



Raising Outlook \$40K: Bitcoin Reaches Target But Upside Remains

Crypto investors received a late Christmas present with the price of Bitcoin reaching new all-time highs early this morning briefly touching \$28,580. Bitcoin has risen by 75% since our [last upward price target revision](#) and now sits at ~\$28,000 or 12% above our most recent \$25,000 target. Despite the rise in prices and valuations, we believe the conditions remain in place for a continued rally in Bitcoin and crypto more broadly over the next 6-12 months. Institutional & corporate buying, regulatory de-risking and retail stimulus demand are factors that have led to an increase in positive momentum, which we believe can continue. As such, we're revising our valuation model estimates higher and raising our price forecast to \$40k representing ~50% upside from current levels.

- New Buyers, Regulatory De-Risking & Stimulus:** Institutional investors and corporations are entering crypto and are acting as a new source of demand. We view recent FINCEN & SEC proposed regulation and enforcement actions as long term positive de-risking events that highlight the growing regulatory clarity and U.S. government stance on Bitcoin, albeit not all crypto assets, which should lower the risk premium and bolster capital flows. The latest U.S. stimulus package should boost personal savings and could lead to greater retail crypto investment ([Slide 2](#)). For these reasons, we believe Bitcoin prices can go higher and are raising our target to \$40,000 ([Slide 3](#)).
- Fourth Bitcoin Bull Market Cycle Still Remains Intact:** We continue to believe Bitcoin is in its fourth bull market cycle, which we now see in its 4th or 5th innings vs. the 3rd or 4th innings we discussed at the time of our prior target update report. We believe our new 6 to 12-month target of \$40,000, which offers 50% upside from current levels, is conservatively reachable, while reaching \$100k+ during the full cycle is historically not outside the realm of possibilities ([Slide 4](#)).
- Valuations Becoming More Expensive But Can Go Higher:** Bitcoin's price has risen by nearly 4x during the year. The gains in price have come alongside increased fundamental traction and valuation multiple expansion. Our two metrics for tracking supply (Grider Book Value) and demand (Wallets/Users) fundamentals have risen by ~33% while valuations investors have been willing to pay have risen by roughly 175%. This implies a large portion of the gains have come from multiple expansion ([Slide 5](#)), but we believe this cycle will go longer ([Slide 6](#)), and while trailing multiples are nearing the higher end of their historic range ([Slide 7](#)), forward multiples based on our estimates make current prices appear more sustainable ([Slide 8](#)).
- Increasing FY21 Economic Estimates & Raising Outlook:** Our FY2021 fundamental forecasts now call for Bitcoin's Book Value to reach \$29.7B (41% growth) and Book Value Per Share (BTC) to reach \$1,569 (39% growth) ([Slide 9](#)). Our new target applies a 26x P/B multiple, which we view as conservatively reachable because it's in line with the +2 Std. Dev. lifetime multiple where 6M forward returns turned negative during the prior two cycles. We believe the possibility for further, more speculative multiple expansion back to prior cycle highs of ~70x is possible, which could lead to BTC prices north of \$100k ([Slide 10](#)).
- What are the downside risks?** Prices have had a significant run and profit taking may slow or reverse the rally. Crypto regulatory actions against unregulated exchanges, certain DeFi or ICO projects, and enhanced stable coin restrictions are possible during Q1. We wouldn't view these events as long-term negatives for Bitcoin, but if such events unfold, they may negatively impact broader market sentiment and prices.

Bottom Line: 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 \$25,000 to \$40,000, while again noting that we recommend investors seeking to add exposure should favor pull backs given the recent run and corresponding higher valuations.

For Reg AC certification and other important disclosures see [Slide 12](#).

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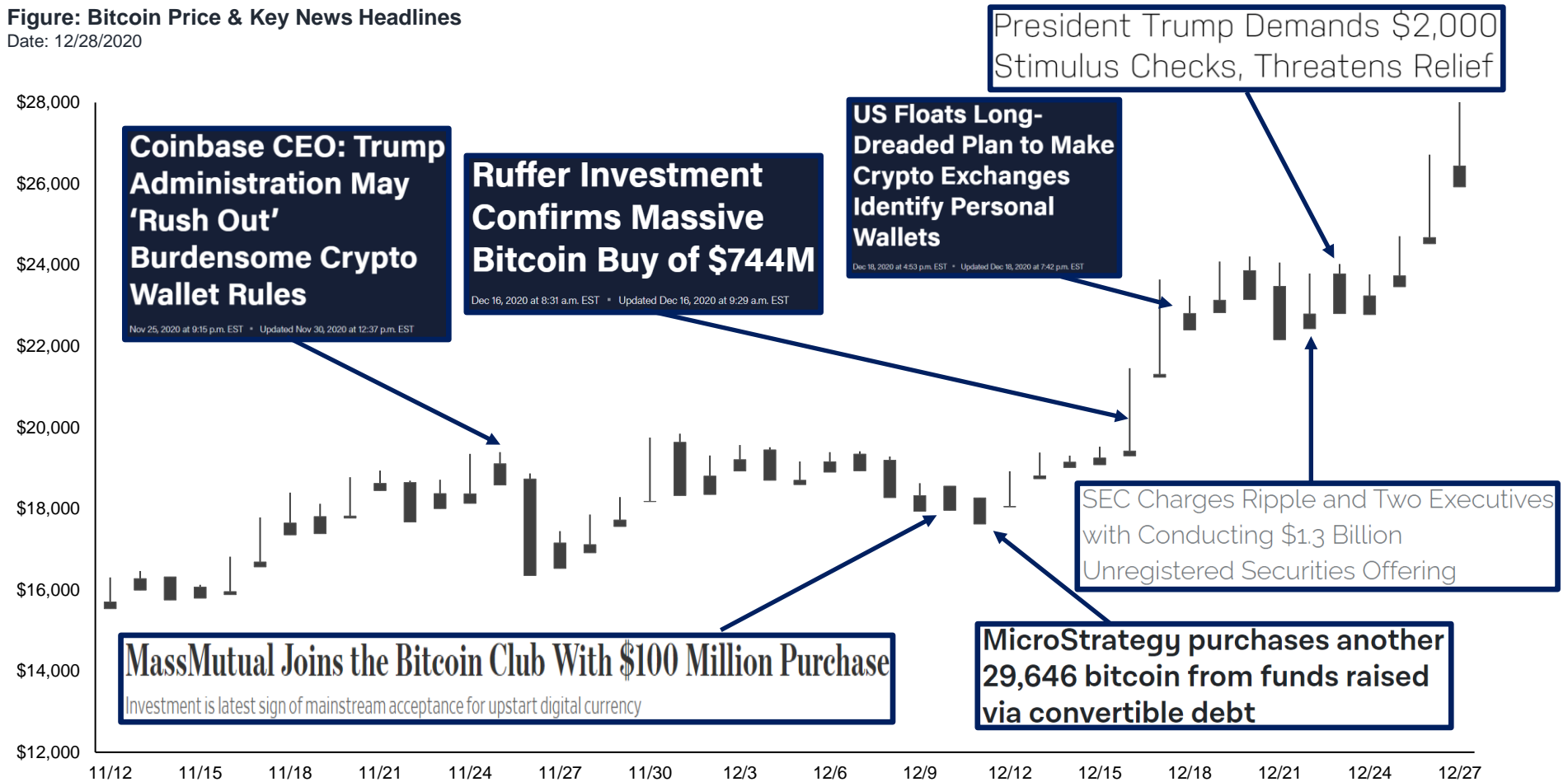
Bitcoin Breaking New Highs & Our \$25k Target

Drivers: institutional & corporate buying, regulatory de-risking & stimulus

- Institutional investors & corporates entering crypto are a new source of demand and we see the trend continuing.
- FINCEN & SEC crypto actions are long term positive de-risking events that highlight the growing regulatory clarity and U.S. government stance on Bitcoin, although not all crypto assets, which should increase capital flows.
- U.S. government fiscal stimulus package will boost personal savings and could lead to greater retail investment.

Figure: Bitcoin Price & Key News Headlines

Date: 12/28/2020



Source: FSInsight, Bloomberg, Coinmarketcap, Coindesk, TheBlock, WSJ, SEC, Nasdaq

Increasing Bitcoin Price Target: \$40,000

BTC reached our recent target but new target offers 50% upside

- Bitcoin has continued to rally since we increased our buy recommendation price target in November, bringing the price to ~\$28,000 or 12% above our price target of \$25,000.
- We remain bullish on Bitcoin and are raising our price target to \$40,000 based on our new revised upward FY-21 financial model estimates ([Slide 9](#)).

Figure: Bitcoin Price & FSInsight Bitcoin Price Target

Date: 12/28/2020



Source: FSInsight, Bloomberg, Coinmarketcap

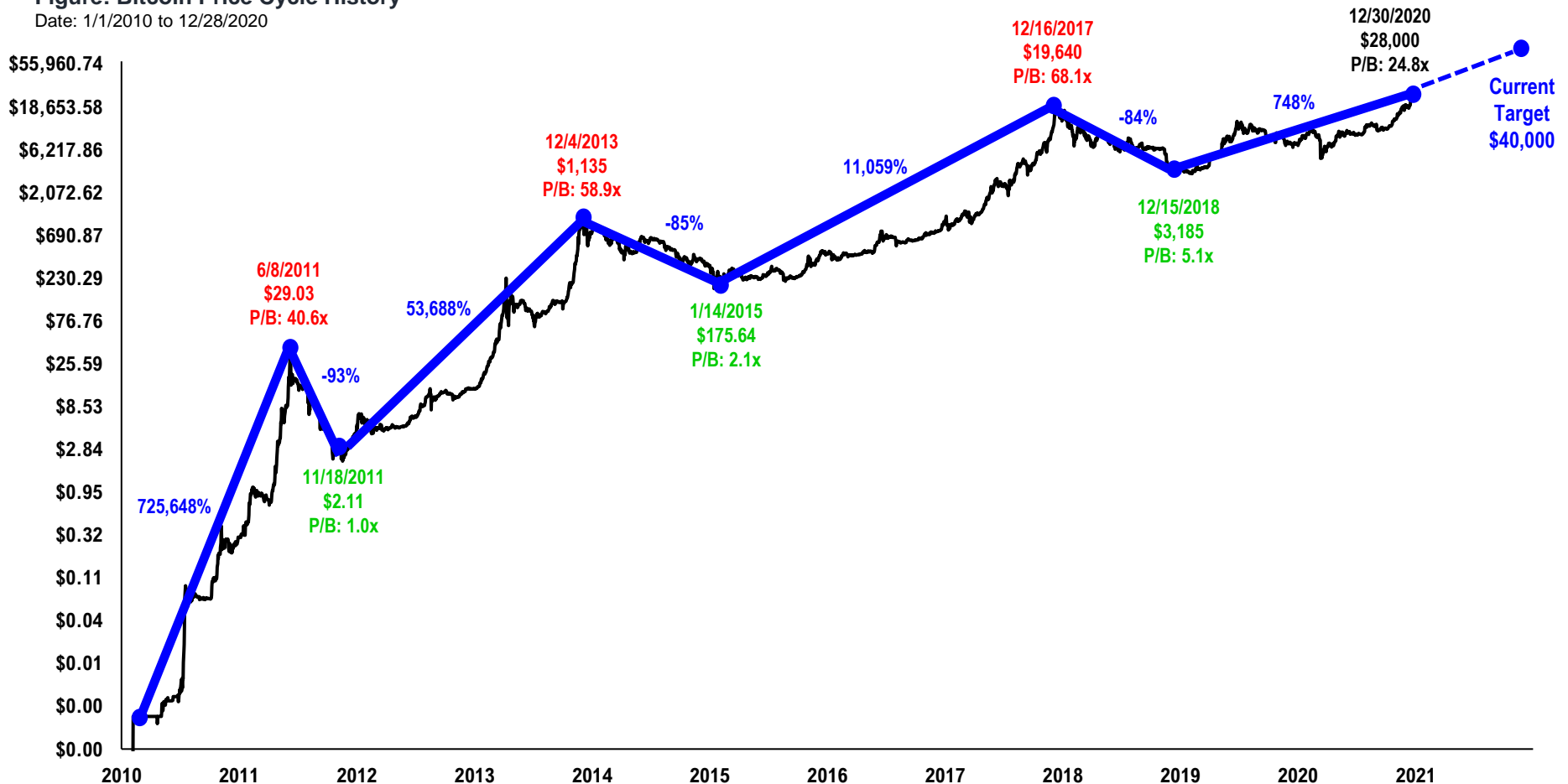
Fourth Bull Market Cycle STILL Underway

Outlook remains positive as expansion now enters its 4th or 5th innings

- We continue to believe the fourth crypto bull market cycle is intact and see the expansion now entering its 4th or 5th innings vs. the 3rd or 4th innings we discussed at the time of our prior target update report.
- We believe our new 6 to 12-month target of \$40,000, which offers 50% upside from current levels, is conservatively reachable, while reaching \$100k+ during the full cycle is historically not outside the realm of possibilities ([Slide 10](#)).

Figure: Bitcoin Price Cycle History

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



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

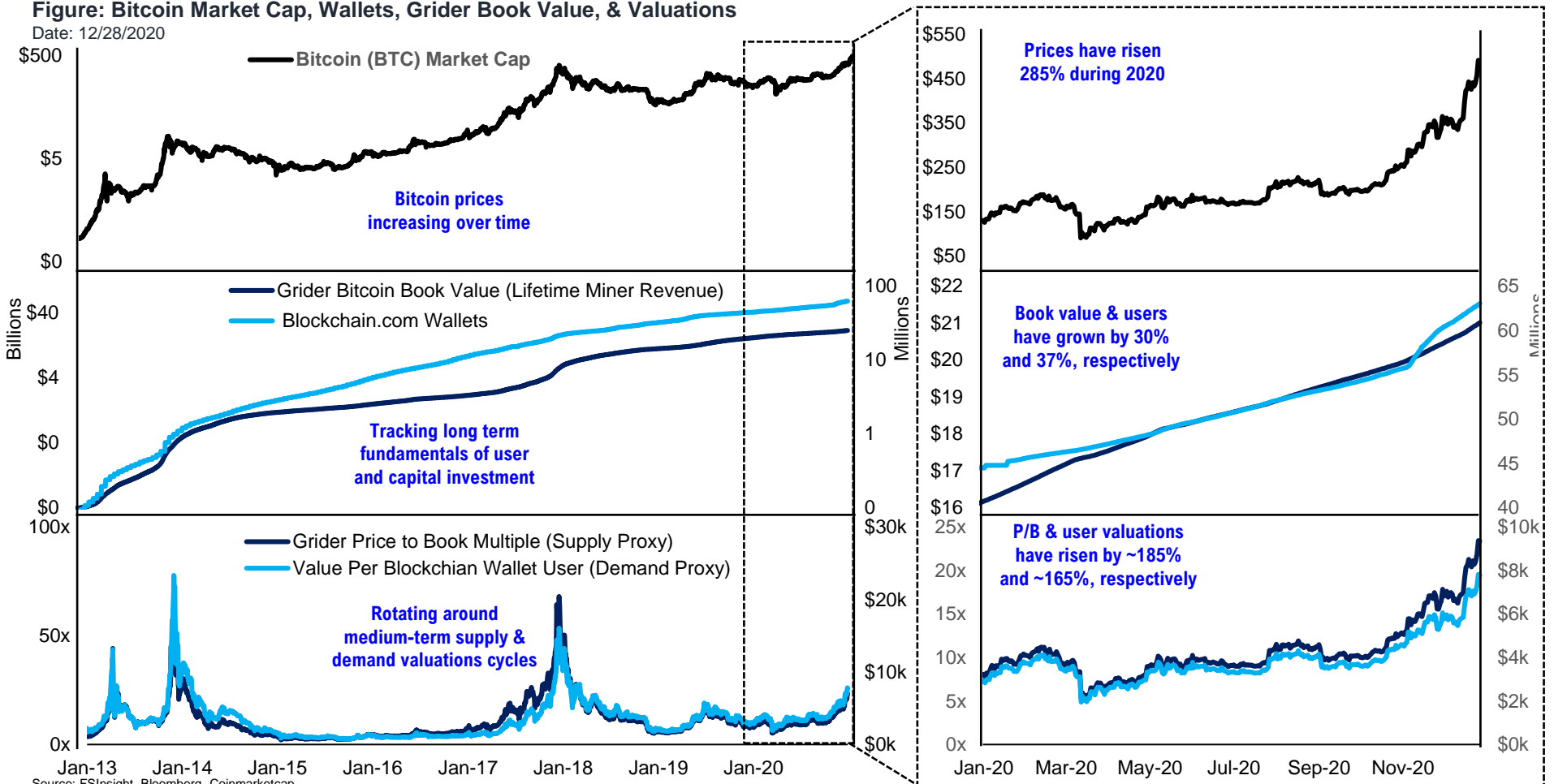
Prices Increasing Alongside Fundamentals & Valuations

Supply Driver: Unrealized CAPEX Profit & Demand Driver: Users

- Bitcoin has had a tremendous year with prices increasing by 285% YTD. The gains in price have come alongside increased fundamental traction and valuation multiple expansion. Our two metrics for tracking supply (Grider Book Value) and demand (Wallets/Users) fundamentals have risen by ~33% while valuations investors have been willing to pay have risen by roughly 175%. This implies a large portion of the gains have come from multiple expansion, but we're not getting overly cautious of this yet given it's consistent with broader stock market P/E expansion.

Figure: Bitcoin Market Cap, Wallets, Grider Book Value, & Valuations

Date: 12/28/2020



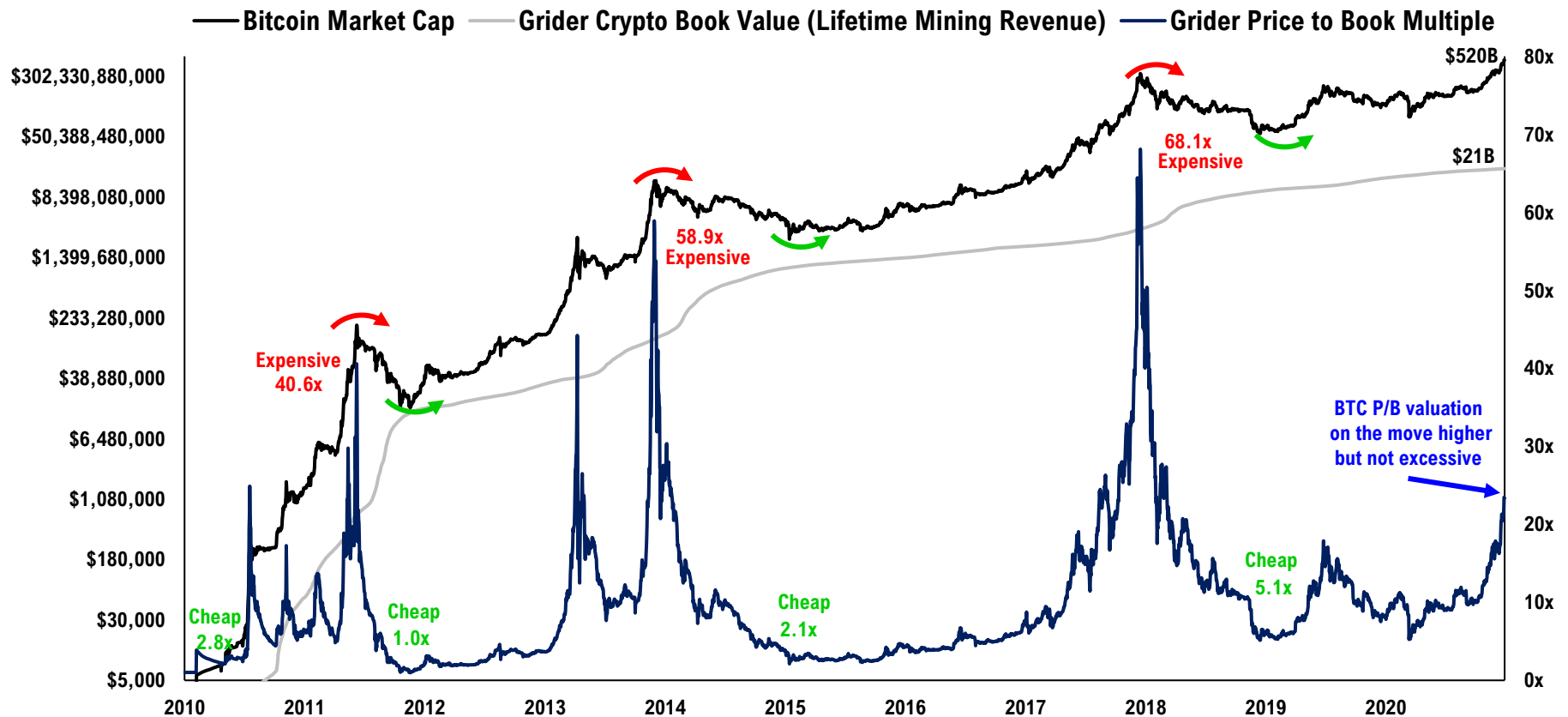
Multiples Are More Expensive But STILL Have Room To Rise

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

- Our proprietary valuation model, the Grider Price to Book Multiple ([Slide 11](#)), 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 now 4X off cycle lows and becoming more expensive, but we see strengthening fundamentals and think this cycle will go longer.

Figure: Bitcoin Market Cap & Grider Crypto Book Valuation History

Date: 12/30/2020



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

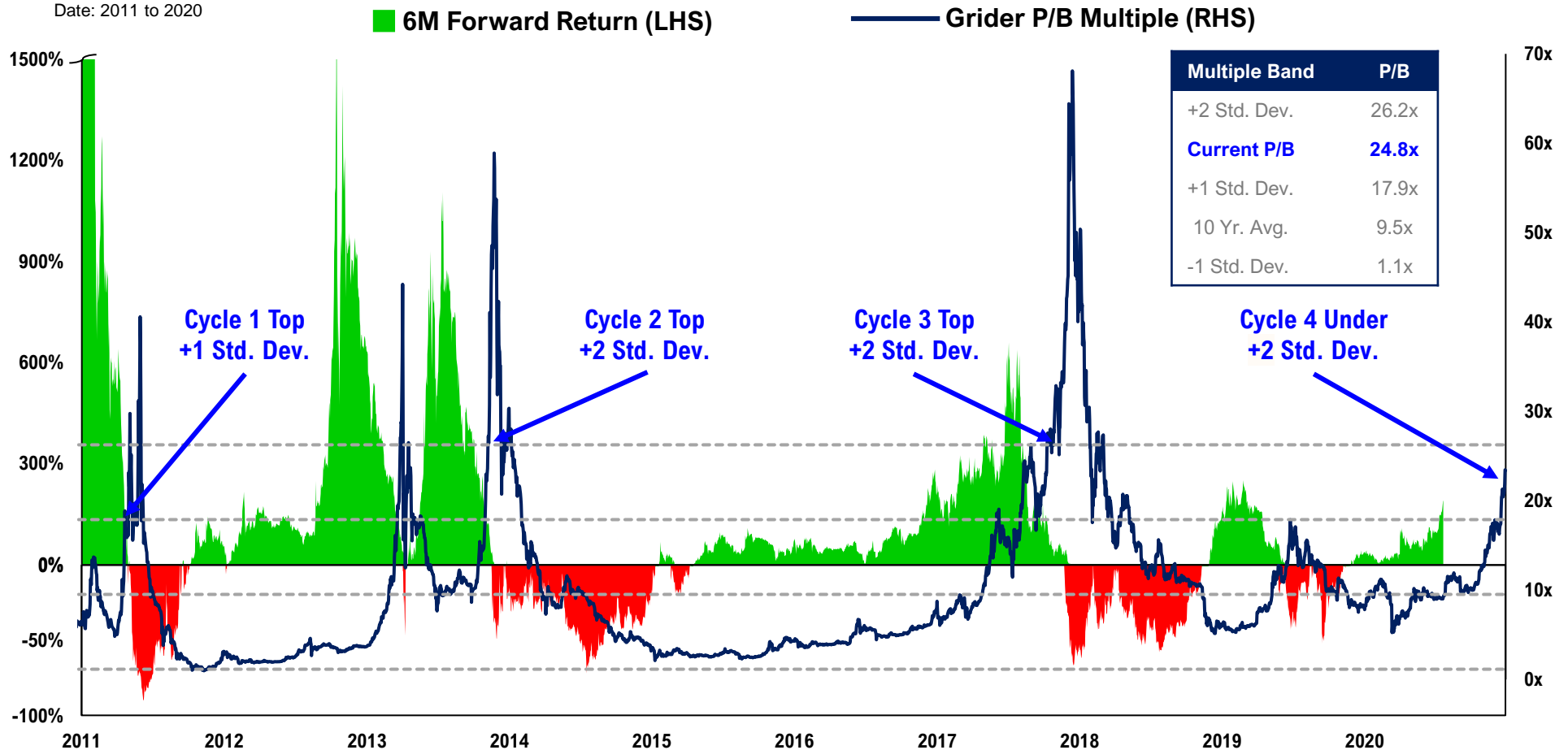
P/B Ratio Under +2 Std. Dev. Have Generated Positive 6M Returns

Trailing valuations from current levels historically have room to increase

- Bitcoin 6-month forward returns were positive until Grider P/B multiples reached +2 standard deviations during the second and third market cycles.
- Current Bitcoin P/B multiples sit at 23.4x, which are above the lifetime average of 9.4x, but below +2 standard deviation of 26.2x, which we still 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

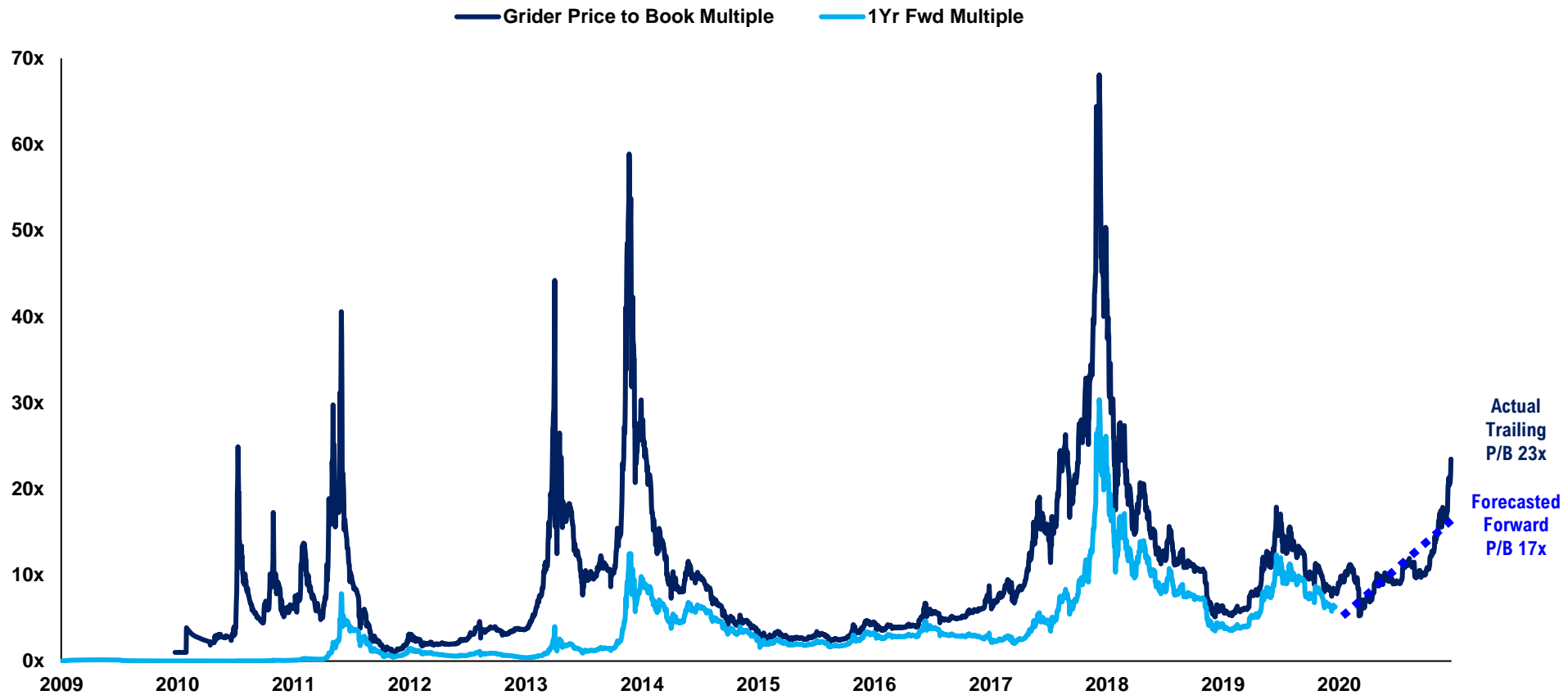
Forward P/B Multiples Still Reasonable Based On Our Forecasts

Factoring in book value growth expectations Bitcoin trades at 17x FY 21E

- Although Bitcoin trailing Grider Price to Book fundamental valuation multiples are tending towards the higher end of the historic range and are now near +2 Std. Dev., 1Yr forward P/B multiples (defined as the market cap divided by the realized or forecasted 1Yr forward Grider Book Value) look more reasonable. Based on our FY 2021 economic forecasts and current prices, we estimate that Bitcoin trades at a 17x forward P/B multiple, which is in line with the +1 Std. Dev. from the historical average.

Figure: Bitcoin Trailing & 1-Yr Forward Grider Crypto Book Valuation

Date:12/28/2020



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

Revising FY-2021 Fundamental Economic Estimates Higher

Now expecting Book Value Per Coin of \$1,569 for FY-2021E

- 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 \$29.7B and \$1,569, respectively.
- We also forecast user growth and use mining expense and transaction fees to derive customer acquisition cost and average revenue per user.

Figure: Bitcoin Fundamental Economic Financial Model

Date: 12/28/2020

	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
Revised													
Market Data													
Price (YE)	\$0.001	\$0.30	\$4.71	\$13.5	\$730	\$321	\$430	\$969	\$13,921	\$3,687	\$7,167	\$26,431	\$40,785
Return (YoY)	n/a	39171%	1471%	187%	5286%	-56%	34%	126%	1337%	-74%	94%	269%	54%
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	\$491,158	\$771,435
Change (YoY)	n/a	121254%	2405%	281%	6091%	-51%	47%	141%	1399%	-72%	102%	278%	57%
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	\$2,258,056	\$5,645,141
Change (YoY)	n/a	942540%	125481%	251%	823%	41%	30%	210%	497%	-23%	-11%	20%	150%
Transaction Fee Revenue (\$M)	\$0.000	\$0.000	\$0.03	\$0.06	\$2.13	\$2.46	\$2.30	\$13.2	\$502	\$336	\$155	\$179	\$448
Change (YoY)	n/a	n/a	889381%	110%	3277%	16%	-7%	475%	3698%	-33%	-54%	15%	150%
Payment Processing Costs (\$M)		\$0.233	\$18	\$21	\$306	\$782	\$373	\$558	\$2,882	\$5,150	\$5,020	\$4,707	\$8,212
Change (YoY)	n/a	n/a	7438%	20%	1353%	156%	-52%	50%	416%	79%	-3%	-6%	74%
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	\$21,010	\$29,671
Change (YoY)	n/a	18799%	7511%	118%	791%	226%	33%	38%	163%	100%	47%	30%	41%
Book Value Per Share (\$M)	\$0.001	\$0.047	\$2.23	\$3.7	\$28.5	\$82.8	\$100	\$129	\$326	\$627	\$889	\$1,130	\$1,569
Change (YoY)	n/a	6016%	4675%	65%	675%	191%	21%	29%	152%	93%	42%	27%	39%
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%	0.008%	0.008%
Change (YoY)	n/a	n/a	n/a	-40%	266%	-18%	-28%	85%	536%	-13%	-48%	-3%	0%
Active Crypto Users (M)	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	\$1.69	\$2.22
Change (YoY)	n/a	n/a	n/a	n/a	n/a	-62%	-53%	188%	1788%	-55%	-67%	-52%	32%
Customer Acquisition Cost (CAC)	n/a	n/a	n/a	n/a	\$345	\$429	\$142	\$104	\$267	\$495	\$398	\$76	\$58
Change (YoY)	n/a	n/a	n/a	n/a	n/a	25%	-67%	-26%	155%	86%	-20%	-81%	-24%
Valuation Metrics													
Value Per User (VPU)	n/a	n/a	\$94,309	\$2,034	\$10,021	\$1,617	\$1,208	\$1,457	\$10,858	\$2,017	\$2,920	\$4,631	\$3,829
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	23.4x	26.0x

Source: FSInsight, Bloomberg, Coinmetrics, Coinmarketcap

Conservative Target Is \$40k But \$100k+ Is Historically Possible

Target applies +2 Std Dev. P/B multiple of 26x, well below highs of 70x

- We had previously increased our Bitcoin price target to \$25,000. Bitcoin reached this price target earlier than expected, and based on the results of our updated analysis, we believe fundamentals support a Bitcoin target of \$40,000 by year end 2021. The updated price target represents 50% upside from current levels.
- The \$40,000 target is derived by multiplying our FY 2021 Grider Bitcoin Book Value/Share forecast of \$1,569 by a forward Grider Price/Book multiple of 26x. The multiple represents +2 std. dev. of the historical average P/B multiple and is well below the ~60x and ~70x multiples where Bitcoin topped out during the bull cycles of 2013 and 2017.
- Based on the positive convergences taking place, it's possible for our current target to have room for later further upside. A comparison of our current and prior outlooks and a valuation sensitivity is shown below.

Figure: Bitcoin FY 2021 Outlook

Date: 12/28/2020

	Prior vs. Current Target			Current vs. Target			Bitcoin Price Target Sensitivity							
	Prior Target	Current Target	Delta	Current Price	FY-21E	Delta	Crypto Book Value Per Coin							
								\$1,200	\$1,300	\$1,400	\$1,500	\$1,600	\$1,700	\$1,800
Grider Book Value Per Coin	\$1,454	\$1,569	8%	\$1,130	\$1,569	39%	10x	\$12,000	\$13,000	\$14,000	\$15,000	\$16,000	\$17,000	\$18,000
							20x	\$24,000	\$26,000	\$28,000	\$30,000	\$32,000	\$34,000	\$36,000
							30x	\$36,000	\$39,000	\$42,000	\$45,000	\$48,000	\$51,000	\$54,000
							40x	\$48,000	\$52,000	\$56,000	\$60,000	\$64,000	\$68,000	\$72,000
Forward Price to Book Multiple	17.2x	26.0x	52%	23.4x	26.0x	11%	50x	\$60,000	\$65,000	\$70,000	\$75,000	\$80,000	\$85,000	\$90,000
							60x	\$72,000	\$78,000	\$84,000	\$90,000	\$96,000	\$102,000	\$108,000
Bitcoin (BTC) Price Target	\$25,000	\$40,785	63%	\$26,431	\$40,785	54%	70x	\$84,000	\$91,000	\$98,000	\$105,000	\$112,000	\$119,000	\$126,000

Source: FSInsight, Bloomberg, Coinmetrics, Coinmarketcap

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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Positive (+): The analyst expects the performance of his industry/sector coverage universe over the next 6-18 months to be attractive vs. the relevant broad market benchmark, being the S&P 500 for North America.

Neutral (N): The analyst expects the performance of his or her industry/sector coverage universe over the next 6-18 months to be in line with the relevant broad market benchmark, being the S&P 500 for North America.

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