

DIGITAL ASSETS



Bitcoin Reaches Target: Issuing FY-21E & Increasing Outlook: \$25K

Crypto continues to be in a secular bull market. Bitcoin has rallied 3x since we issued our initial outlook following the mid-March sell-off, with prices today bursting to ~\$16,700 or 1% above our FY-2020 target of \$16,500. We are maintaining our bullish view on crypto and releasing our new FY-2021 fundamental economic financial model estimates, which we are applying to revise our price target upward to \$25,000 ([Slide 2](#)).

- **Macro Thematic Thesis Remains Strong:** Bitcoin has been the best performing among global assets 8 out of 10 years since inception and leads in 2020 by 98% YTD ([Slide 3](#)). Outlook remains strong and we're maintaining our recommendation for investors to overweight crypto as a core portfolio holding at 1-2% or a 10-20x OW vs. current size at 0.1% of assets ([Slide 4](#)).
- **Fourth Bull Market Cycle Remains Intact:** Crypto economies move in macro boom and bust business cycles like traditional economies. As the U.S. drives the global economy, Bitcoin, the largest among peers, is the bellwether and driver of the crypto economy. It has seen three macro market cycles with astonishing returns, excessive valuations and over 80% price declines. We continue to believe Bitcoin is in its fourth bull market cycle, which we now see in its 3rd or 4th innings ([Slide 5](#)).
- **Growing Central Bank Assets, Mining CAPEX & Users:** Crypto emerging market price cycles follow mechanical cause and effect incentive relationships between capital flows, accumulated fixed investment, and human capital productivity. Bitcoin price has been highly reflexive to major central bank balance sheet growth, which has increased \$18T since 2009. Bitcoin's \$310B market cap has captured 1.7% of this value, and we estimate an accumulated \$20B of mining CAPEX (our proprietary Grider Crypto Book Value metric which has served as a price floor) has been invested in the digital economy, while crypto users have grown above 100M ([Slide 6](#)).
- **Price to Book Valuation Multiples Support Higher Prices:** Our proprietary Grider Price to Crypto Book Value Multiple, which compares Bitcoin's Market Cap (Price) to its accumulated mining CAPEX/revenue (Book), has been a very reliable predictor of cycle movements since it was first published in January 2018. Multiples are 3X off cycle lows, but by no means excessive, and we believe given the currently strong market fundamentals this cycle will go longer ([Slide 7](#)). Current Bitcoin P/B multiples sit at 15.4x, which are above the lifetime average of 9.4x but well below +2 std. dev. or 26.1x, where 6M forward returns turned negative during the prior two cycles ([Slide 8](#)). Grider P/B multiples and Bitcoin forward returns have had a stronger relationship than PE multiples and S&P 500 stock returns, and 3M, 6M & 1Y returns from current 15x P/B averaged 26%, 69% & 49%, respectively, with 6M and 12M returns at or above the 50% upside implied by our FY-21 target ([Slide 9](#)).
- **Introducing Bitcoin FY21 Economic Estimates & Raising Outlook To \$25,000:** Our FY20 fundamental forecasts call for Bitcoin's Book Value to reach \$27.5B (35% growth) and Book Value Per Share (BTC) to reach \$1,454 (32% growth) ([Slide 11](#)). Other than our prior model released in May 2020 ([Report](#)), we believe this is the first of such sell-side forecasts. Our target applies a 17.2x forward P/B, which is slightly under +1 std. dev. lifetime valuation of 17.8x, but below prior cycle highs of 69x.
- **More Liquidity & A Weaker Dollar Offer Macro Tailwind For Growth:** Prior cycles have coincided with central bank balance sheet growth and a weaker dollar, both conditions are in place today that we see as catalysts for meeting our target ([Slide 10](#)).

Bottom Line: Bitcoin is within 1% of our 2020 economic and price forecasts. Conditions are in place for a continued rally in crypto prices over the course of the next year. We remain bullish and are raising our Bitcoin price target from \$16,500 to \$25,000, while noting that we recommend investors seeking to add exposure should favor pull backs, especially given the recent run.

For Reg AC certification and other important disclosures see [Slide 15](#).

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Digital Assets Strategy

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Price Target: Increasing Bitcoin Outlook: \$25,000

BTC rallied 3x since our initial guidance but new target offers 50% upside

- Bitcoin has continued to rally since we issued our initial buy recommendation following the mid-March sell-off, bringing the price to ~\$16,700 or 1% above our FY-20 price target of \$16,500.
- We remain bullish on Bitcoin and are raising our price target to \$25,000 based on our new issued FY-21 financial model estimates ([Slide 11](#)).

Figure: Historical Bitcoin Price & FSInsight Bitcoin Price Target

Date: 11/15/2020



Source: FSInsight, Bloomberg, Coinmarketcap

Thematic View (3Y-5Y): Maintaining Overweight Crypto Exposure

Bitcoin Outperformed Global Assets 9 of 11 Years & Upside Remains

- Bitcoin has been the best performing, albeit most volatile, global asset class over the last decade, with returns topping the charts 8 out of 10 years, and 2020 looks to be the 9th, as BTC leads all others by over 98%.
- We continue to see crypto as a highly asymmetric alpha opportunity for investors over the next 3-5 years.

Figure: Global Asset Ranked By Annual Return

Date: 12/31/2009 to 11/15/2020

Best	Best	Best	Best		Best	Best	Best		Best	Best
FY-2010	FY-2011	FY-2012	FY-2013	FY-2014	FY-2015	FY-2016	FY-2017	FY-2018	FY-2019	YTD 2020
Bitcoin 39171%	Bitcoin 1471%	Bitcoin 187%	Bitcoin 5286%	Dollar 13%	Bitcoin 34%	Bitcoin 126%	Bitcoin 1337%	Dollar 4%	Bitcoin 94%	Bitcoin 123%
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%
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 11%
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%	US Treasuries 8%
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 7%
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 Bonds 7%
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%	MSCI EM 7%
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%	Dollar -4%
US Treasuries 6%	Commodities -13%	Commodities -1%	Commodities -10%	Oil -46%	Commodities -25%	US Bonds 3%	Commodities 2%	Oil -25%	US Treasuries 7%	Commodities -9%
Dollar 2%	MSCI EM -20%	Oil -7%	Gold -28%	Bitcoin -56%	Oil -30%	US Treasuries 1%	Dollar -10%	Bitcoin -74%	Dollar 0%	Oil -34%

Worst

Worst

Source: FSInsight, Bloomberg

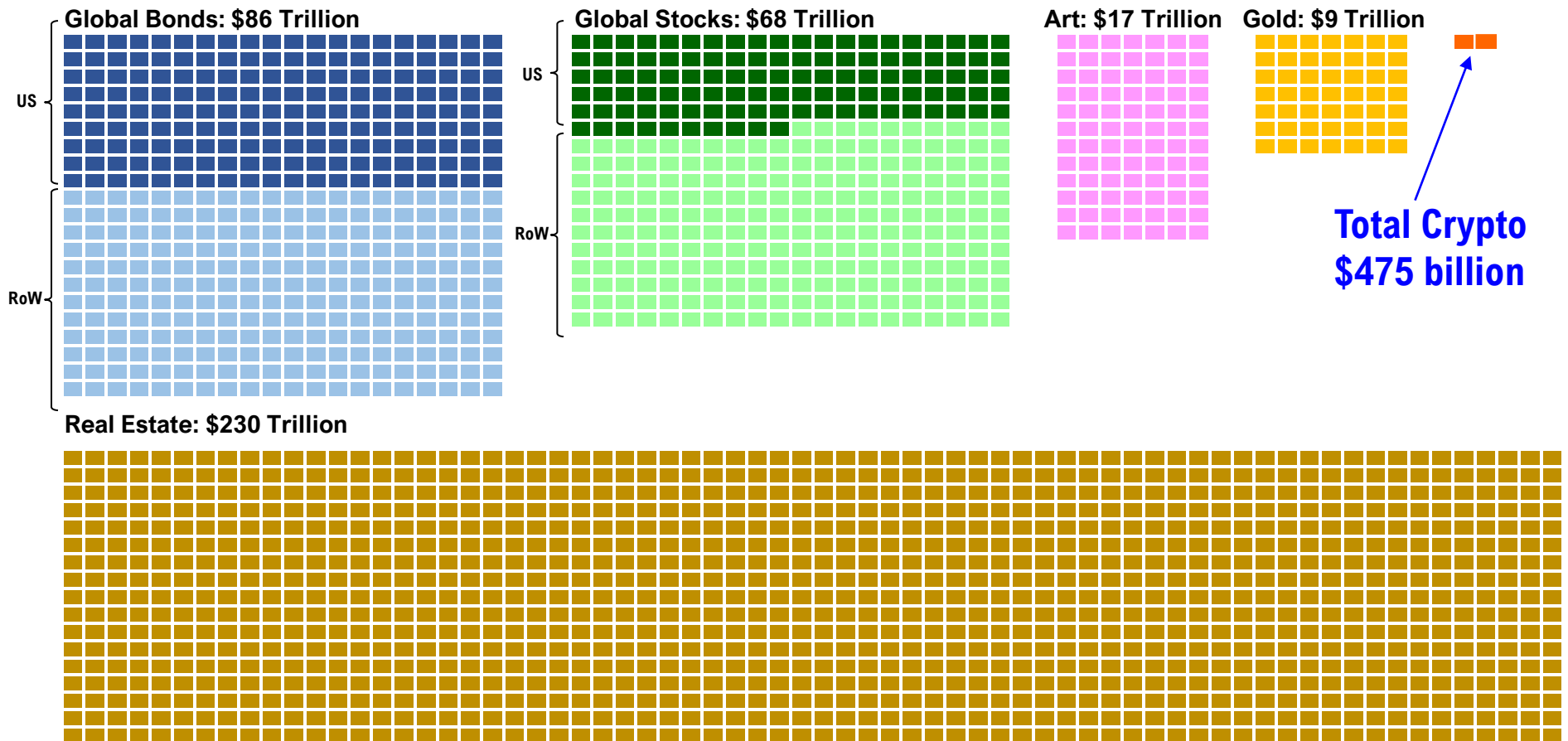
Thematic Weighting: 1%-2% Core Portfolio Allocation To Crypto

Crypto Emerging Market 0.1% Global Assets Market 1-2% = 10-20x OW

- Although crypto assets have experienced significant growth over the past decade, they only represent 0.1% of global assets, making them historically too small for institutional investment, but that is starting to change.
- Crypto emerging market digital economies encompass the spectrum of assets types from commodities (minable assets), art (NFTs), stocks (staking & equity tokens), debt (stablecoins), etc., all digitizing the global asset TAM.

Figure: Size of Various Markets

Each square = \$200 billion



Source: FSInsight, Bloomberg

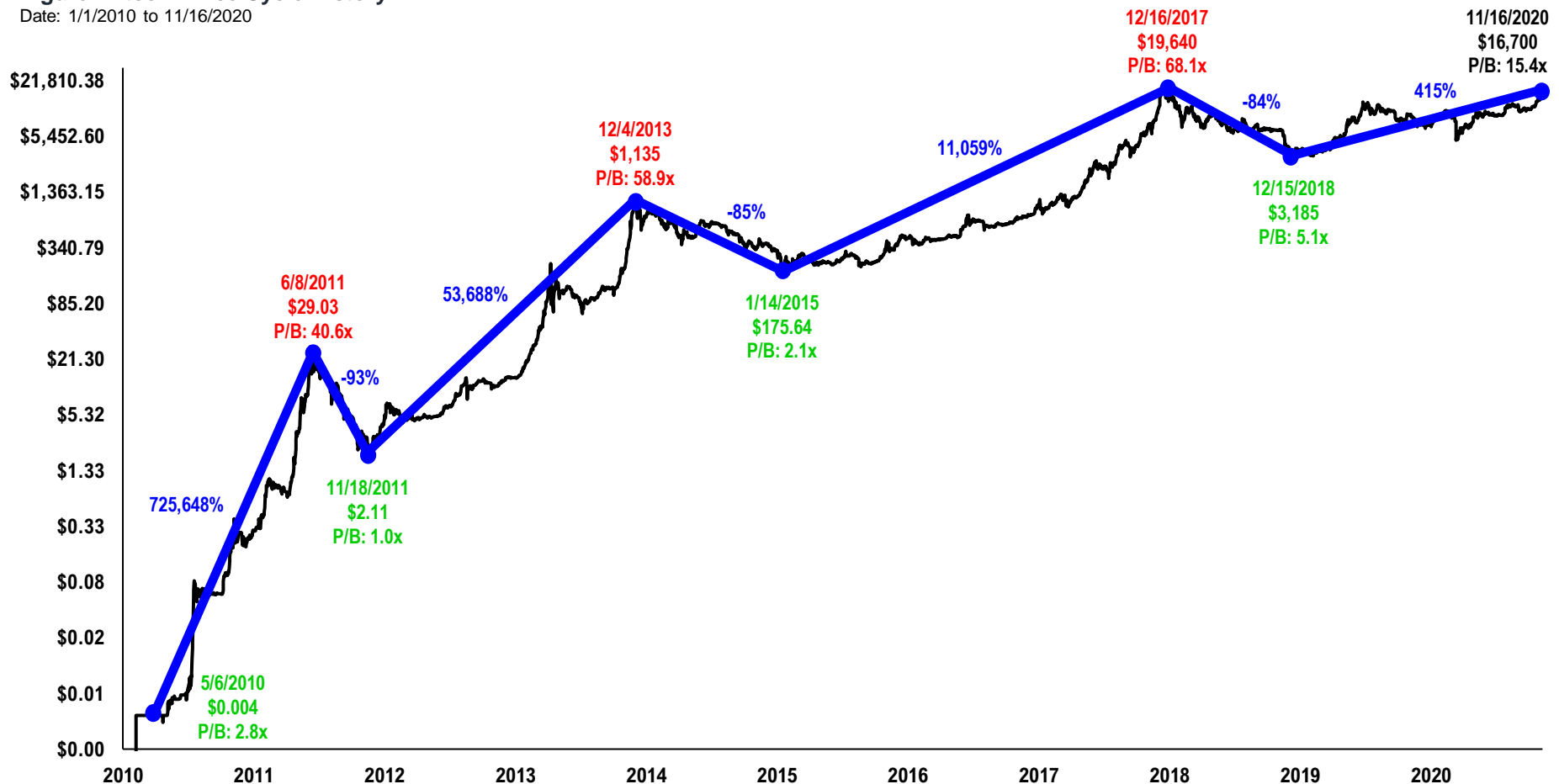
Tactical View (6M-12M): Fourth Bull Market Cycle Still Underway

Bitcoin & crypto outlook is positive as expansion enters 3rd or 4th innings

- Crypto economies experience boom and bust economic business cycles like the traditional economy. Bitcoin has had three prior cycles with astonishing returns, extreme relative valuations, and over 80% drawdowns.
- We continue to believe the fourth crypto bull market cycle is intact and see the expansion now entering its 3rd or 4th innings.

Figure: Bitcoin Price Cycle History

Date: 1/1/2010 to 11/16/2020



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

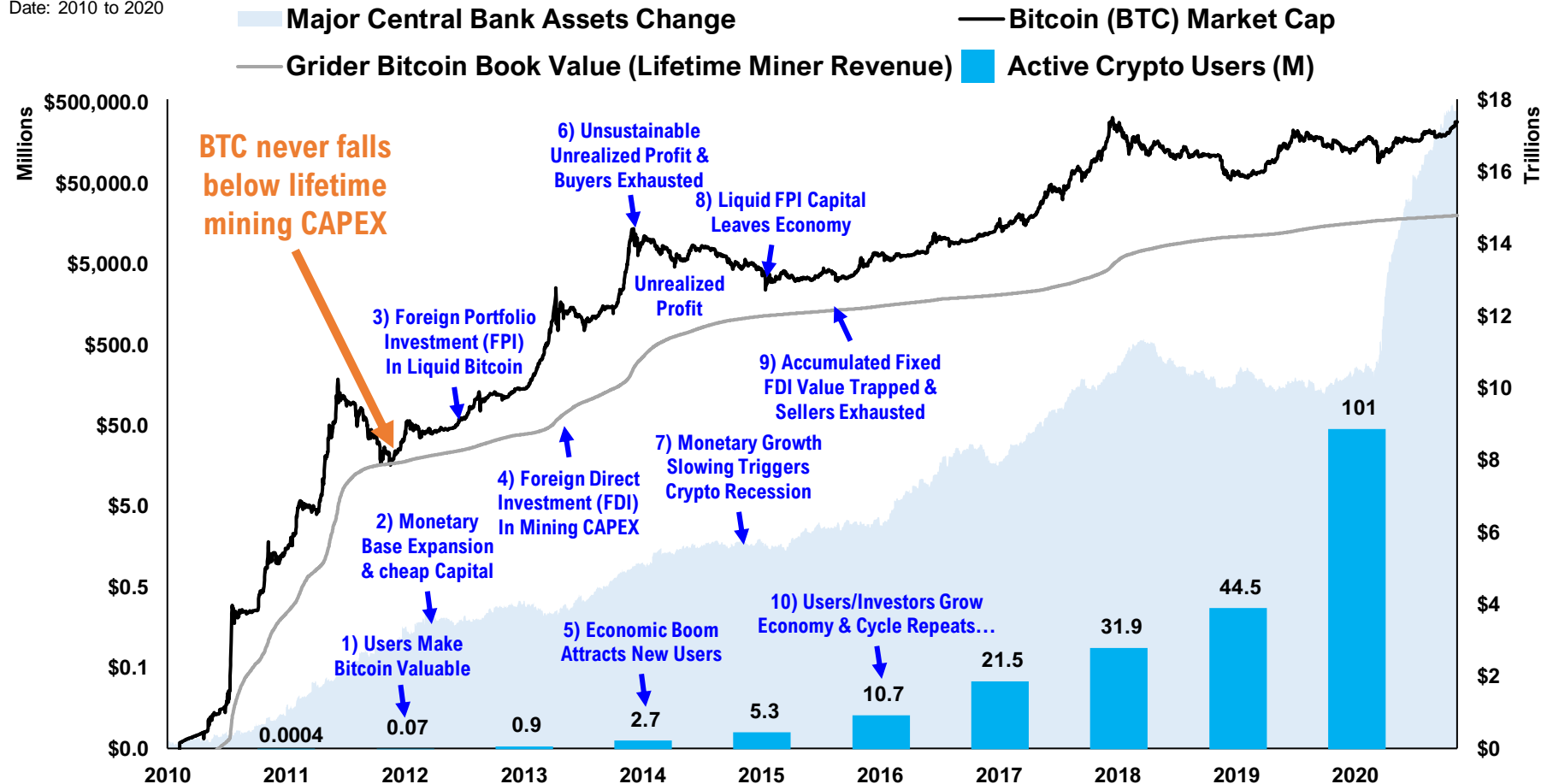
Value Drivers: Capital Flows, Fixed Investment, & Labor Productivity

Minable digital store of value benefited by growing users & money supply

- As digital gold to many, more like digital real estate in my view, Bitcoin has hard money-like store of value features due to growing users and accumulated mining capital investment in its digital economy, not the 21M BTC supply.
- Much like land development, there's a cost for producing BTC and other minable crypto, and as developers make housing investments in cities as populations and prices rise, miners the same, both affected by the money supply.

Figure: FED, ECB, BOJ & PBOC Balance Sheet Change, Bitcoin Market Cap, Grider Book Value & Active Users

Date: 2010 to 2020



Source: FSInsight, Bloomberg, Bitcoin Charts, Blockchain.info, Cambridge University, Coinmetrics, Coinmarketcap

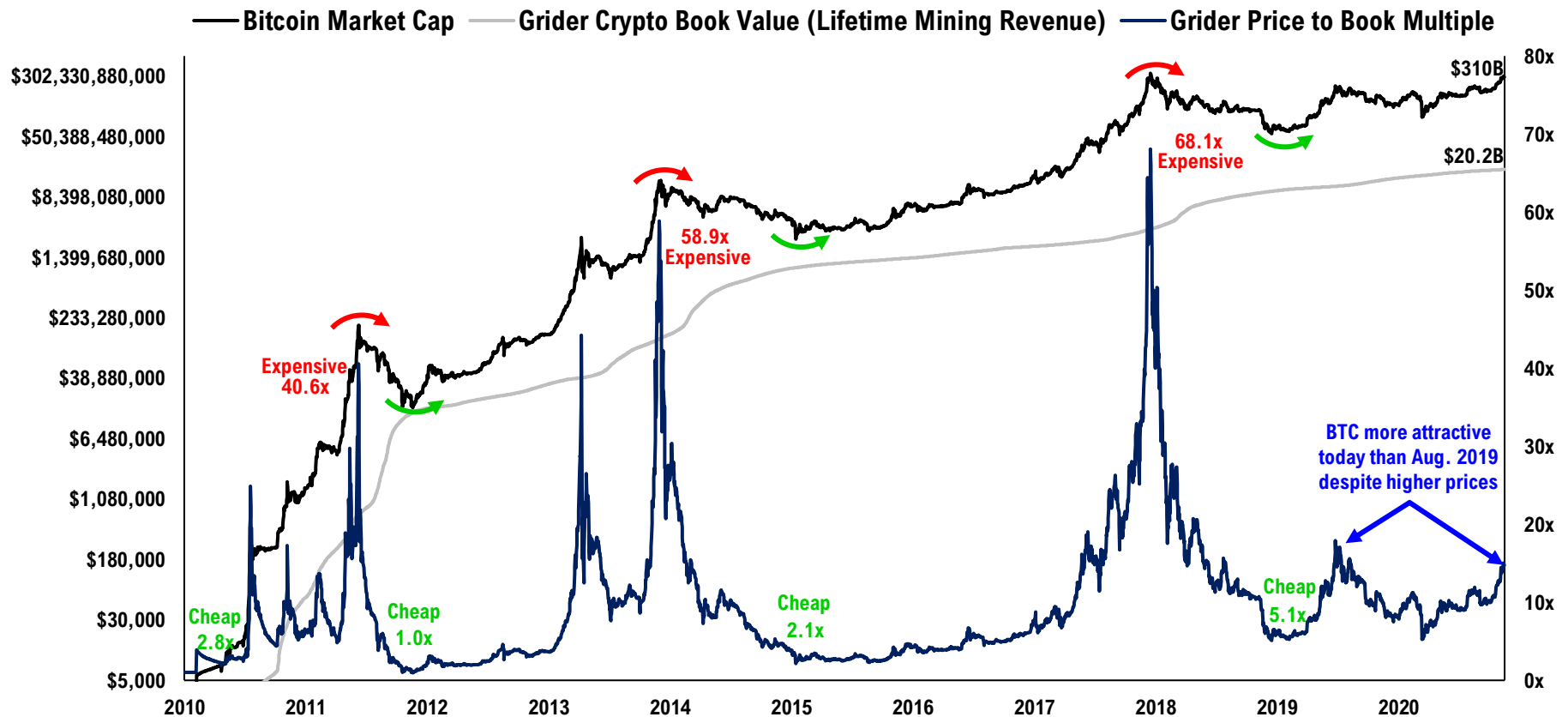
Inflection Points: Valuations Have Room For Continued Expansion

Crypto EM boom & bust cycles gauged by Grider price to book multiples

- Our proprietary valuation model, the Grider Price to Book Multiple ([Slide 14](#)), is a relative fundamental valuation metric that compares Bitcoin's market cap (Price) to lifetime miner revenue/CAPEX (Book) to gauge macro cycles.
- Multiples today are 3X off cycle lows, but by no means excessive, and we see market fundamentals as stronger than during the "goldilocks economy" we saw in 2H-19 that rolled over, leading us to think this cycle will go longer.

Figure: Bitcoin Market Cap & Grider Crypto Book Valuation History

Date: 11/16/2020



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

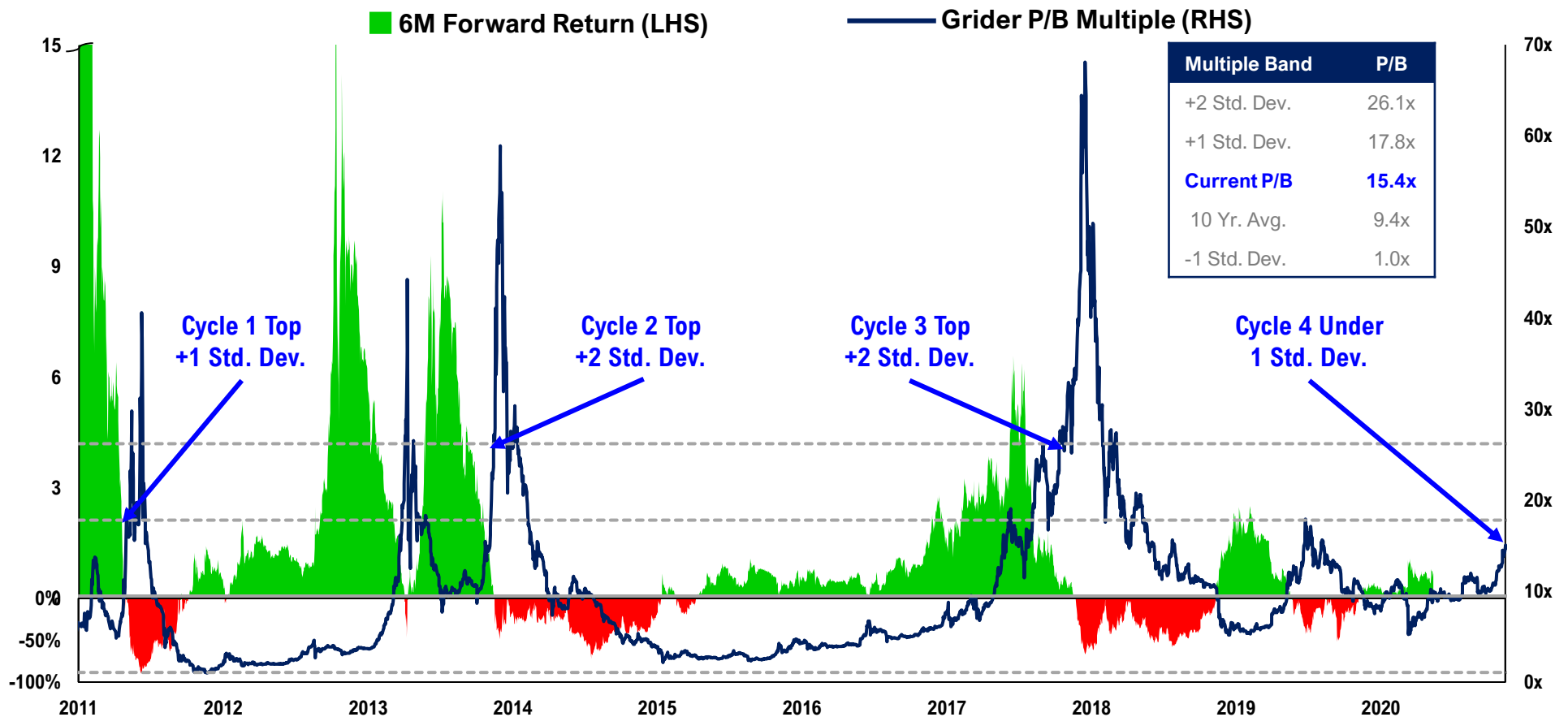
Return Dynamics: P/B Multiples Influence Forward Returns

Valuations under +1 std. dev. historically have room to increase

- Bitcoin 6-month forward returns were positive until Grider P/B multiples reached +1 standard deviation during the first cycle and +2 standard deviations during the second and third cycle.
- Current Bitcoin P/B multiples sit at 15.4x, which are above the lifetime average of 9.4x, but below +1 and +2 standard deviations of 17.8x and 26.1x, which we think this cycle could comfortably reach and possibly exceed.

Figure: Bitcoin 6M Forward Return & Grider P/B Multiple

Date: 2011 to 2020



Source: FSInsight, Bloomberg, Coinmetrics, Coinmarketcap

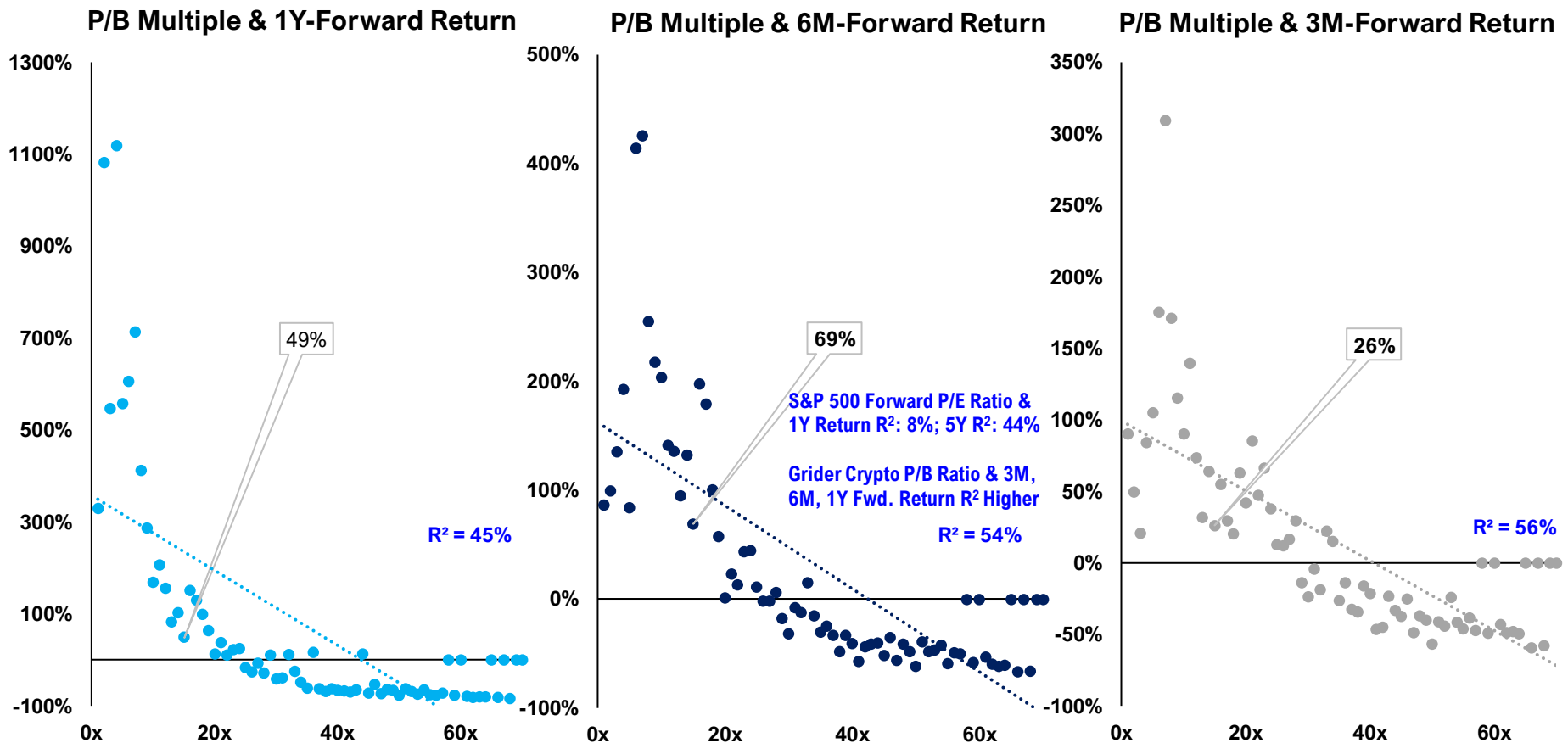
Risk & Reward: Returns Have Been Strong From Current Levels

3M, 6M & 1Y returns from today's 15x P/B have been 26%, 69% & 49%

- Based on our analysis below and JP Morgan equity data, Grider P/B multiples and Bitcoin forward returns have a stronger relationship than forward PE multiples and S&P 500 returns.
- Bitcoin prices over the next 3M, 6M & 1Y were historically on average all positive from today's 15x P/B multiple, with 6- and 12-month returns being around or above the 50% upside implied by our FY-2021 price target.

Figure: Grider P/B Multiple & Average Forward Return

Date: 2011 to 2020



Source: FSInsight, Bloomberg, Coinmetrics, JP Morgan Asset Management: Guide to the Markets

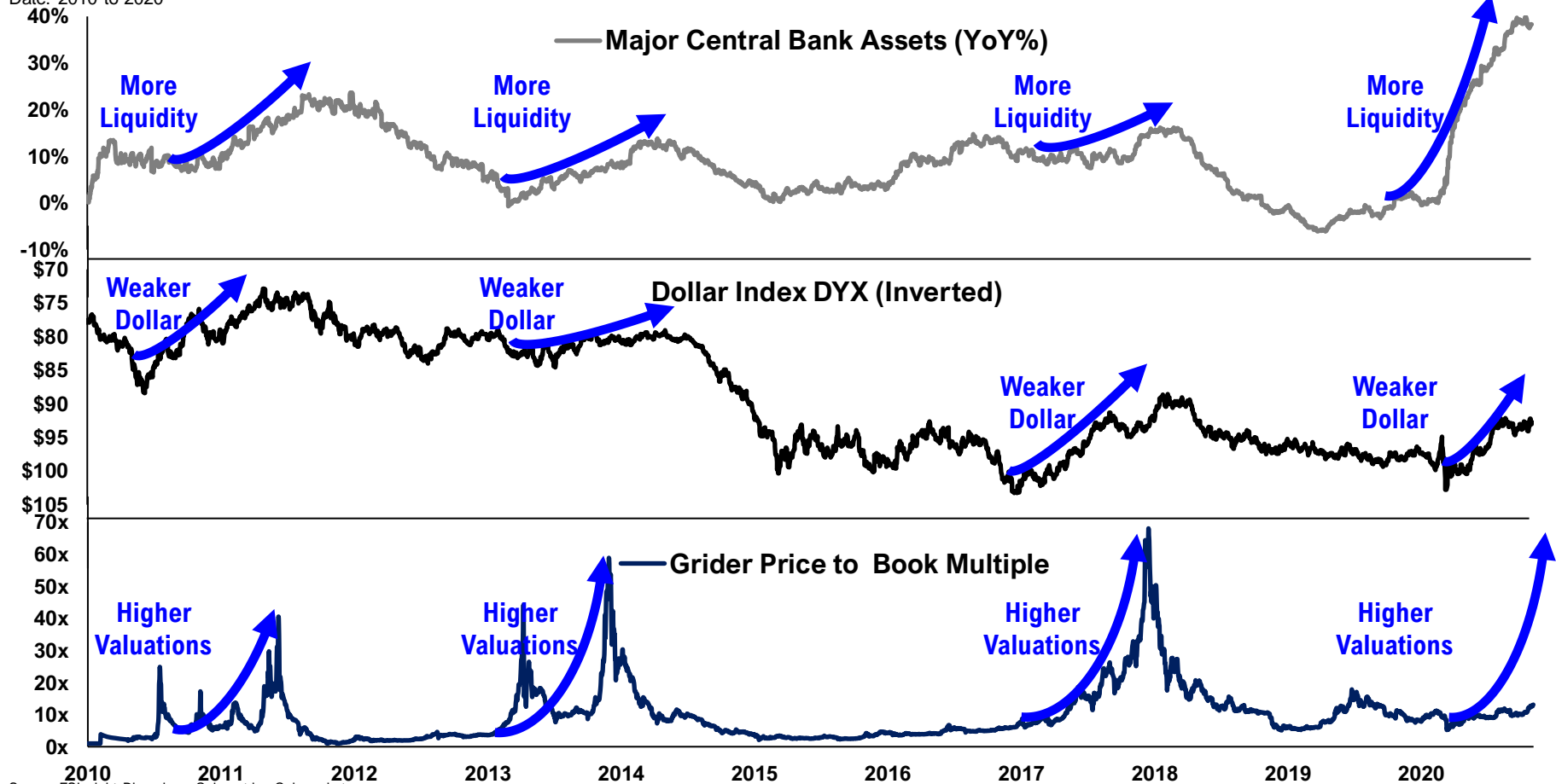
Macro Tailwinds: More Liquidity, Weaker Dollar, Higher Valuations

Cycle prices rise as monetary backdrop becomes more accommodative

- During historical Bitcoin cycles, crypto prices and P/B valuation multiples have increased with accommodative central bank policy and a weakening dollar.
- With recent increases in global liquidity and a weakening dollar, we see the macro conditions in place for higher valuations and a continuation of the current crypto bull market cycle.

Figure: Major Central Bank Asset Growth% (FED, ECB, BOJ, PBOC), Dollar Index & Bitcoin Grider P/B Multiples

Date: 2010 to 2020



Source: FSInsight, Bloomberg, Coinmetrics, Coinmarketcap

Bitcoin Forecast: Issuing FY-2021 Fundamental Economic Estimates

Expecting Book Value Per Coin of \$1,100 for FY-20E and \$1,454 for FY-21E

- Our model forecasts Bitcoin's FY 2021 mining costs (transaction fees & processing costs/dilution) to arrive at the total Book Value and Book Value Per Share (BTC) of the economy's assets of \$27.5B and \$1,454, respectively.
- We also forecast user growth and use mining expense and transaction fees to derive customer acquisition cost and average revenue per user and we note our market value per user estimate of \$2.3k is in line with Nedbank fintechs¹.

Figure: Bitcoin Fundamental Economic Financial Model

Date: 11/16/2020

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020E	NEW FY 2021E
Market Data													
Price (YE)	\$0.001	\$0.30	\$4.71	\$13.5	\$730	\$321	\$430	\$969	\$13,921	\$3,687	\$7,167	\$16,500	\$25,009
Return (YoY)	n/a	39171%	1471%	187%	5286%	-56%	34%	126%	1337%	-74%	94%	130%	52%
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	\$306,662	\$473,018
Change (YoY)	n/a	121254%	2405%	281%	6091%	-51%	47%	141%	1399%	-72%	102%	136%	54%
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	18.91
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	\$1,973,881	\$4,934,703
Change (YoY)	n/a	942540%	125481%	251%	823%	41%	30%	210%	497%	-23%	-11%	5%	150%
Transaction Fee Revenue (\$M)	\$0.000	\$0.000	\$0.03	\$0.06	\$2.13	\$2.46	\$2.30	\$13.2	\$502	\$336	\$155	\$197	\$493
Change (YoY)	n/a	n/a	889381%	110%	3277%	16%	-7%	475%	3698%	-33%	-54%	27%	150%
Payment Processing Costs (\$M)		\$0.233	\$18	\$21	\$306	\$782	\$373	\$558	\$2,882	\$5,150	\$5,020	\$4,117	\$6,570
Change (YoY)	n/a	n/a	7438%	20%	1353%	156%	-52%	50%	416%	79%	-3%	-18%	60%
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	\$20,438	\$27,501
Change (YoY)	n/a	18799%	7511%	118%	791%	226%	33%	38%	163%	100%	47%	27%	35%
Book Value Per Share (\$M)	\$0.001	\$0.047	\$2.23	\$3.7	\$28.5	\$82.8	\$100	\$129	\$326	\$627	\$889	\$1,100	\$1,454
Change (YoY)	n/a	6016%	4675%	65%	675%	191%	21%	29%	152%	93%	42%	24%	32%
Key Performance Indicators													
Transaction Take Rate%	n/a	n/a	0.001%	0.001%	0.003%	0.002%	0.002%	0.003%	0.018%	0.016%	0.008%	0.010%	0.010%
Change (YoY)	n/a	n/a	n/a	-40%	266%	-18%	-28%	85%	536%	-13%	-48%	21%	0%
Active Crypto Users (M)	n/a	n/a	0.0004	0.07	0.9	2.7	5.3	10.7	21.5	31.9	44.5	106	201
Change (YoY)	n/a	n/a	n/a	n/a	n/a	205%	97%	100%	101%	48%	40%	138%	90%
Average Revenue Per User (ARPU)	n/a	n/a	n/a	n/a	\$2.39	\$0.91	\$0.43	\$1.24	\$23.34	\$10.52	\$3.49	\$1.86	\$2.45
Change (YoY)	n/a	n/a	n/a	n/a	n/a	-62%	-53%	188%	1788%	-55%	-67%	-47%	32%
Customer Acquisition Cost (CAC)	n/a	n/a	n/a	n/a	\$345	\$429	\$142	\$104	\$267	\$495	\$398	\$67	\$46
Change (YoY)	n/a	n/a	n/a	n/a	n/a	25%	-67%	-26%	155%	86%	-20%	-83%	-31%
Valuation Metrics													
Value Per User (VPU)	n/a	n/a	n/a	\$2,034	\$10,021	\$1,617	\$1,208	\$1,457	\$10,858	\$2,017	\$2,920	\$2,892	\$2,348
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	15.0x	17.2x

Source: FSInsight, Bloomberg, Coinmetrics, Coinmarketcap, 1) Ark Invest

Updating Outlook: Revising Target By Applying FY-2021 Estimates

Bitcoin on pace to meet our FY-20E while our FY-21E imply further upside

- Bitcoin is on pace to meet our prior FY-20E. Based on the results of our updated analysis, we believe fundamentals support a Bitcoin target of \$25,000 by year end 2021, which represents 50% upside from current levels.
- The \$25,000 target is derived by multiplying our FY 2021 Grider Bitcoin Book Value/Share forecast of \$1,454 by a forward Grider Price/Book multiple of 17.2x. The multiple is near where Bitcoin topped out at during its 2H-19 rally and reflects a slight discount to a +1 Std. dev. of 17.8x and is well within prior historical ranges.
- We believe our expectations for further multiple expansion from recent trough levels are justified given the current stage of the bull market cycle. Based on the positive convergences taking place, it's possible for our current target to have room for later further upside. A comparison of actual and our current and prior outlooks is shown below.

Figure: Bitcoin FY 2020 & FY 2021 Outlook

Date: 11/16/2020

	Actual vs. Actual			Current vs. FY-2020E			FY-2020E vs. FY-2021E			Current vs. FY-2021E		
	Prior Revision (5/14/20)	Current (11/16/20)	Delta	Current (5/14/20)	FY-20E (5/14/20)	Delta	FY-20E	FY-21E	Delta	Current	FY-21E	Delta
Crypto Book Value Per Coin	\$987	\$1,087	10%	\$1,087	\$1,100	1%	\$1,100	\$1,454	32%	\$1,087	\$1,454	34%
Grider Price to Book Multiple	9.9x	15.4x	55%	15.4x	15.0x	-2%	15.0x	17.2x	15%	15.4x	17.2x	12%
Bitcoin (BTC) Price Target	\$9,801	\$16,700	70%	\$16,700	\$16,500	-1%	\$16,500	\$25,009	52%	\$16,700	\$25,000	50%

Source: FSInsight, Bloomberg, Coinmetrics, Coinmarketcap

Stock Exposure: Publicly Traded Equities Offering Crypto Beta

Crypto investment trusts, mining companies & service provider stocks

- We highlight several assets below that offer investors indirect exposure to crypto through stocks which are tradable in their brokerage accounts.
- We view the investment vehicles as having the most directly related return beta to the underlying crypto assets themselves, while we expect mining stocks to have higher and services providers to have lower crypto beta.

Figure: Crypto Asset Investment Vehicles & Stocks Weekly Performance

Date: 11/13/20

	Name	Ticker	Price	Market Cap	52W Range (High - Low)	Avg. Daily Volume (10 day)	7D Return	P/B Ratio
Higher Crypto Beta	Mining Companies							
	Canaan	CAN	\$2.7	\$520,307,407	\$13 - \$1.8	\$15,848,781	9.9%	78.9x
	Ebang International Holdings	EBON	\$7.4	\$1,032,508,208	\$15 - \$3.8	\$5,463,736	-10.4%	47.2x
	Marathon Patent Group	MARA	\$2.4	\$130,558,286	\$5.3 - \$0.4	\$24,348,056	-0.8%	2.7x
	Hive Blockchain	HVBTF	\$0.4	\$138,268,226	\$0.5 - \$0.1	\$549,198	-3.8%	-
	Hut8 Mining	HUT	\$1.2	\$114,144,142	\$2.1 - \$0.5	\$755,399	-8.6%	2.8x
	Riot Blockchain	RIOT	\$4.0	\$208,801,401	\$4.6 - \$0.5	\$28,020,723	9.0%	3.3x
	TAAL Distributed Information Technologies	TAAL	\$1.5	\$37,974,054	\$3.7 - \$1	\$35,537	-7.8%	1.4x
	Investment Vehicles							
	Grayscale Bitcoin Trust	GBTC	\$18.0	\$10,026,280,273	\$18.9 - \$5	\$175,194,218	2.4%	1.2x
Lower Crypto Beta	Grayscale Bitcoin Cash Trust	BCHG	\$14.9	\$293,513,367	\$34 - \$4.1	\$1,218,254	-13.1%	6.2x
	Grayscale Digital Large Cap Fund	GDLC	\$13.3	\$200,643,341	\$37.6 - \$3.5	\$1,135,361	-14.8%	1.4x
	Grayscale Ethereum Trust	ETHE	\$63.6	\$1,773,874,268	\$259.5 - \$24.1	\$11,393,278	5.5%	1.5x
	Grayscale Ethereum Classic Trust	ETCG	\$5.5	\$80,704,002	\$23.8 - \$4.7	\$900,104	-4.8%	1.2x
	Grayscale Litecoin Trust	LTCN	\$145.0	\$1,490,426,392	\$190 - \$23	\$760,896	98.6%	24.4x
	The Bitcoin Fund	QBTC.U	\$21.5	\$203,857,178	\$23.2 - \$10	\$4,345,242	-0.1%	1.1x
	Bitwise 10 Crypto Index Fund				Applications filed for making Bitwise shares tradable			
	Bitwise Bitcoin Fund							
	Financial Services/Other							
	Galaxy Digital	BRPHF	\$4.3	\$1,434,494,799	\$4.9 - \$0.4	\$1,041,506	8.0%	-
	Overstock.com	OSTK	\$54.5	\$2,237,898,573	\$128.5 - \$2.5	\$222,170,218	-19.0%	6.3x
	MicroStrategy	MSTR	\$192.3	\$1,889,817,067	\$204.4 - \$90	\$31,549,747	3.6%	4.9x
	Silvergate Capital	SI	\$28.3	\$531,634,068	\$29.8 - \$7.6	\$7,772,129	2.7%	1.9x
	Square	SQ	\$177.2	\$80,789,837,088	\$201.3 - \$32.3	\$2,183,468,946	-10.5%	38.9x

Source: FSInsight, Bloomberg

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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