	1,453,370	90%	220,791	1,232,579	76%
 Microsoft	1,490,813	52,904		6,405	2,965	168,339	1,260,200	85%	119,595	1,140,605	77%
 Google	932,060	84,587		721	13,078	134,080	699,594	75%	324,000	375,594	40%
FAAMG Composite	8,139,826	347,672	15,402	10,914	176,250	560,989	7,028,599	86%	1,487,586	5,541,013	68%

Source: FSInsight, Bloomberg, Brand Finance: Global 500 Report, Visual Capitalist

FAAMG Revenue ~\$500B or 50%+ May Be Up For Disruption

Advertising, software, marketplaces, cloud targeted by crypto

- Half of FAAMG revenue¹ could one day be at risk of cryptonetwork disruption. Of that value, advertising comprises 41%, with cloud computing comprising or 24%. Other revenue streams possibly at risk include third party seller services, subscription services, and other digital goods information network or data-based or software applications.

Figure: FAAMG revenue streams at risk

\$ millions

facebook		Apple		amazon		Microsoft		Google		FAAMG	
Segment	Revenue	Segment	Revenue	Segment	Revenue	Segment	Revenue	Segment	Revenue		
Advertising	73,284	Services (Apps, Music, Maps, Cloud, etc.)	52,624	AWS Cloud	43,232	Server & Cloud Services	36,768	Google Advertising	119,468	More Likely	
				3rd-Party Seller Services	72,780	Office & Cloud Services	33,864	Google Cloud	12,028		
				Subscription Services	24,072	Windows	21,412				
				Other (Advertising)	16,884	Gaming	10,168				
						Advertising	7,964				
						LinkedIn	7,636				
Combined	73,284	Combined	52,624	Combined	156,968	Combined	117,812	Combined	131,496	Combined	532,184
Share%	98%	Share%	22%	Share%	44%	Share%	89%	Share%	86%	Share%	56%
Other	1,464	Products (iPhone, iPad, etc.)	186,116	Online Stores	183,584	Enterprise Services	6,180	Google Other	20,496	Less Likely	
				Physical Stores	3,774	Devices	4,808	Hedging gains	604		
						Other	3,420	Other Bets	592		
Combined	1,464	Combined	186,116	Combined	198,680	Combined	14,408	Combined	21,692	Combined	422,360
Share%	2%	Share%	78%	Share%	56%	Share%	11%	Share%	14%	Share%	44%
Total Revenue	74,748	Total Revenue	238,740	Total Revenue	355,648	Total Revenue	132,220	Total Revenue	153,188	Total Revenue	954,544

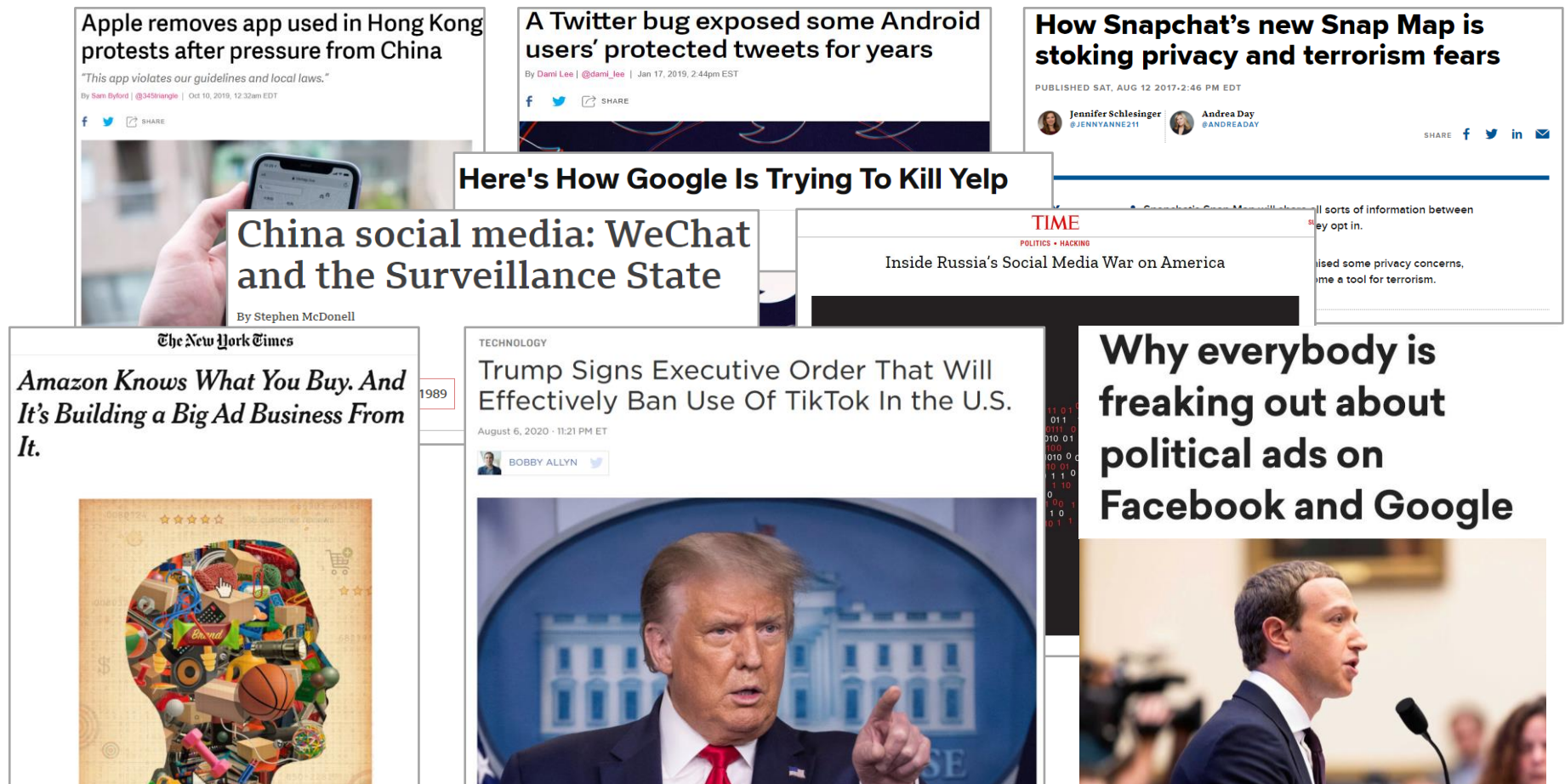
Source: FSInsight, Bloomberg, Estimated Using Q2 2020 Annualized Revenue (\$ millions)

Big Tech Headwinds Offer Macro Catalysts For Crypto

Social and political forces targeting big tech are bullish for Web 3.0

- Big Tech is facing several challenges that could act as catalysts for crypto. From GDPR data privacy, to monopoly power hearings on Capitol Hill, to democrat and republican platform politicization struggles, to an intensifying U.S. China tech cold war, to internet freedom globally - Big Tech has big problems that may pay off for crypto.

Figure: Big Tech Controversies



Source: FSInsight, Internet

Market Recap

2021 Outlook

Crypto Thesis

Bitcoin Cycles

Macro Trends

Flows & Catalysts

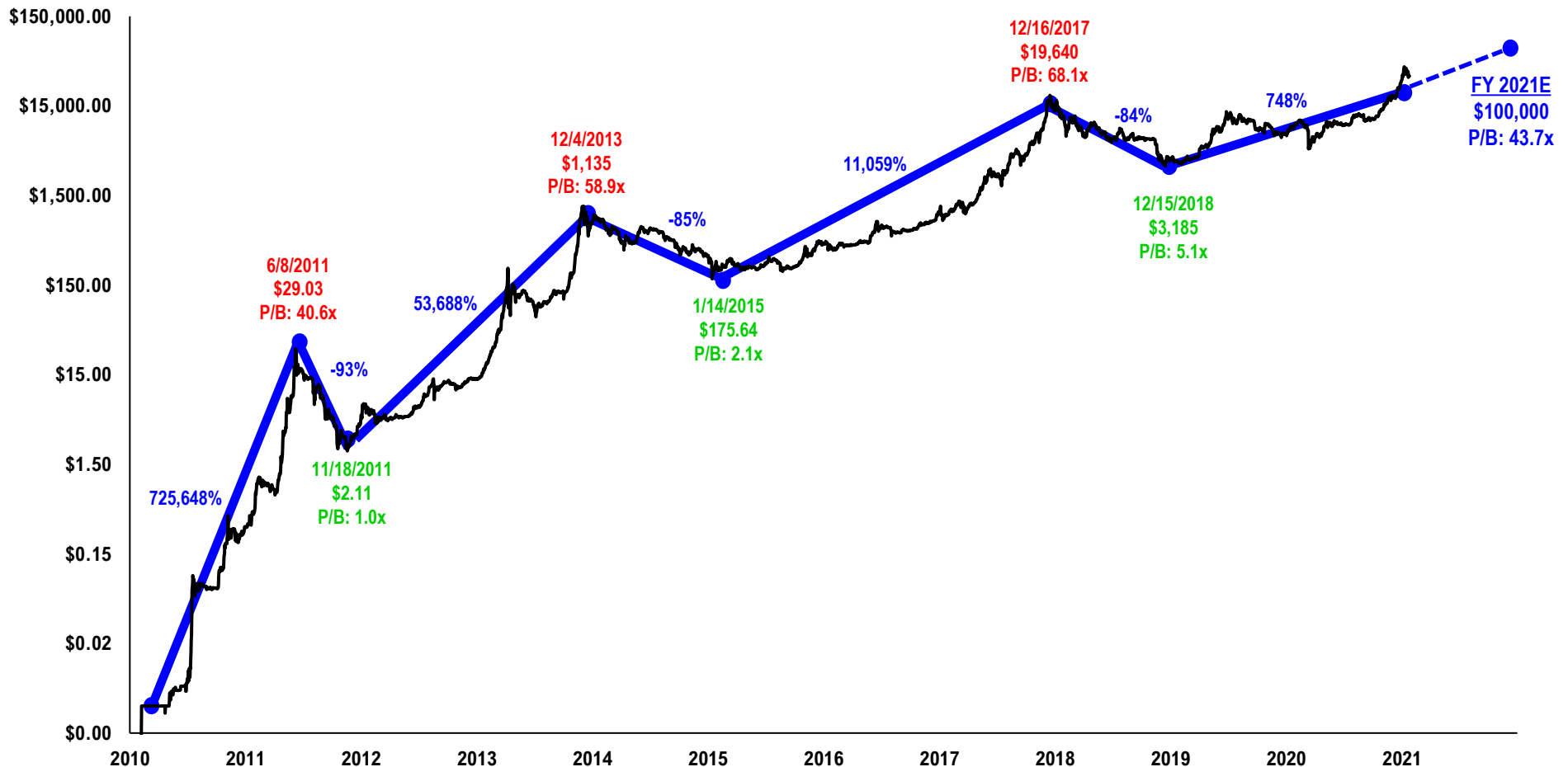
Price: Fourth Bull Market Cycle STILL Underway

Outlook remains positive as expansion in its 4th or 5th innings

- We continue to believe the fourth crypto bull market cycle is intact and see the expansion in it's 4th or 5th innings.

Figure: Bitcoin Price Cycle History

Date: 1/1/2010 to 12/28/2020



Source: FSInsight, Bloomberg, Bitcoin Charts, Coinmetrics, Coinmarketcap

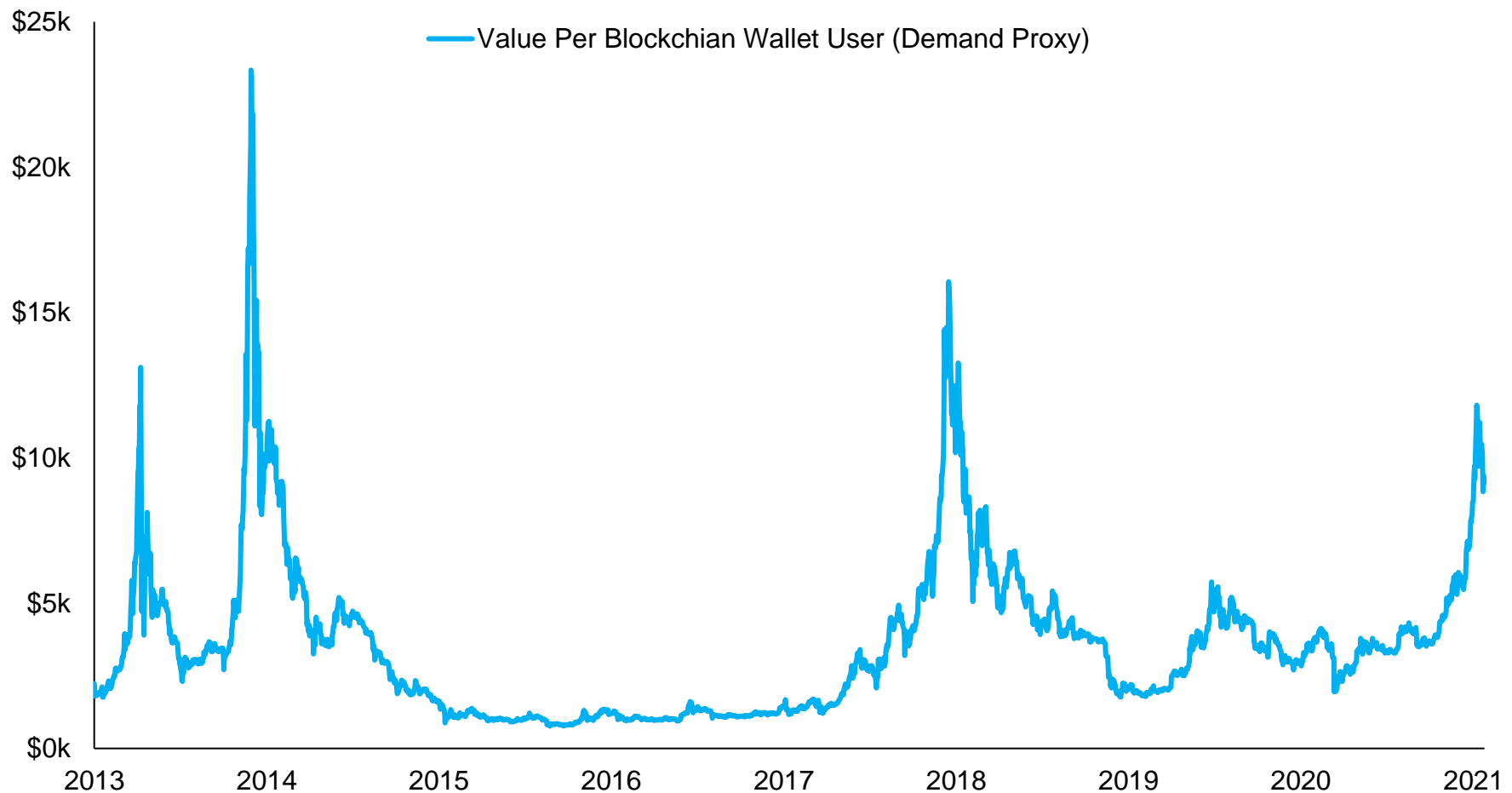
Demand: Users Drive Demand & Value Per User Still Reasonable

Bank & fintech user values ~\$3k while BTC ~\$8k but users growing faster

- We think given the 50% to 100% year over year Bitcoin wallet growth, higher per user values than traditional banking and fintech firms are justified and past cycle multiples show that current prices are not overly stretched.

Figure: Bitcoin Market Value Per Wallet User

Date: 1/1/2013 to 1/24/2021



Source: FSInsight, Bloomberg, Coinmarketcap, Ark Invest

New Supply: Historical Post-Halving Returns Imply Further Upside

Total supply = new + existing for sale; BTC halving cut first one in half

- History shows the price gains are quite dramatic post the two preceding halving events. Notice the significant change in the gains of Bitcoin price into the halvening and after the halvening. Past trends imply there's room to go.

Figure: Comparison of Bitcoin price performance around halvening event
12 months prior to and 24 months following each halvening



Source: FSInsight, Bloomberg, blockchain.info

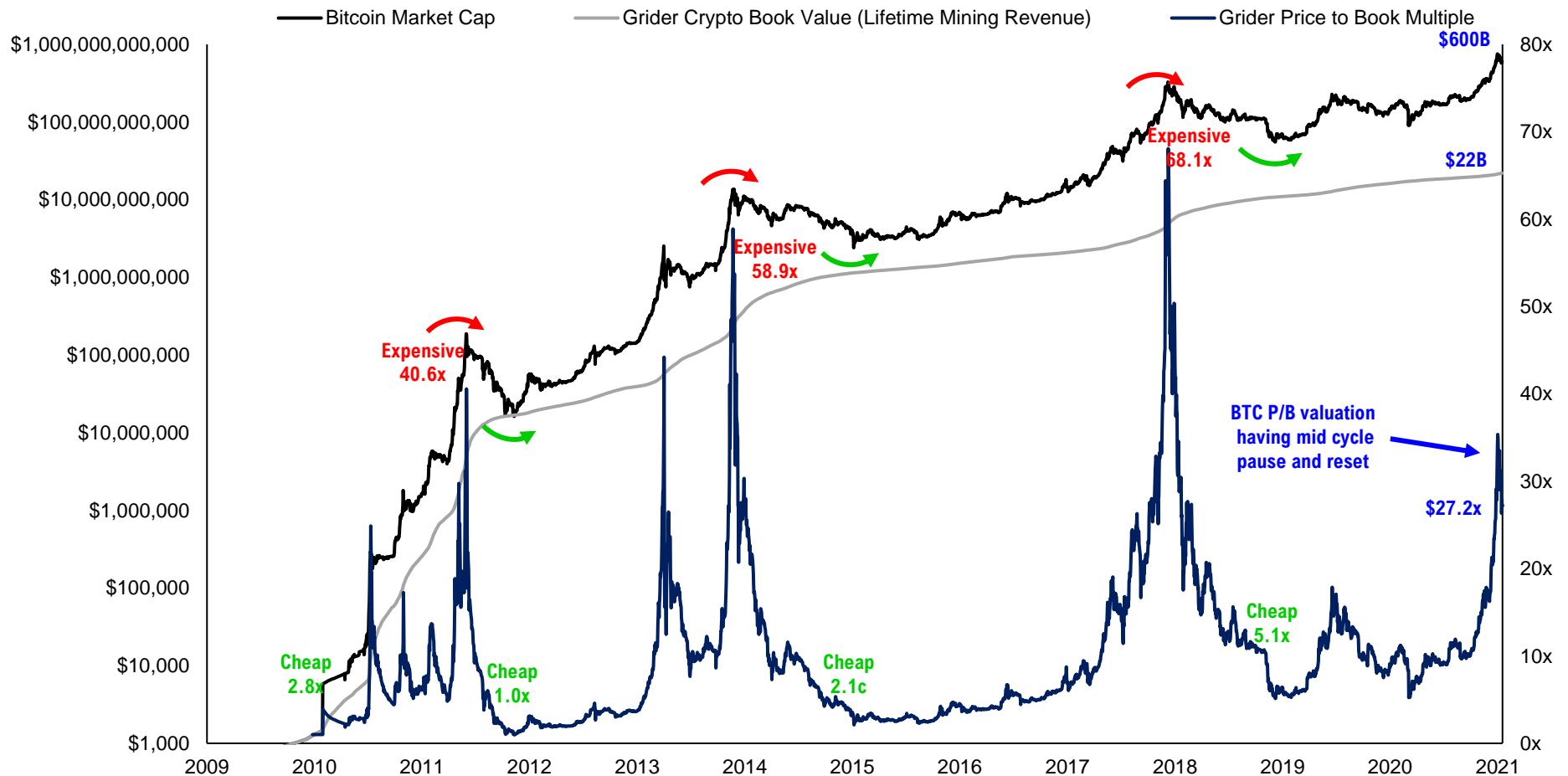
Existing Supply: Bitcoin More Expensive But Not A Bubble

Book value = floor cost basis; PB rising but at mid-cycle levels

- Our proprietary valuation model, the Grider Price to Book Multiple ([Slide 95](#)), is a relative fundamental valuation metric that compares Bitcoin's market cap (Price) to lifetime miner revenue/CAPEX (Book) to gauge macro cycles. Crypto investors tend to have high required rates of returns and historically don't sell in mass until higher levels.

Figure: Bitcoin Market Cap & Grider Crypto Book Valuation History

Date: 1/25/2021



Source: FSInsight, Bloomberg, Bitcoin Charts, Coinmetrics, Coinmarketcap

JPM Model Signals¹ Market Turning Over After Prior Highs

Our model signals healthy pause in longer term bull market uptrend

- There are several mining costs models. One reason we like ours, which looks at cumulative lifetime CAPEX costs vs. ones that look at current costs is because newly issued supply will only make up 1.8% of total supply in 2021 and we think understanding the existing supply base incentives is more important.

Figure: Current vs. Cumulative Mining Cost Model

Date: 1/1/2017 to 1/22/2021

JP Morgan Model: Ratio of Bitcoin market price to intrinsic value

Intrinsic value estimated using the cost of production approach following Hayes (2018)¹



Fundstrat Model: Ratio of Bitcoin market price to intrinsic value

Intrinsic value estimated using the lifetime cost of production (miner revenue/security spend) approach following Grider (2018)



Source: FSInsight, JP Morgan (1. We estimated implied JPM mining costs estimate after 1/6/2021 by adjusting for market value change since data was released), Coinmetrics

Realized Value Was 25% Off Peak Or 1.5x Higher vs. Our Model

Both indicate healthy correction but our model signals greater upside

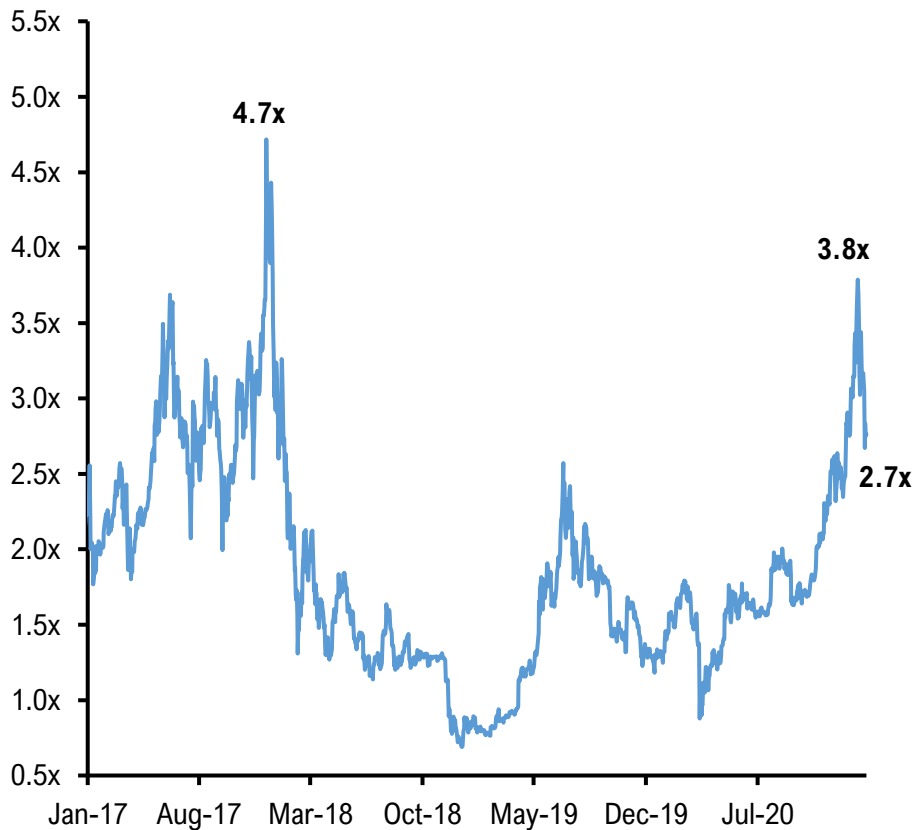
- One model we like for understanding the exiting supply base is Realized value. It models the price of a coin the last time it was model on chain as the cost basis. The reason we still primarily look to ours is it's less susceptible to gaming by investors moving coins intentionally to inflate the metrics and we also have longer history of data.

Figure: Realized Value vs. Cumulative Mining Cost Model

Date: 1/1/2017 to 1/24/2021

Coinmetrics Model: Ratio of Bitcoin market price to intrinsic value

Intrinsic value estimated using the realized value approach following Carter, Puell, Mahmudov (2018)



Fundstrat Model: Ratio of Bitcoin market price to intrinsic value

Intrinsic value estimated using the lifetime cost of production (miner revenue/security spend) approach following Grider (2018)



Source: FSInsight, JP Morgan,

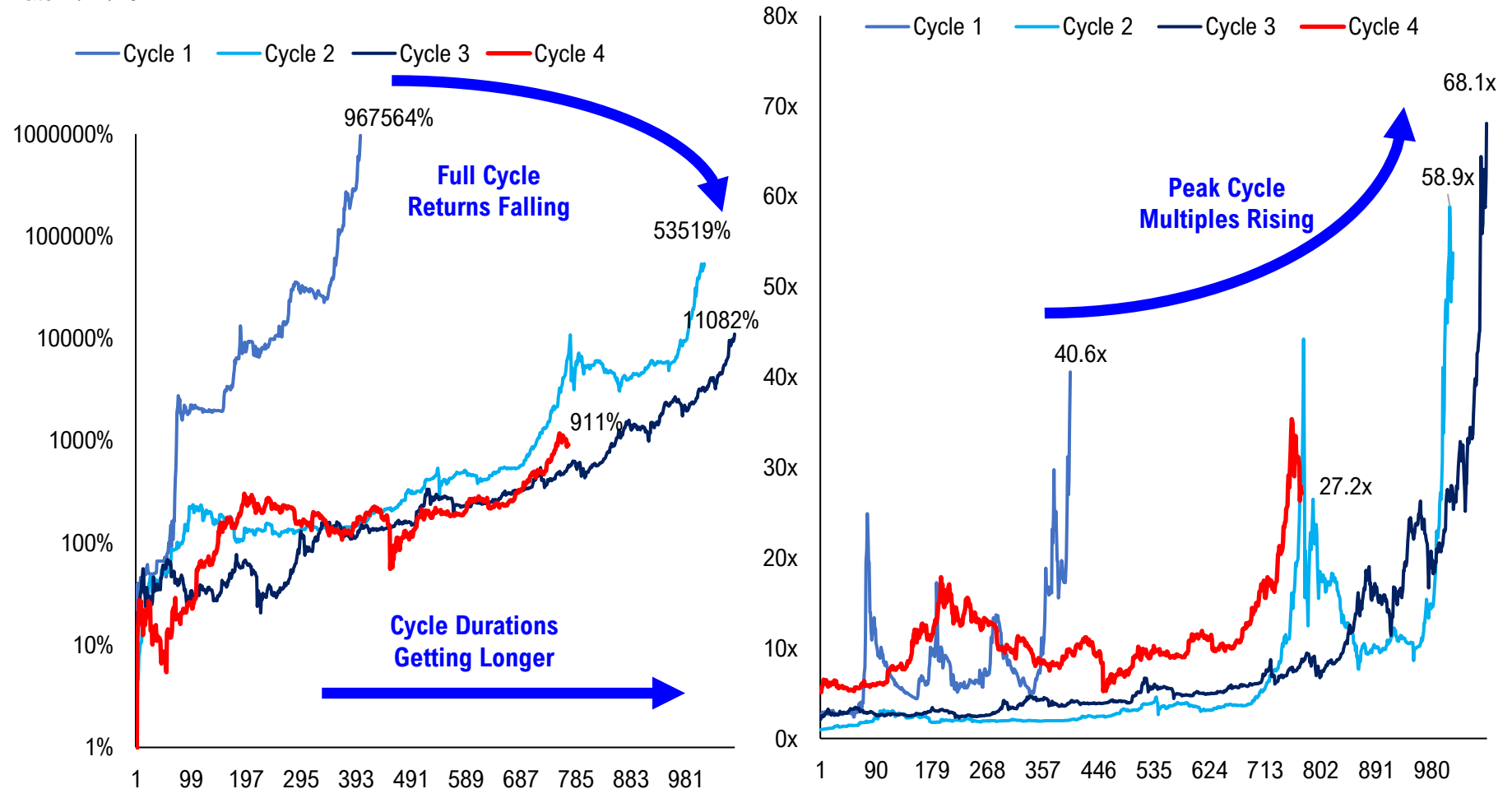
Historical Cycle Data Signals Crypto Bull Market Continuation

Bitcoin cycle returns falling, durations lengthening & multiples rising

- A reason we think the cycle could continue - if the cycle ended here it would be the shortest among prior crypto cycles, which have been lengthening and reaching higher valuations (justified in our view given de-risking), albeit offering lower but still impressive returns each subsequent cycle.

Figure: Prior Bitcoin Bull Market Cycle Comparison

Date: 1/24/2021



Source: FSInsight, Coinmetrics

Bitcoin Forecast: FY-2021 Fundamental Economic Estimates

Increasing estimates and multiple expectations based on macro trends

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	YTD 2020	FY 2021E
Market Data													
Price (YE)	\$0.001	\$0.30	\$4.71	\$13.5	\$730	\$321	\$430	\$969	\$13,921	\$3,687	\$7,167	\$29,023	\$101,236
Return (YoY)	n/a	39171%	1471%	187%	5286%	-56%	34%	126%	1337%	-74%	94%	305%	249%
Market Cap (\$M)	\$0.001	\$1.51	\$37.72	\$143.77	\$8,901	\$4,384	\$6,458	\$15,577	\$233,524	\$64,362	\$129,970	\$539,438	\$1,914,907
Change (YoY)	n/a	121254%	2405%	281%	6091%	-51%	47%	141%	1399%	-72%	102%	315%	255%
Supply Out (M)	1.62	5.02	8.00	10.61	12.20	13.67	15.03	16.08	16.77	17.46	18.13	18.59	18.92
Dilution (YoY)	n/a	209%	59%	33%	15%	12%	10%	7%	4%	4%	4%	2%	2%
Financial Metrics													
Total Payment Volume (\$M)	\$0.000	\$1.998	\$2,510	\$8,810	\$81,361	\$115,074	\$149,167	\$462,617	\$2,763,896	\$2,117,775	\$1,887,381	\$2,335,824	\$8,627,934
Change (YoY)	n/a	942540%	125481%	251%	823%	41%	30%	210%	497%	-23%	-11%	24%	269%
Transaction Fee Revenue (\$M)	\$0.000	\$0.000	\$0.03	\$0.07	\$2.17	\$2.44	\$2.34	\$13.6	\$554	\$284	\$155	\$326	\$2,113
Change (YoY)	n/a	n/a	877925%	116%	3232%	12%	-4%	483%	3965%	-49%	-45%	110%	548%
Payment Processing Costs (\$M)	\$0.233	\$18	\$21	\$306	\$782	\$373	\$558	\$2,830	\$5,202	\$5,019	\$4,686	\$20,592	\$20,592
Change (YoY)	n/a	n/a	7438%	20%	1352%	156%	-52%	50%	407%	84%	-4%	-7%	339%
Grider Crypto Book Value (\$M)	\$0.001	\$0.23	\$17.85	\$39.0	\$347	\$1,132	\$1,507	\$2,079	\$5,463	\$10,949	\$16,124	\$21,136	\$43,841
Change (YoY)	n/a	18799%	7511%	118%	791%	226%	33%	38%	163%	100%	47%	31%	107%
Book Value Per Share (\$M)	\$0.001	\$0.047	\$2.23	\$3.7	\$28.5	\$82.8	\$100	\$129	\$326	\$627	\$889	\$1,137	\$2,318
Change (YoY)	n/a	6016%	4675%	65%	675%	191%	21%	29%	152%	93%	42%	28%	104%
Key Performance Indicators													
Transaction Take Rate%	n/a	n/a	0.001%	0.001%	0.003%	0.002%	0.002%	0.003%	0.020%	0.013%	0.008%	0.014%	0.024%
Change (YoY)	n/a	n/a	n/a	-38%	261%	-20%	-26%	88%	580%	-33%	-38%	69%	76%
PayPal Total Take Rate%	n/a	n/a	3.788%	3.773%	3.624%	3.422%	3.283%	3.062%	2.869%	2.671%	2.496%	2.392%	2.292%
Change (YoY)	n/a	n/a	n/a	0%	-4%	-6%	-4%	-7%	-6%	-7%	-7%	-4%	-4%
Cost Savings vs. PayPal (\$M)	n/a	n/a	\$95	\$332	\$2,947	\$3,936	\$4,895	\$14,152	\$78,756	\$56,285	\$46,955	\$55,547	\$195,664
Change (YoY)	n/a	n/a	n/a	250%	787%	34%	24%	189%	457%	-29%	-17%	18%	252%
Active Bitcoin Wallet Users (M)	n/a	n/a	0.0004	0.065	0.9	2.7	5.4	10.9	21.3	31.9	44.5	63.4	158.6
Change (YoY)	n/a	n/a	n/a	n/a	1295%	198%	100%	103%	96%	49%	39%	43%	150%
Average Revenue Per User (ARPU)	n/a	n/a	n/a	n/a	\$2.40	\$0.91	\$0.43	\$1.25	\$25.94	\$8.89	\$3.50	\$5.14	\$13.32
Change (YoY)	n/a	n/a	n/a	n/a	n/a	-62%	-52%	187%	1979%	-66%	-61%	47%	159%
Customer Acquisition Cost (CAC)	n/a	n/a	n/a	n/a	\$339	\$438	\$139	\$101	\$271	\$493	\$399	\$247	\$185
Change (YoY)	n/a	n/a	n/a	n/a	n/a	29%	-68%	-27%	169%	82%	-19%	-38%	-25%
Implied GDP (Assumed 2.5x Velocity)			\$1,004	\$3,524	\$32,545	\$46,029	\$59,667	\$185,047	\$1,105,558	\$847,110	\$754,952	\$934,330	\$3,451,174
Valuation Metrics													
Value Per User (VPU)	n/a	n/a	\$92,915	\$2,222	\$9,860	\$1,630	\$1,200	\$1,427	\$10,940	\$2,018	\$2,922	\$8,502	\$12,073
Cost Savings Multiple (Annual)	n/a	n/a	0.4x	0.4x	3.0x	1.1x	1.3x	1.1x	3.0x	1.1x	2.8x	9.7x	9.8x
Market Cap / Implied GDP (%)	n/a	n/a	4%	4%	27%	10%	11%	8%	21%	8%	17%	58%	55%
Price to Book (P/B)	n/a	6.4x	2.1x	3.7x	25.6x	3.9x	4.3x	7.5x	42.7x	5.9x	8.1x	25.5x	43.7x

Source: FSInsight, Bloomberg, Blockchain.info, Cambridge University, Coinmetrics, Coinmarketcap, 1) Ark Invest

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Monetary: Central Banks Dropping Money From The Sky



FORTUNE

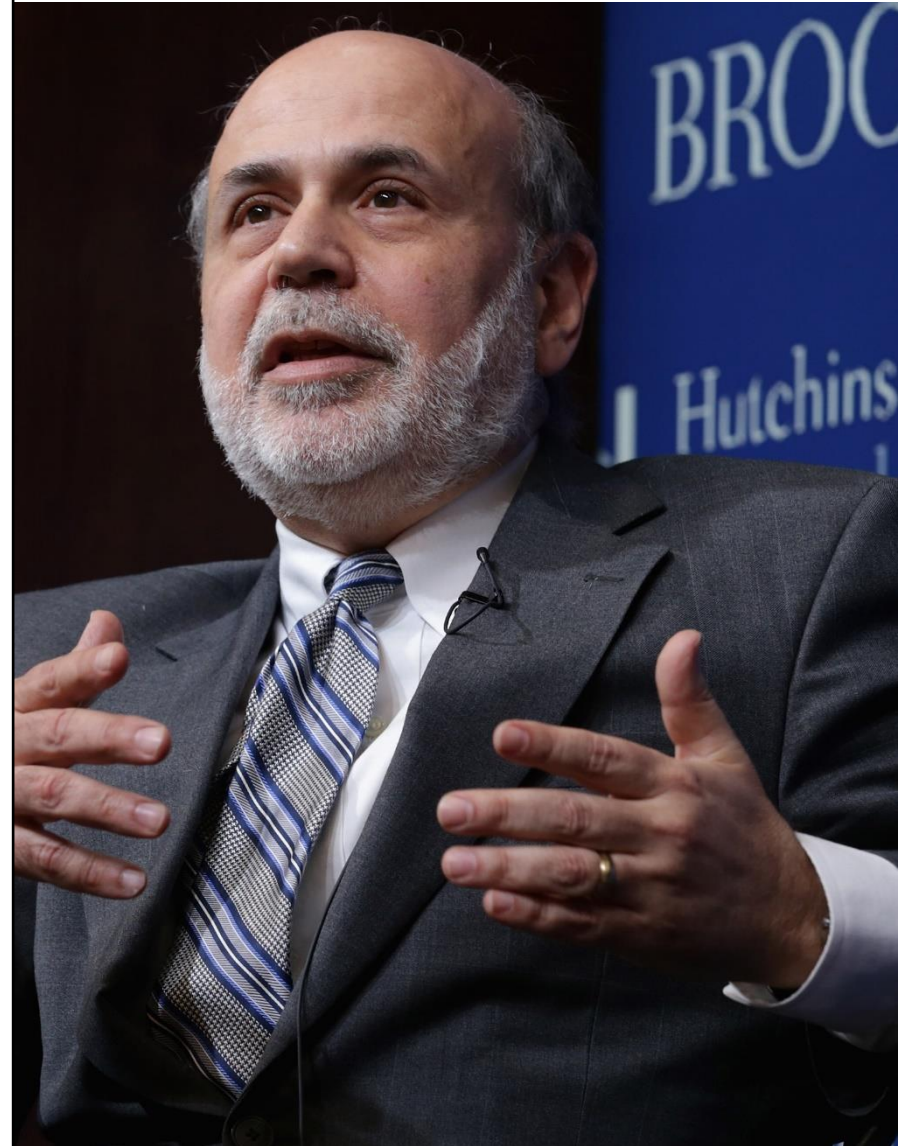


Here's How Ben Bernanke's "Helicopter Money" Plan Might Work

By Chris Matthews April 12, 2016

"In theory at least, helicopter money could prove a valuable tool," Bernanke writes. "In particular, it has the attractive feature that it should work even when more conventional monetary policies are ineffective and the initial level of government debt is high."

The term was invented by famed conservative economist Milton Friedman, who used the metaphor of dropping money down from a helicopter to illustrate the fact that a determined central bank could cause inflation if it really wanted to, if by no other means than simply handing out free money.



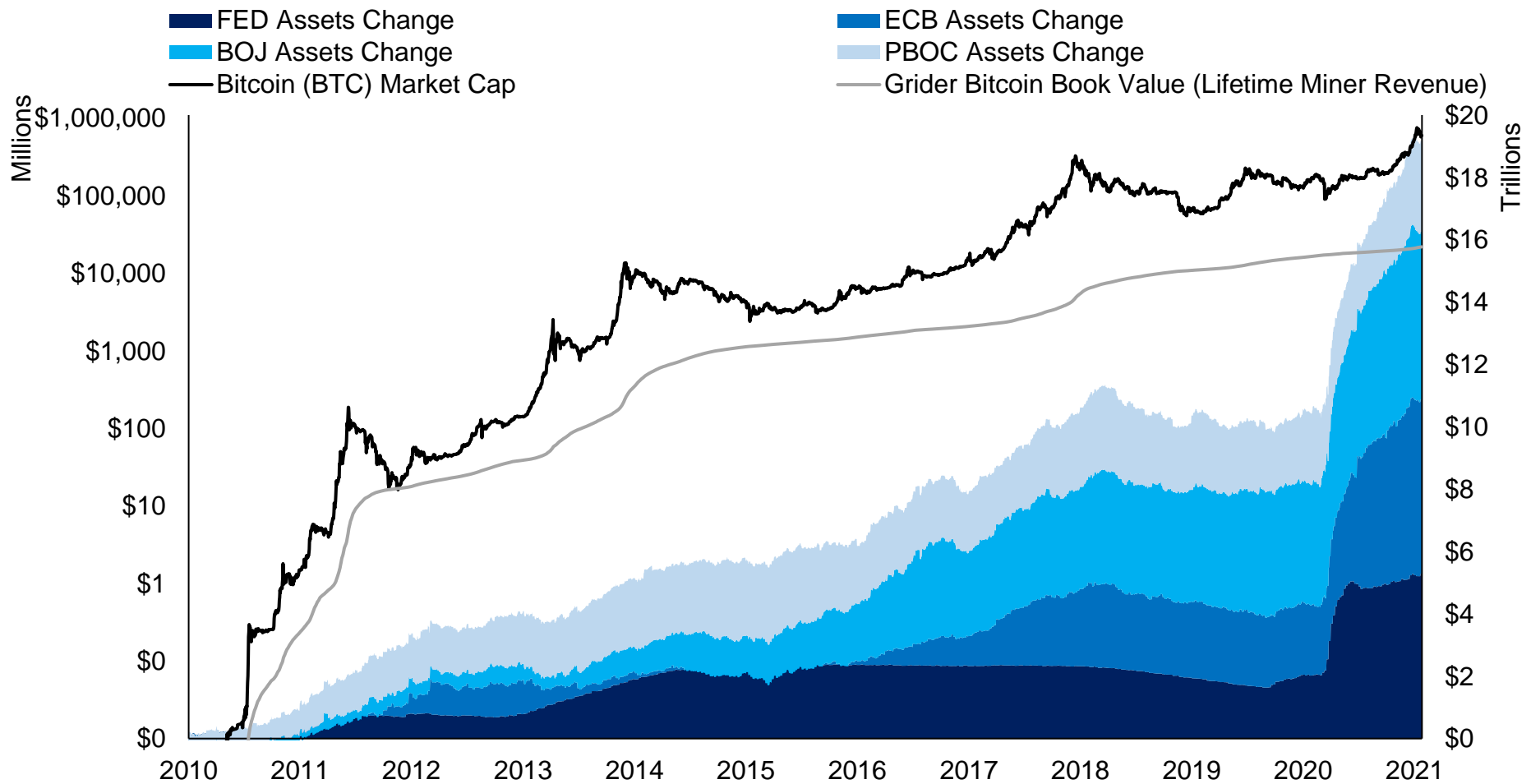
Monetary: Central Bank Balance Sheet Growth Fuels Crypto

Liquidity benefits Bitcoin prices like other risk on assets

- Macro conditions have a major influence on crypto emerging market economies.
- Prior Bitcoin and crypto bull price cycles have correlated with greater central bank liquidity.

Figure: Major Central Bank (FED, ECB, BOJ, PBOC) Balance Sheet Growth (Since BTC Inception)

Date: 1/1/2010 to 1/24/2021



Source: FSInsight, Bloomberg

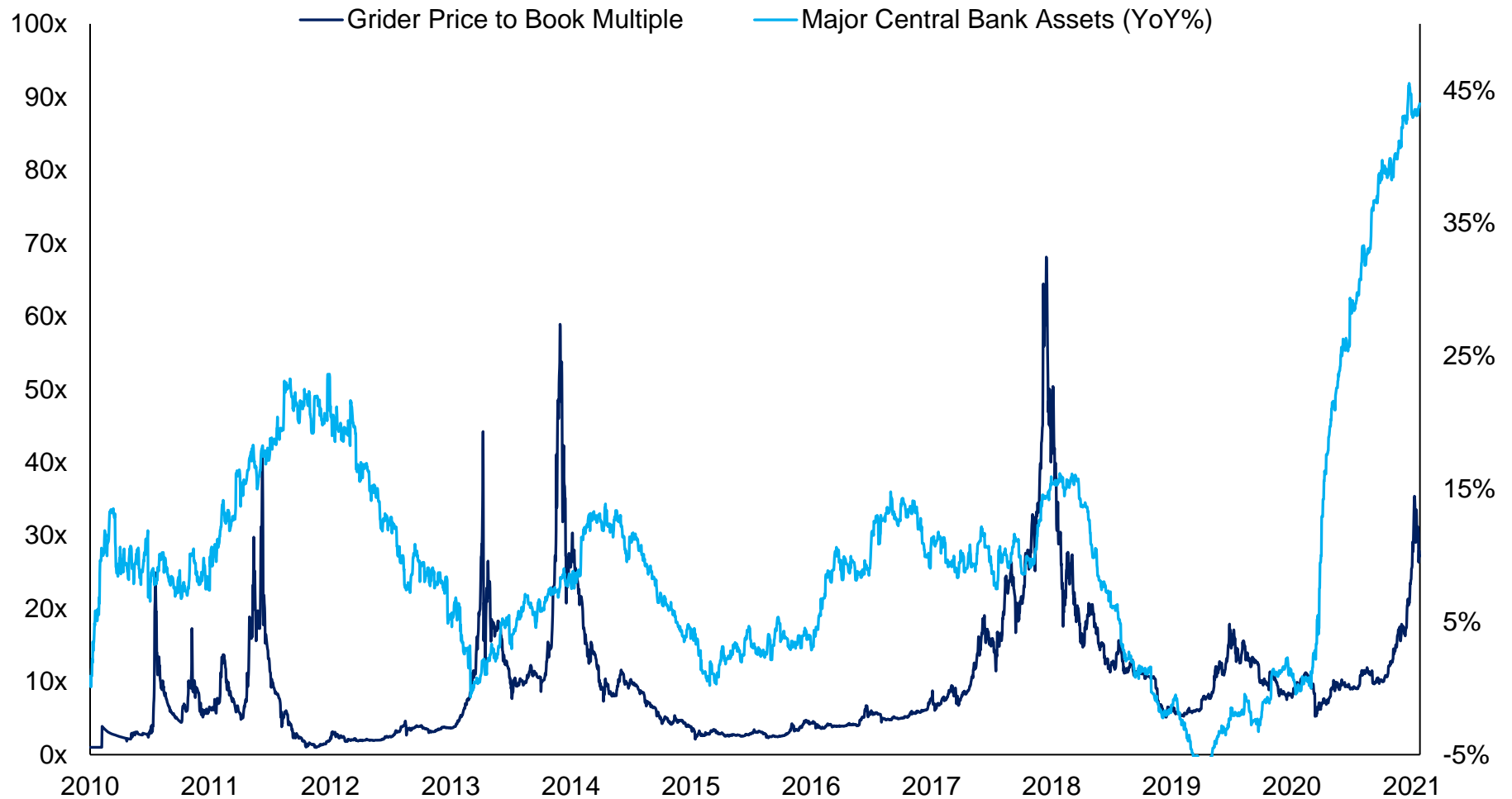
Monetary: Crypto Bull & Bear Cycles Lag QE By ~1 Year

Past crypto bull cycles didn't peak over until a year after QE slowed

- Past cycles historically continued until asset growth slowed or turned negative.

Figure: Major Central Bank (FED, ECB, BOJ, PBOC) YoY Balance Sheet Growth

Date: 1/1/2010 to 1/24/2021



Source: FSInsight, Bloomberg

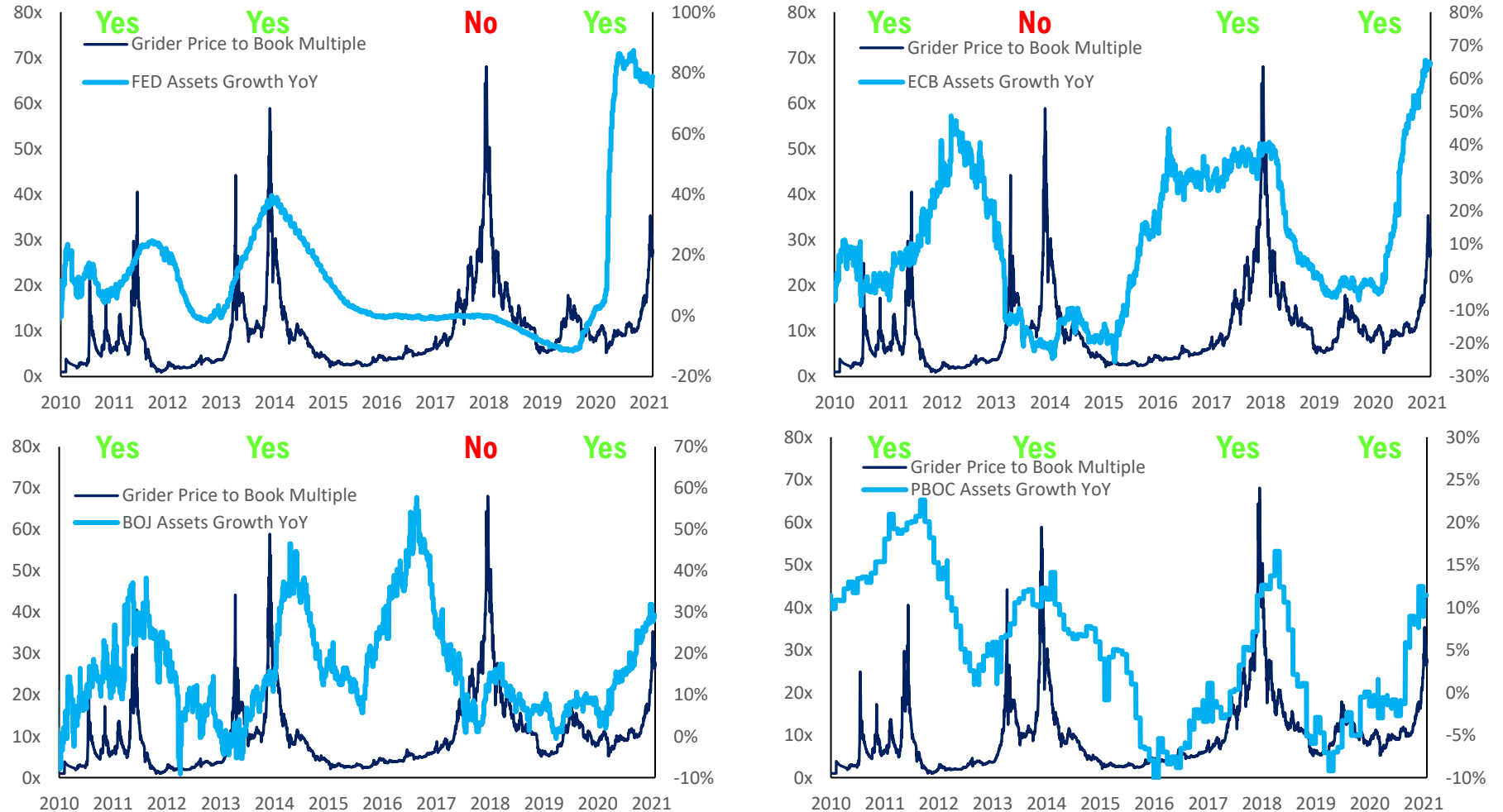
Monetary: This Cycle All Central Banks Have Foot On The Gas

FED, ECB, BOJ & PBOC all employing accommodative policy together

- Different from prior two cycles, all the major central banks are headed in the same direction.

Figure: Central Bank YoY Balance Growth vs. Bitcoin P/B

Date: 1/1/2010 to 1/24/2021



Source: FSInsight, Bloomberg

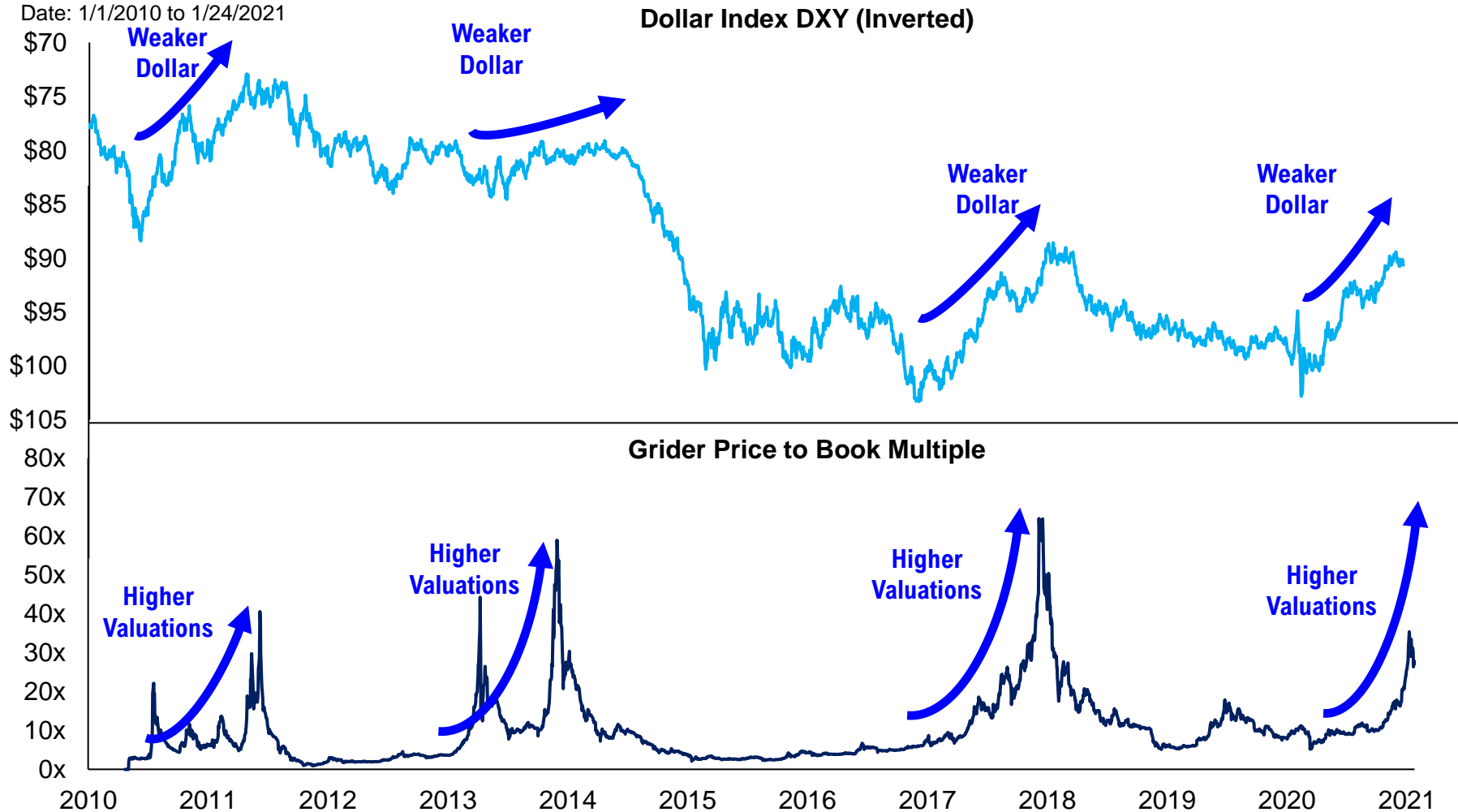
Currencies: Weaker Dollar Supports Higher Bitcoin Valuations

Expected further dollar weakness into year end bullish for crypto

- As the dollar weakens Bitcoin strengthens. Dollar outlook for 2021 is for continued weakness.

Figure: Dollar Index (Inverted) vs. Bitcoin PB

Date: 1/1/2010 to 1/24/2021



Source: FSInsight, Bloomberg, Coinmetrics, Coinmarketcap

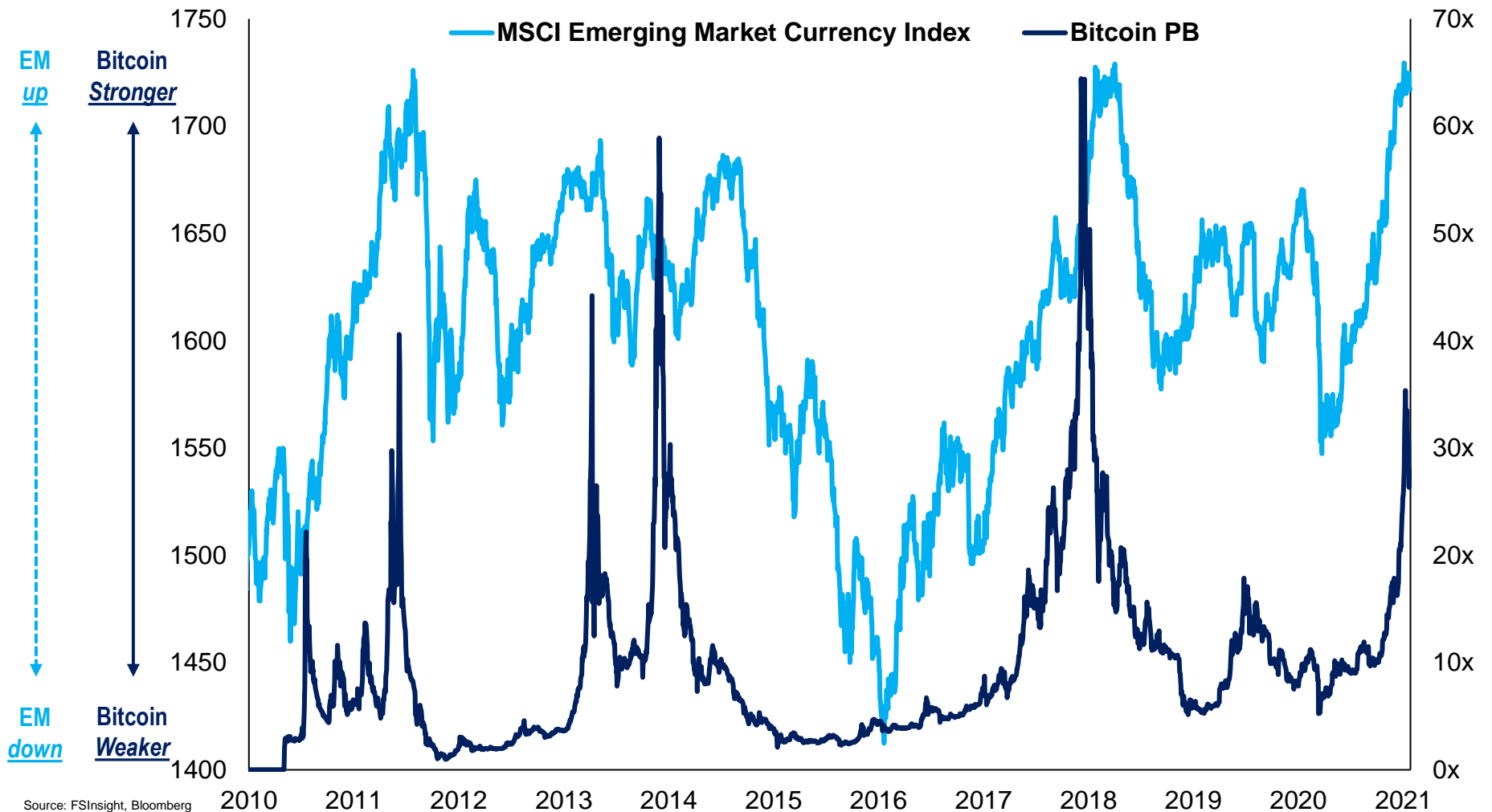
Currencies: Bitcoin Strengthens As EM Currencies Rise

Crypto emerging market prices move with traditional EM currencies

- Crypto emerging market currencies move along with traditional emerging market currencies benefited by capital flows.

Figure: MSCI Emerging Market Currency Index vs. Bitcoin Price to Book

Date: 1/1/2010 to 1/25/2021



Source: FSInsight, Bloomberg

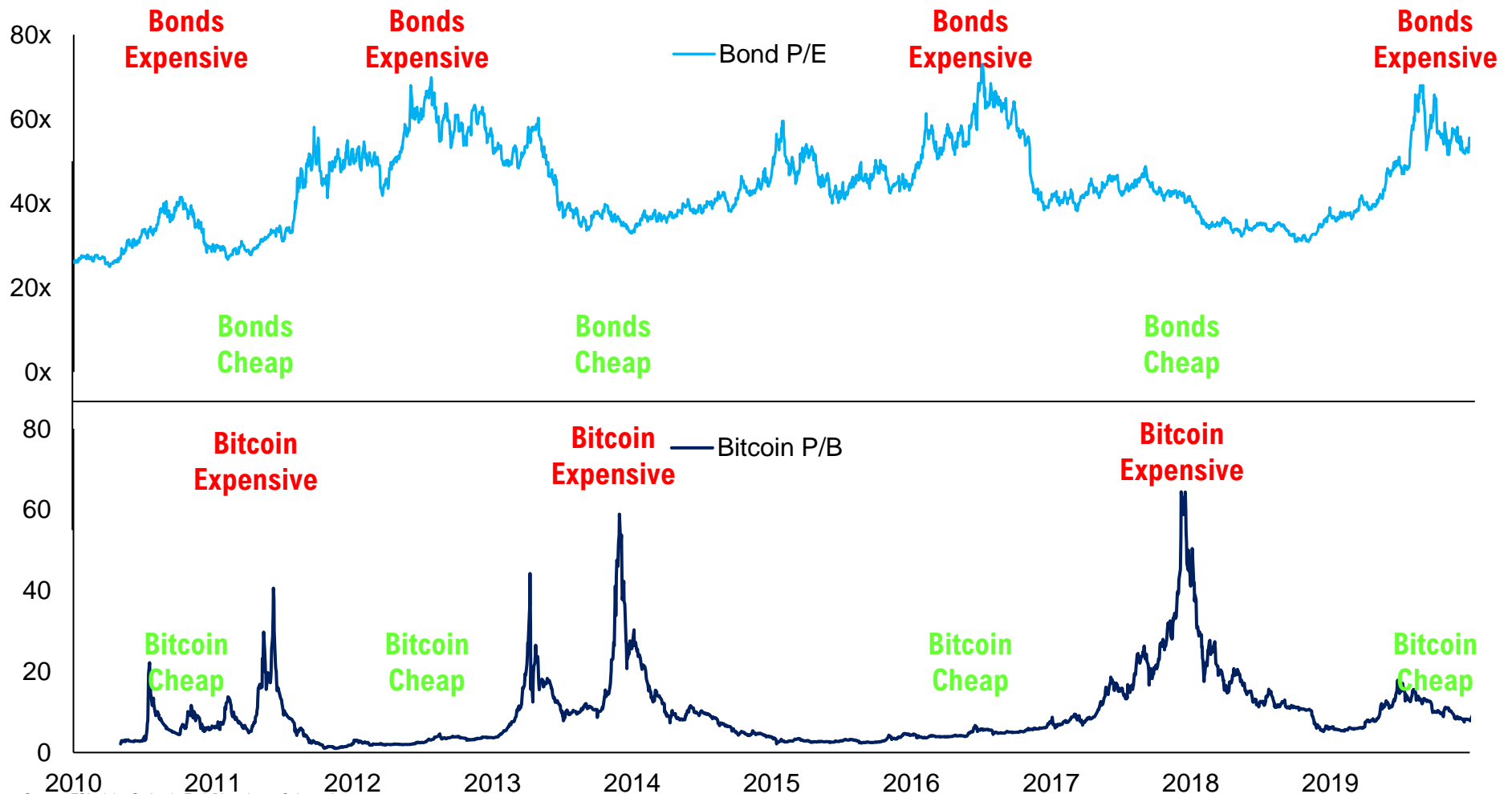
Rates: Expensive Treasuries = Cheap Bitcoin & Visa Versa

Bond P/E (Inverse Yield) & Bitcoin P/B valuation history (2010-2019)

- Consistent with discount rate effect for all assets, as treasury rates move lower, and implied bond PEs rise – Bitcoin has tended to look cheaper – and as rates rise and bond PEs fall – Bitcoin has tended to look more expensive.

Figure: Bond P/E (Inverse 10 Yr. Treasury Yield) vs. Bitcoin P/B

Date: 1/1/2010 to 12/31/2019



Source: FSInsight, St. Louis Fed, Bloomberg, Coinmetrics

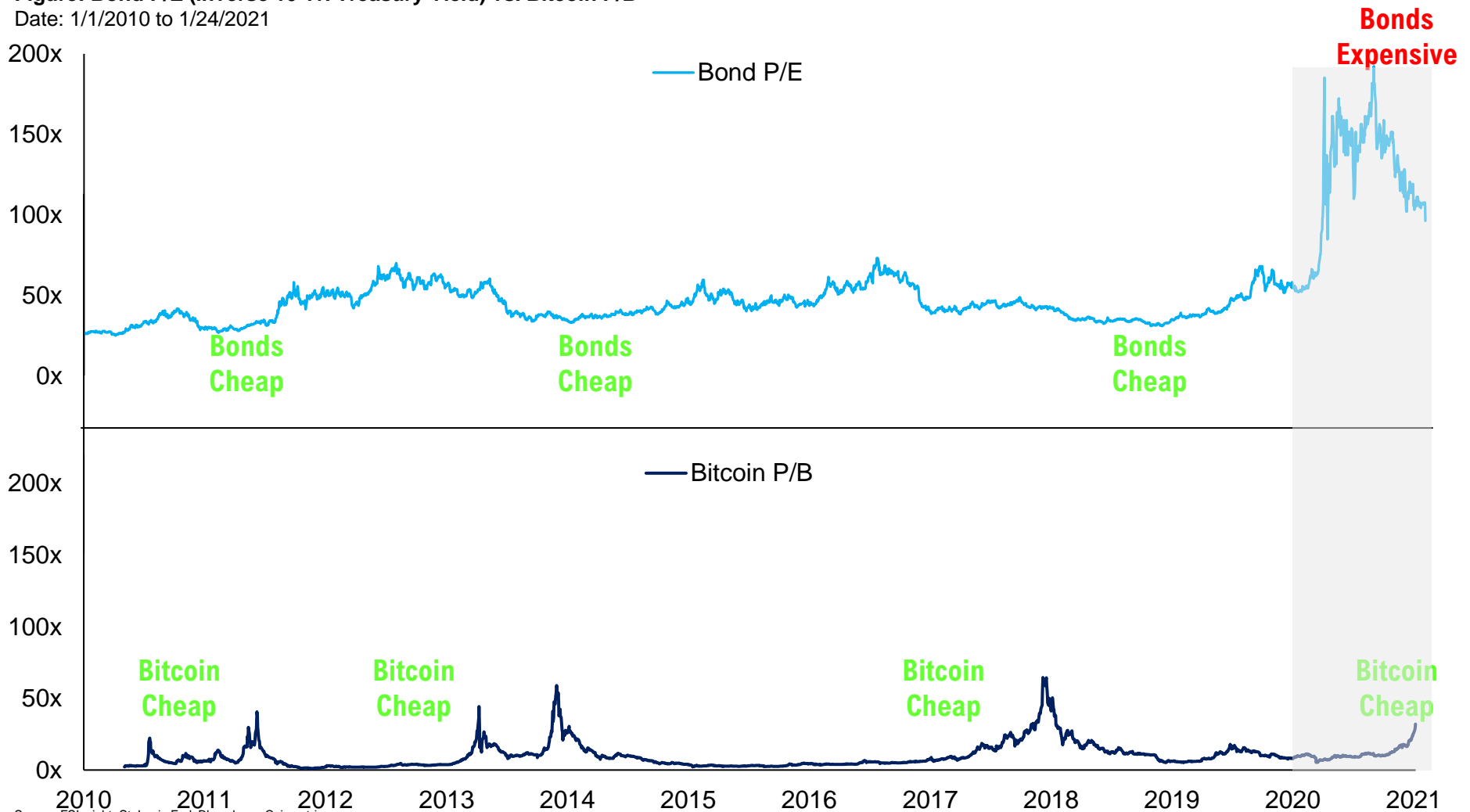
Rates: Low Rates Make Past & Current Cycles Look Cheap

Bond P/E (Inverse Yield) & Bitcoin P/B valuation history (2010-2021)

- Historically low-rates make Bitcoin look cheap comparatively which may signal upside.

Figure: Bond P/E (Inverse 10 Yr. Treasury Yield) vs. Bitcoin P/B

Date: 1/1/2010 to 1/24/2021



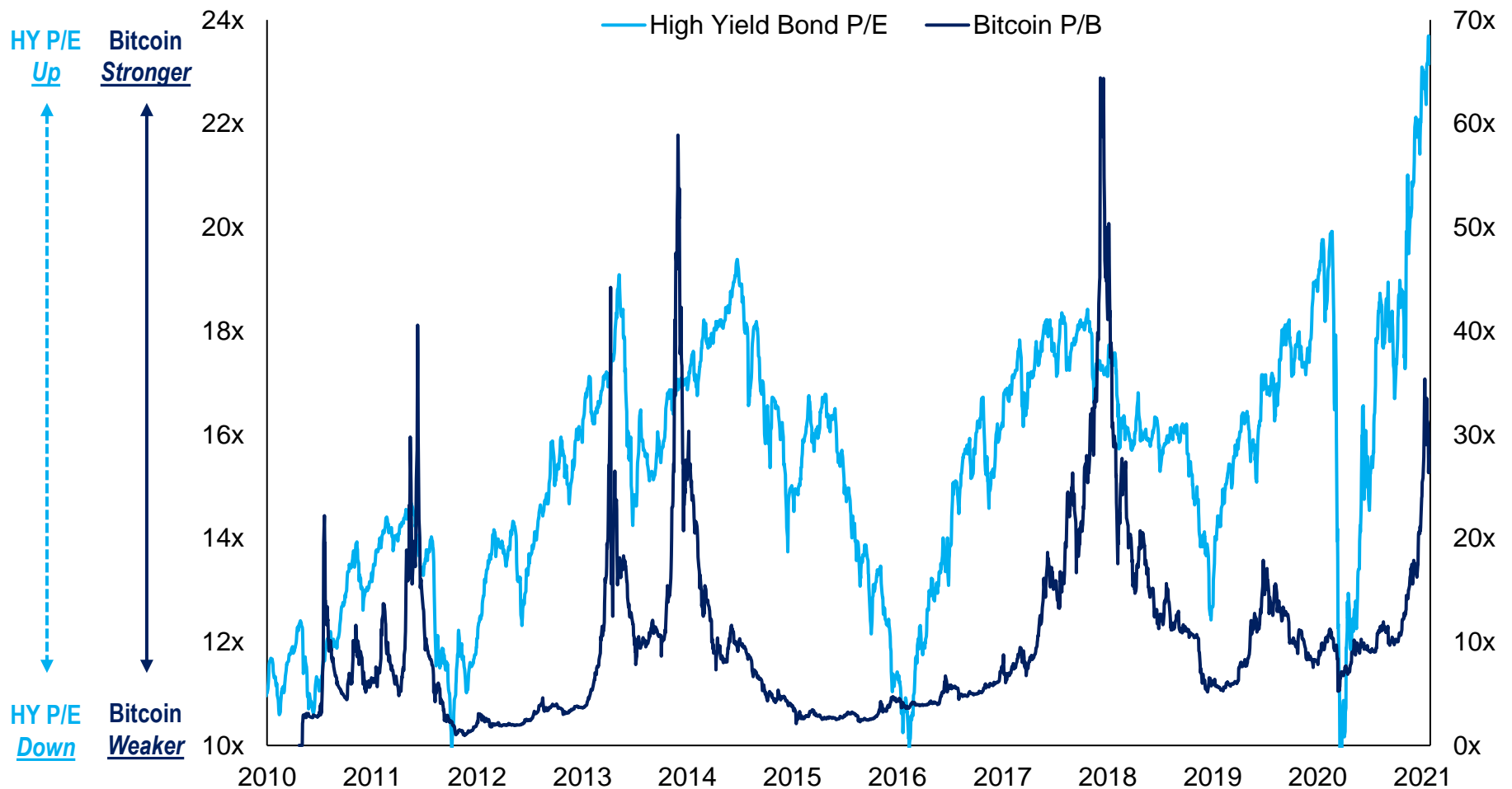
Rates: High Yield Credit Leads BTC & Signals Further Upside

High Yield PEs & Bitcoin PBs Correlated As Investors Seek Returns

- As low rates push investors out on the credit / risk curve into assets like high yield bonds, capital also flows into Bitcoin and crypto – a reason we see credit as a leading indicator for crypto prices – which is signaling upside.

Figure: High Yield Bond P/E (Inverse ICE BofA US High Yield Index Effective Yield) vs. Bitcoin P/B

Date: 1/1/2010 to 1/26/2021



Source: FSInsight, Bloomberg, St Louis Fed

Negative Yielding Debt Worth \$18T Searching For A Home

Bitcoin \$0.7T Market Cap ONLY 4% Global Negative Yielding Debt

- Bitcoin gets criticized for needing another buyer at a higher price in order to generate a return.
- Negative yielding debt has a similar requirement – and there's \$18T of it which we view as bullish for crypto.

Figure: Global Negative Yielding Debt & Bitcoin Market Cap

Date: 12/31/2009 to 1/27/2021



Source: FSInsight, Bloomberg

Bitcoin Performs Best When S&P 500 Performs Strongly

Bitcoin performed in synch with the S&P 500 during its 11-year history

- In years where the S&P 500 has the strongest gains, we see the best returns for Bitcoin. Does this mean Bitcoin is a risk-on asset? Maybe. But we think the better explanation is Bitcoin works best when there is a clear macro trend.

Figure: Comparative performance of Bitcoin and S&P 500
Since 2010

	Annual Performance (%)										
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
S&P 500	17	-0	13	30	11	-1	10	19	-6	29	16
Stock Market Trend	Strong	No	Up	Strong	Up	Down	Up	Strong	Down	Strong	Strong
Bitcoin	200	1,467	187	5,485	-58	34	124	1,369	-74	92	303

Stock market trend is ...

Down	Up / No Trend	Strong
-3	9	22
-20	430	1,490

Bitcoin shows the best returns when S&P 500 has strong gains (>15%)

Source: FSInsight, Bloomberg

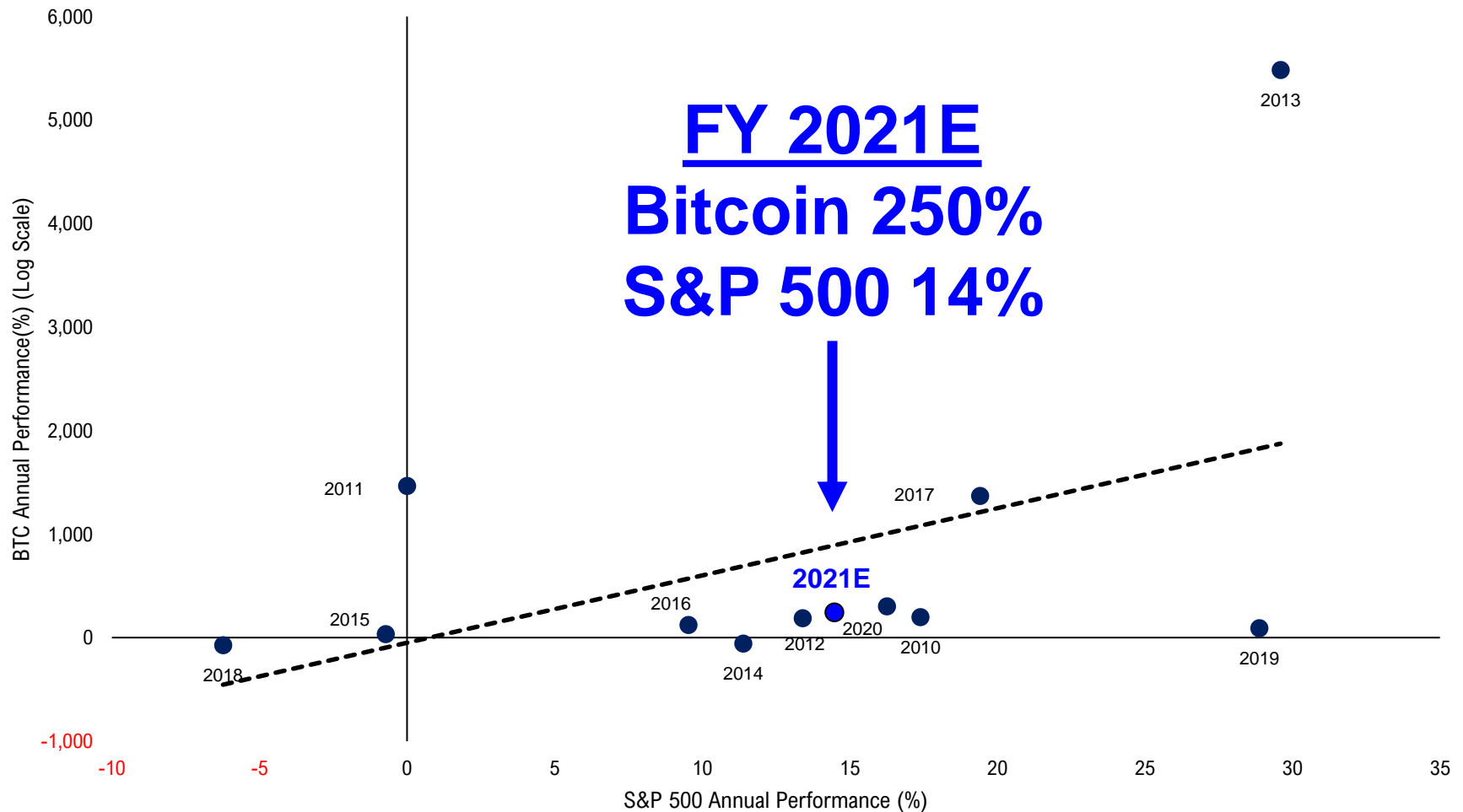
Bitcoin 250% Forecast Reasonable vs. S&P 500 14% FY-2021E

Fundstrat FY 21 Bitcoin target of \$100k vs. S&P 500 target of 4,300

- Positive correlation between S&P 500 and Bitcoin is best seen in a chart. Our Bitcoin forecast for FY 2021 of \$100K implies ~250% returns while our (Tom Lee's) S&P 500 forecast for 2021 of 4,300 implies 14% returns.

Figure: Comparative return of Bitcoin and S&P 500

Since 2010



Source: FSInsight, Bloomberg, Factset

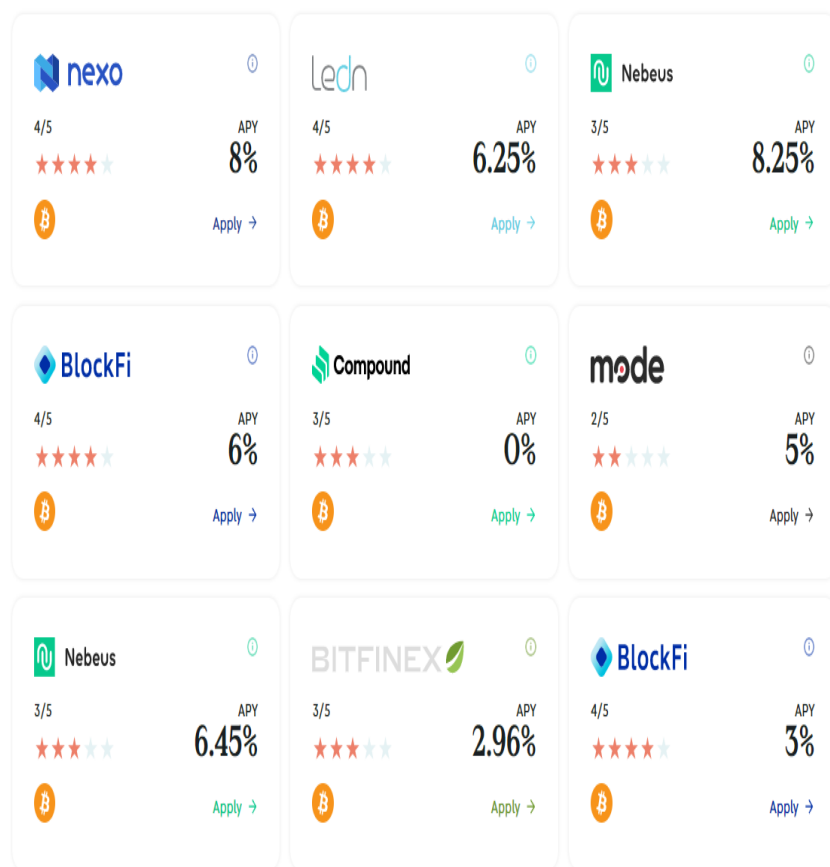
Crypto Can Be An Emerging Market Income Generating Asset

Lending yields for Bitcoin between 3% to 8.25% attractive to many

- Bitcoin and crypto can be borrowed and lent out. A large market for this has emerged as the crypto financial system has grown. We think investors will find this added yield attractive and it could attract capital flows to crypto.

Figure: Crypto Borrowing and lending Rates

Date: Q2 2018 to January 2021



Genesis Capital Crypto Borrowing & Lending Rates		
Quarter	Median BTC Borrow Rate (Quarter Close)	Median USD Borrow Rate (Quarter Close)
Q2 2018	3.000%	-
Q3 2018	3.500%	-
Q4 2018	3.500%	2.500%
Q1 2019	4.000%	6.000%
Q2 2019	4.000%	8.000%
Q3 2019	4.250%	8.000%
Q4 2019	4.330%	8.500%
Q1 2020	5.500%	8.000%
Q2 2020	5.000%	8.500%
Q3 2020	5.000%	9.000%
Q4 2020	4.000%	9.500%

Source: FSInsight, Defirate, Genesis Capital

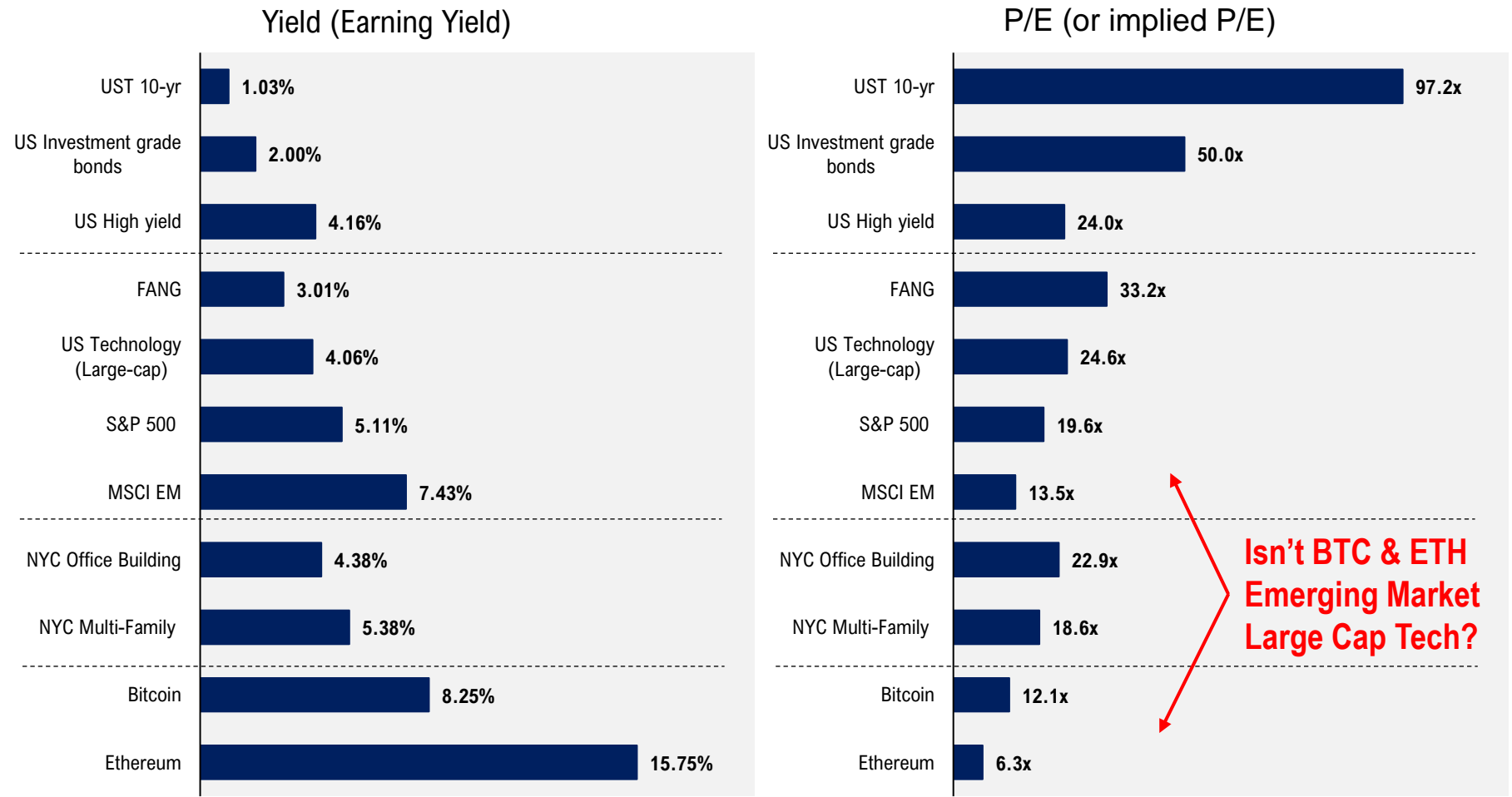
T.I.N.A. – There Is No Alternative

Relative Cross Asset Class Yield Based Valuations

- Investors will look at crypto total returns in the context of other assets. Holding crypto and loaning it out for yield isn't that dissimilar from owning and renting emerging real estate. Crypto lending yields do carry greater volatility risks but on a total return basis they have been attractive, and we think this method offers a useful, interesting proxy.

Figure: Global Assets Actual or Implied Yields & PEs

Date: 1/6/2021



Source: FSInsight, Bloomberg

Market Recap

2021 Outlook

Crypto Thesis

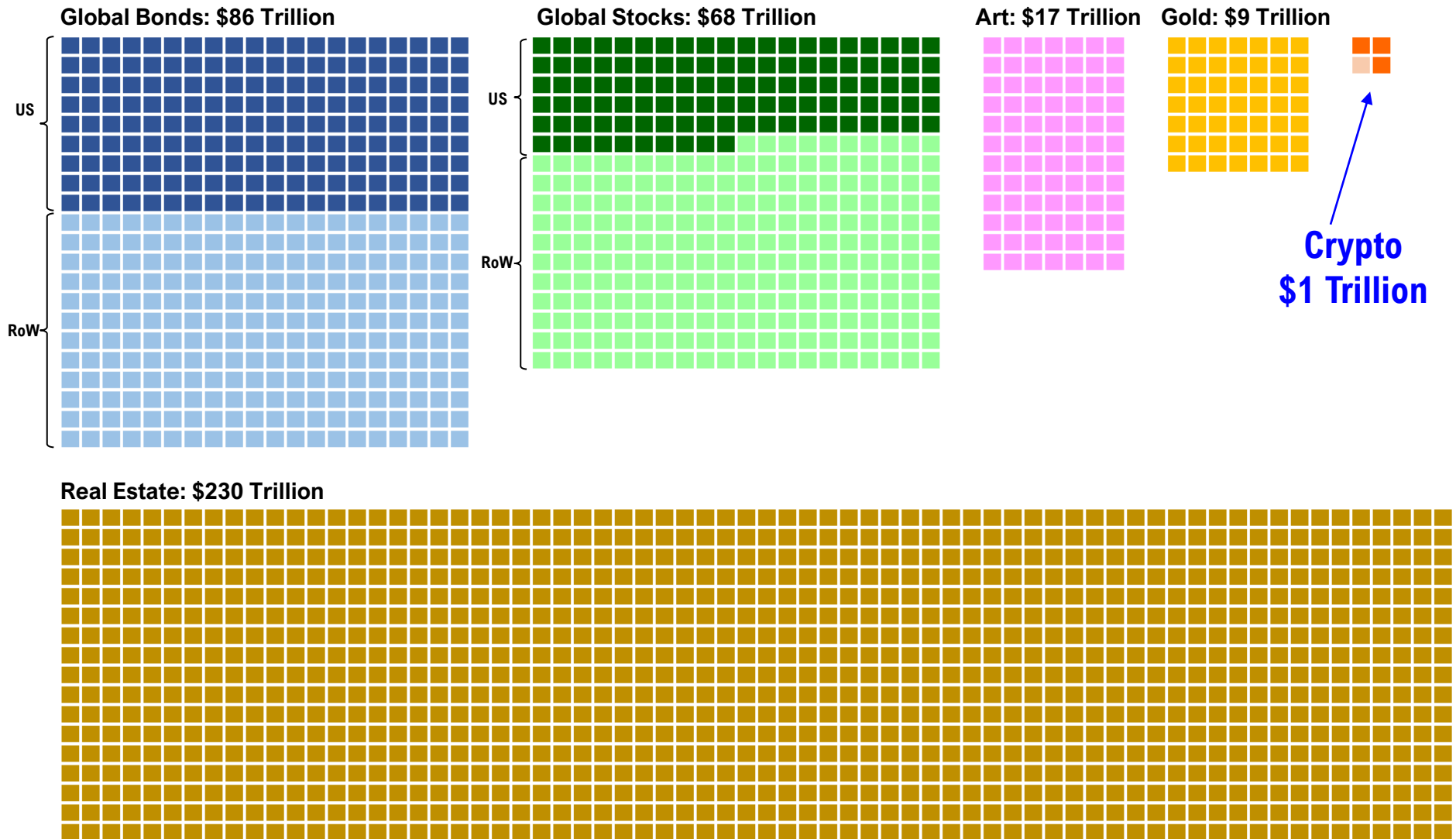
Bitcoin Cycles

Macro Trends

Flows & Catalysts

Crypto Getting Large Enough To Be Institutionally Investable

Crypto increased 5X since 2020 but is ONLY 0.25% of global assets



Source: FSInsight, Bloomberg, Date: 12/14/2020

Wall Street Buy-Side Investors & Sell-Side Banks Taking Notice

Several major institutional firms are making bullish calls on crypto

J.P.Morgan

“The adoption of Bitcoin by institutional investors has only begun.”

Nikolaos Panigirtzoglou, December 2020



“Do I think it’s a durable mechanism that could take the place of gold to a large extent? Yes, I do, because it’s so much more functional than passing a bar of gold around.”

Rick Rieder, November 2020



“The whole existence of Bitcoin has been characterized by unthinkable rallies followed by painful correction. This move could potentially peak in December 2021..suggesting a move as high as \$318,000.”

Tom Fitzpatrick, November 2020

Paul Tudor Jones invests 2% of assets in Bitcoin. “Every day that goes by that Bitcoin survives, the trust in it will go up.”

Square invests \$50 million, or 1% of cash reserves, in Bitcoin and its users purchase \$1.63 billion of Bitcoin in the third quarter

Grayscale Bitcoin Trust exceeds \$12 billion in assets

Stan Druckenmiller announces long Bitcoin position

Ray Dalio: “I think that Bitcoin has over the last ten years established itself as an interesting gold-like alternative.”

Ruffer Investment Company, a U.K. asset manager, acquires \$744 million Bitcoin, or 2.7% of assets under management

MicroStrategy, a Nasdaq traded software company, invests \$425 million of its cash reserves in Bitcoin

PayPal provides its 238 million active U.S. users with the functionality to buy Bitcoin

Ricardo Salinas Pliego, Mexico’s second richest man, announces that he has 10% of his liquid assets in Bitcoin

Guggenheim files with the SEC to invest up to \$530 million of its Macro Opportunities Fund in Bitcoin

MassMutual Life Insurance buys \$100 million of Bitcoin for its investment portfolios

One River and Alan Howard raise \$1 billion for a dedicated digital assets fund. “There is going to be a generational allocation to this new asset class.”



“There seems to be an increasing demand to use Bitcoin where gold used to be used to hedge dollar risk, inflation and other things.”

Jim Reid, November 2020



“I have changed my mind about Bitcoin’s role in asset allocation. In January 2018, we declared that it has no such role...we have to admit that it does.”

Inigo Fraser Jenkins, November 2020

Morgan Stanley

“There are reasons to think this Bitcoin rush has deeper roots. Bitcoin will gain from widening distrust in the traditional alternatives.”

Ruchir Sharma, December 2020

Source: FSInsight, Skybridge Capital

Reputational Risk For Investing In Crypto Greatly Diminished

Changing media perception & lower career risk for investing in crypto

Bitcoin: \$138
“Becoming the next bubble”

Bitcoin: \$34,000
“Integrated into financial system”



Source: FSInsight

More Regulatory Certainty Lowers Risk Premium = Higher Price
Bitcoin and several others seem very unlikely to get banned at this point

**“Nobody’s going
to ban bitcoin.”**

— Brian Brooks
U.S. Comptroller of the Currency (OCC)
December 4, 2020

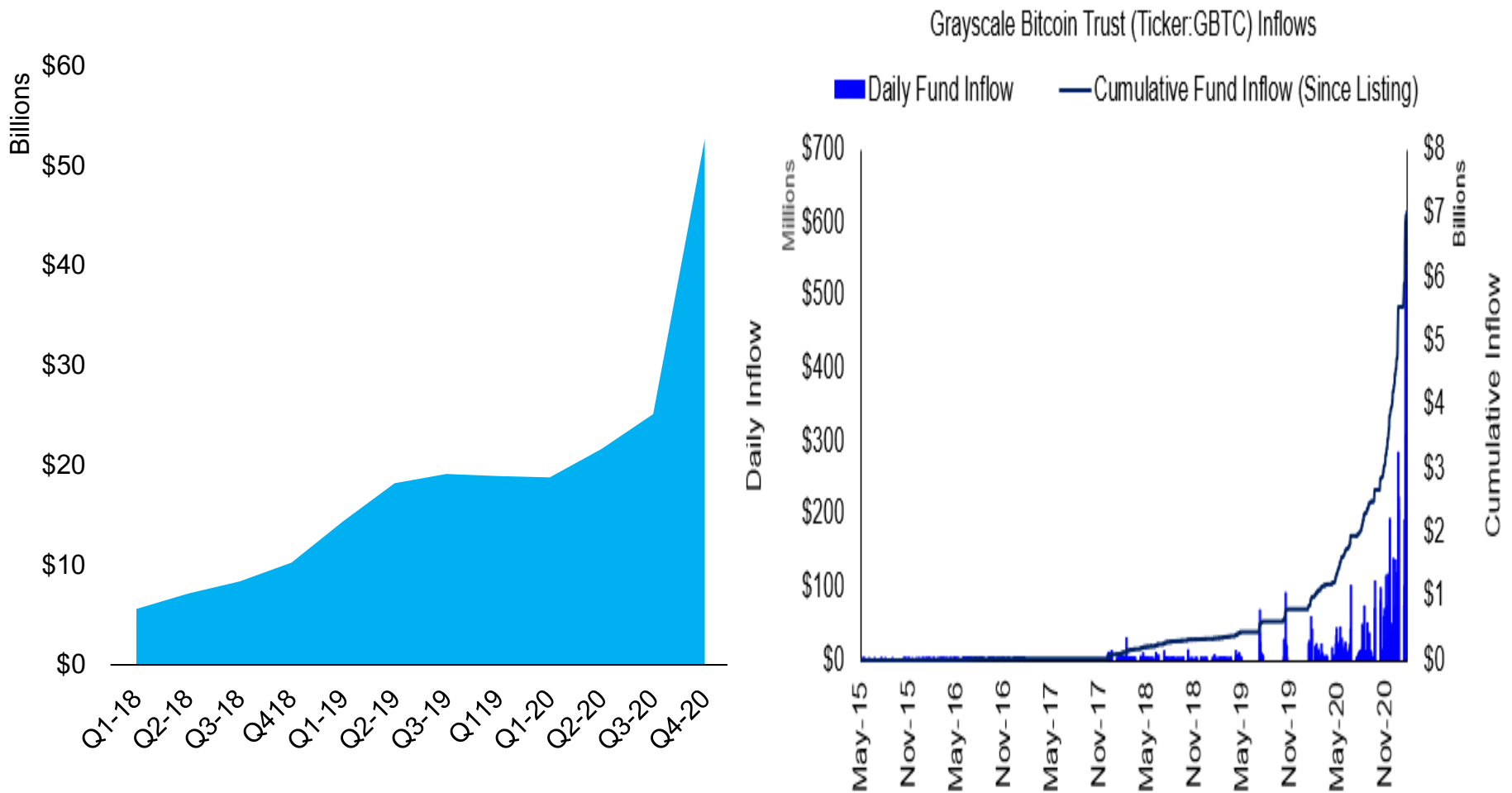
Source: FSInsight, Skybridge Capital

Crypto Funds' Assets Under Management Likely Passed \$50B

Grayscale Bitcoin Trust alone generating billions dollar in demand

- Crypto funds are seeing increased assets and increased fund flows which is bullish for bitcoin and crypto.

Figure: Estimated Crypto Fund Assets Under Management



Source: FSInsight, Crypto Fund Report

Headline Grabbing Forecasts Imply Highly Bullish Consensus

Many prominent investors have made bold calls on Bitcoin

- It would seem Bitcoin and crypto is the most crowded trade on Wall Street based on the many eye-popping crypto calls, which may seem too aggressive to be realistic at times.

Figure:

“Bitcoin will surge to \$1 million in 5 years by an ‘enormous wall of money,’ former Goldman Sachs hedge-fund chief says”

Raoul Pal, October 2020

“Virgin Galactic’s Chamath Palihapitiya: Bitcoin could go to \$1 Million, Everybody should own some”

Chamath Palihapitiya, April 2020

“Bitcoin could hit \$500,000, the Founder and CEO of Ark Invest Says”

Cathie Wood, November 2020

“Guggenheim’s Scott Minerd says Bitcoin should be worth \$400,000”

Scott Minerd, December 2020

“Bitcoin at \$318,000 next December? One Citibank Executive says it’s possible”

Tom Fitzpatrick, November 2020

“JPMorgan says Bitcoin could surge to \$146,000 in long term”

Nikolaos Panigirtzoglou, January 2021

“Bitcoin to peak at \$115,000 by August, says Pantera Capital CEO”

Dan Morehead, April 2020

“Billionaire Mike Novogratz says Bitcoin will hit \$65,000

Mike Novogratz, November 2020

Source: FSInsight, Bloomberg, Coindesk, Yahoo, Barron's, Business Insider

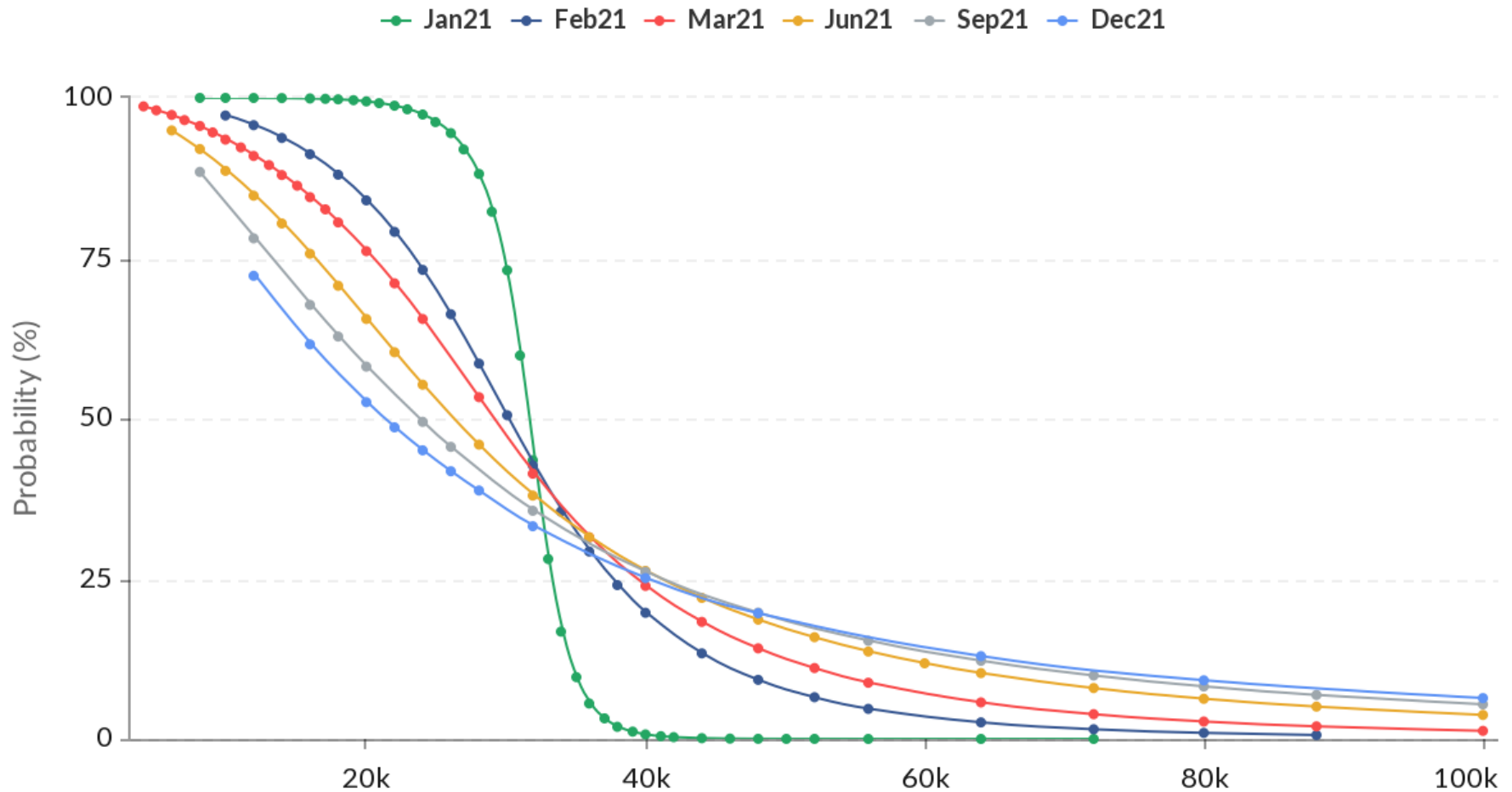


Options Pricing Signals Consensus May Actually Be Too Bearish

Market assigning less than 10% chance Bitcoin above \$100k by year end

- One would think the consensus is \$100k Bitcoin based on many seemingly aggressive calls.
- But the options markets tell us that is not the outcome that's being priced in.

Figure: Probability of BTC being above X\$ per maturity



Source: FSInsight, Skew

Institutional FOMO: Tesla --> Bitcoin

Tesla 2020 rally due to Russell 1000 Growth Manager FOMO = BTC 2021?

- Bitcoin and crypto are now entering the institutional investor universe as Tesla was skyrocketing in the Russell 1000.
- If crypto outperforms and peer manager have exposure that others don't we may see a case of institutional FOMO.

Figure: Probability of BTC being above X\$ per maturity



Source: FSInsight, Skew

Definitions

- **Active Crypto Users:** Estimated users based on the greater of Blockchain.info Bitcoin wallets or the lower bound of crypto users estimated by Cambridge University.
- **Average Revenue Per User:** Annual transaction fee revenue divided by the number Active Crypto Users.
- **Bitcoin:** the most popular blockchain cryptocurrency, has been evolving into a store of value, while another popular blockchain cryptocurrency, Ethereum, is developing use cases in areas such as decentralized applications, smart contracts and token issuance
- **Blockchain:** a distributed database existing on multiple computers at the same time. It is constantly growing as new sets of recordings, or 'blocks', are added to it. Each block contains a series of transactions or other information, a timestamp and a link to the previous block, and a cryptographic hash or signature. Any change to a block changes the signature, which affects the header field for the next and subsequent blocks. Thus, any altered block is immediately identifiable, making the blockchain immutable.
- **Consensus:** the process by which all of the computers reconcile their version of the database and come to an agreement as to which entries to add into their database in the latest block, and to discard their block and replace it with the one a minimum percentage of other computers (typically 51%-67%) all agree is the valid block.
- **Customer Acquisition Cost:** Number of new Active Crypto Users divided by the Payment Processing Cost during period.
- **Distributed Ledger:** a more general version of a blockchain, and encompasses other constructs, as long as the ledger is independently replicated across multiple computers with no single computer acting as the source of data in the ledger.
- **Grider Crypto Book Value:** The sum USD value of all miner revenue (transaction fees plus newly issued block rewards or Payment Processing Costs) for all time from genesis up to the end of that interval. The methodology expanded on the Hayes mining model, which looks at the current costs, and instead tracked the cumulative or aggregate lifetime costs. The model was first developed in December of 2017 and made public in January 2018 by David Grider in the following linked [report](#) on page 9 and 13 described as Cryptocurrency Mining Store of Value Model and methodology later more fully detailed in the following linked [report](#).
- **Grider Book Value Per Share:** The Grider Crypto Book Value divided by the number of native crypto assets outstanding.
- **Grider Crypto Book Value Multiple:** The market capitalization (price times number of assets outstanding) divided by the Grider Crypto Book Value.
- **Major Central Banks:** Collectively, the Federal Reserve (FED), European Central Bank (ECB), Bank of Japan (BOJ) and the Peoples Bank of China (PBOC)
- **Mining:** the process by which Bitcoin or other token “Miners” process and validate transactions, with the first miner to solve a cryptographic puzzle validating the block and receiving a reward (currently 6.25 bitcoin each); other miners have to then replicate the result to confirm and move on to the next block.
- **Payment Processing Costs:** Value of all newly issued Bitcoin paid to miners as block rewards which dilute (inflate) the existing supply, and which we view as similar to stock compensation and classify as an expense to network stakeholders.
- **Total Take Rate:** The total transaction fee revenue (USD) divided by the total transaction value (USD) sent during the period.

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