



Macro weakness paired with new concerns over the solvency of a few large crypto firms led to accelerated declines for bitcoin and digital assets; bitcoin touched ~\$17,600 before quickly regaining the psychological \$20,000 level

KEY TAKEAWAYS

- + “When the tide goes out, you find out who is swimming naked.” Some overleveraged lending institutions and hedge funds now face solvency concerns after the fallout of Luna in early May, likely the reason for digital assets’ underperformance versus expectations last week
- + Bears, pundits, and news outlets quickly danced on bitcoin’s “grave” as the asset broke \$20,000 support over the weekend, touching ~\$17,600 before quickly rallying back above the psychological \$20,000 level
- + This week, we offer reasoning for underperformance versus expectations, compare bitcoin’s drawdown versus its past, and illustrate a significant deviation from longer-term price trend

THE BIRD'S EYE VIEW

Digital assets faced further volatility last week and into the weekend as idiosyncratic concerns over the solvency of established crypto players led to a break of both \$30,000 and \$20,000 in the last two weeks.

As Warren Buffett once said, “When the tide goes out, you find out who is swimming naked.” It appears that the decline in digital asset prices has overleveraged institutions and crypto-native hedge funds now facing issues related to solvency.

While broader macro weakness was one culprit for the decline last week, it was likely the margin calls, forced selling, and fear that led to bitcoin breaking the key level of \$20,000 early Saturday morning. While ether also broke \$1,000, the two quickly rallied back to \$20,427 and \$1,120 by Monday’s close. Still, the assets are now down 35.7% and 42.6% since the beginning of June and 55.4% and 66.1% quarter-to-date.

So, what’s happened?

Celsius, with \$11.8bn as of May 17th, paused all withdrawals, transfers, and swaps earlier this month, sparking concerns over the “next domino to fall” within digital assets. The firm is known for offering interest to depositors through sometimes risky, but attractive yields on DeFi.

The two main concerns with Celsius are a large borrow through DeFi protocol “MakerDao” in which the firm originally deposited around 17,758 wrapped bitcoin to borrow ~\$278 million in Dai. With a 145% collateralization requirement, a liquidation price of \$22,731 caused fear that collateral could be sold if price breached that level. Since, the borrower improved the health of their loan with now 23,963 wrapped bitcoin backing \$225 million in Dai. This reduced liquidation price to \$13,604, removing some near-term worries.

But the second concern with Celsius is their use of liquid staked ether, an asset built by DeFi platform Lido that allows users to deposit ether to participate in proof-of-stake and receive block rewards as yield. In doing so, investors receive a synthetic

asset labelled ‘stETH’ (which is one-to-one to ETH) that is not locked up and can be utilized throughout the DeFi ecosystem.

While this is an attractive offering, Beacon Chain (the chain Ethereum will “merge” with for proof-of-stake) does not allow withdrawals until after the Merge, and therefore, Celsius can only trade stETH for ETH, but not redeem. This in turn has led to a duration mismatch as the firm owns over \$400 million in stETH, and likely a large reason for the pause in withdrawals.

StETH traded down to a 7% discount relative to ether as Three Arrows Capital (3AC, a crypto-native hedge fund based in Singapore), sold over 30,000 stETH in an attempt to meet margin calls from lenders such as BlockFi and Genesis. These stETH losses are on top of a \$200 million loss in Luna and a rumored large position in GBTC, with the founders of the ~\$10 billion hedge fund now “committed to working things out.”

THE “GOOD NEWS”

As bitcoin broke \$20,000 early Saturday morning, many news outlets were quick to dance on bitcoin’s “grave”, highlighting the loss of the \$20,000 level, bitcoin’s record losing streak (10 out of 11 weeks) and the break below 2017’s high of \$19,041. While sensationalism is now the norm in today’s news, these articles are not unexpected – bears, pundits, and news outlets have called for the “end of bitcoin” many times in its 13-year history.

As we now know, each of these calls have been proven wrong. Last [week](#), we offered our answers to many questions received from clients in these volatile times – we urge those that have not done so yet to read through the commentary.

One thing to note is today’s problems are not the future’s – ultimately, this year’s washout improves the infrastructure and stability of this asset class. While these overleveraged institutions and hedge funds now drive the price lower from forced selling, the fundamental theses has not changed for bitcoin: a global payments system and digital store of value taking market share from traditional monetary assets.

While rough waters can remain, those with long-term time horizons have an opportunity to buy at significant valuation discounts, which we discuss on page 2.



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THE DRAWDOWN COMPARED

We illustrate bitcoin's annual drawdowns and annual returns to offer perspective on this most recent decline.

With the highs of the year placed on March 28th of \$47,968, the most recent drawdown to a low of \$17,785 on June 18th was a 63% intra-year drawdown, slightly more than the 55% average and 53% median from 2011 to 2021.

Further, while bitcoin often draws down, it often rallies back. The average rally from the intra-year low to the end of the year is 248%, while the median rally is 107%.

The average length from high to low is 125 days, with the median 87 days; this current drawdown has lasted 82 days.

On average, the total drawdown (high to recovery date) is 410 days, skewed by 2014's Mt. Gox and 2018's bull/bear polarization, while the median is 209 days.

Even with an average 55% intra-year drawdown, bitcoin has had a positive return in nine of the 11 years assessed.

Volatility is nothing new for bitcoin.

Year	Max DD High Date	Max DD Low Date	Max DD	DD Length (High to Low)	Max DD Recovery Date	Total DD Length (High to Recovery)	Rally from Low to End of Year	Annual Return	Annual Closing Price
2022	3/28/2022	6/18/2022	-63%	82	?	?	?	?	?
2021	4/15/2021	7/20/2021	-53%	96	10/19/2021	187	55%	60%	\$46,334
2020	2/12/2020	3/16/2020	-53%	33	7/27/2020	166	491%	305%	\$28,996
2019	6/26/2019	12/17/2019	-48%	174	10/21/2020	483	8%	95%	\$7,158
2018	1/5/2018	12/14/2018	-81%	343	11/17/2020	1047	16%	-74%	\$3,674
2017	6/11/2017	7/16/2017	-36%	35	8/6/2017	56	653%	1375%	\$14,043
2016	6/16/2016	8/15/2016	-25%	60	12/2/2016	169	68%	120%	\$952
2015	1/2/2015	1/14/2015	-42%	12	10/30/2015	301	136%	36%	\$432
2014	1/6/2014	12/3/2014	-69%	331	12/28/2016	1087	12%	-58%	\$317
2013	4/9/2013	7/5/2013	-70%	87	11/4/2013	209	968%	5428%	\$747
2012	1/5/2012	2/16/2012	-39%	42	7/9/2012	186	216%	218%	\$13.5
2011	6/8/2011	11/18/2011	-93%	163	2/20/2013	623	107%	1317%	\$4.3
Average (2011 - 2021)			-55%	125		410	248%	802%	
Median (2011 - 2021)			-53%	87		209	107%	120%	

Source: Bloomberg, Eaglebrook Advisors

DEVIATION FROM TREND

This week we offer two separate metrics that illustrate bitcoin's significant deviation from trend when compared to history.

- **Distance from Moving Average:** Bitcoin is at a significant discount from its 200day moving average, with a disparity of -48.2% by Monday's close. A difference of this magnitude has only occurred in three periods. Using the most recent date this has occurred in each, we find: 12/16/2018 (-48.8%, one-year forward return 114.7%), 1/20/2015 (-50.0%, one year forward return 92.8%), and 12/26/2011 (-48.9%, one-year forward return 235.1%).
- **Market Value to Realized Value:** We write about this valuation metric often, which we view as the "amount one pays vs. the average store of value price." With Glassnode data, Monday's close of \$20,642 compares to the on-chain cost basis of \$22,605, indicating a market price that is below the average on-chain cost basis. We offer historical lows and extremes in last week's [weekly](#), but an MVRV of < 1 has happened very few times in bitcoin's history, all of which were great buying opportunities for long-term investors.

We also point out this is an unusually long losing streak (11 out of 12 weeks), as well as the second worst quarter bitcoin has had in its history (QTD performance of -55.4% as of Monday's close, worst was -68% in Q3 '11).

While rough waters can remain, long-term investors with conviction in bitcoin have great opportunity to buy or dollar cost average on significant weakness vs. long term trend.

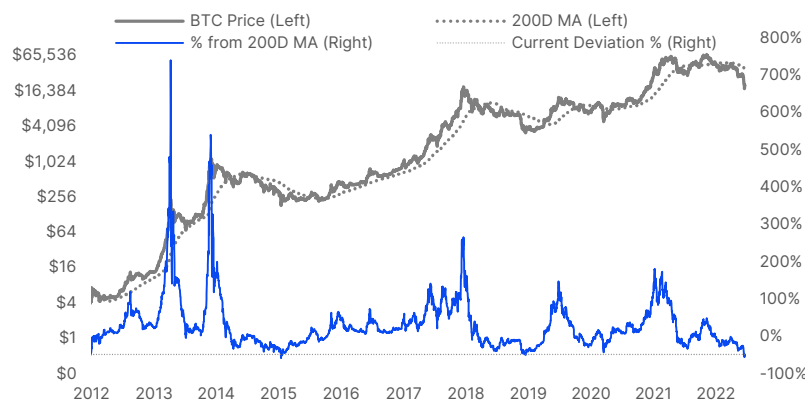
Stay Tuned,

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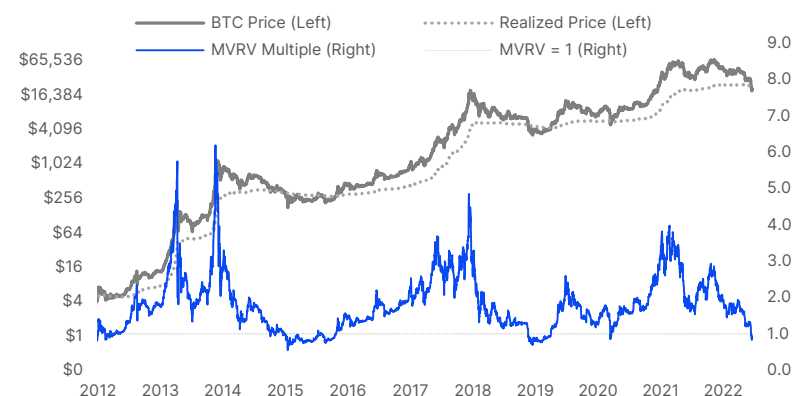
BTC: DEVIATION FROM TREND

Source: Bloomberg, Eaglebrook Advisors



MVRV MULTIPLE

Source: Glassnode, Eaglebrook Advisors





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KEY MARKET DATA

As of Monday, 6/20/2022

Market Capitalization	2018	2019	2020	2021	2022 YTD
Bitcoin Market Cap (mlns)	\$65,307	\$130,517	\$538,811	\$876,370	\$393,712
Ether Market Cap (mlns)	\$13,886	\$14,141	\$84,171	\$433,423	\$134,190
Total Crypto Market Cap (mlns)	\$122,177	\$186,105	\$766,003	\$2,250,184	\$924,126
Bitcoin Dominance %	53.5%	70.1%	70.3%	38.9%	42.6%
Ethereum Dominance %	11.4%	7.6%	11.0%	19.3%	14.5%

Source: Glassnode, TradingView, Eaglebrook Advisors

Bitcoin	2018	2019	2020	2021	2022 YTD
Supply (mlns)	17.5	18.1	18.6	18.9	19.1
Market Price	\$3,674	\$7,158	\$28,996	\$46,334	\$20,427
Realized Price	\$4,556	\$5,587	\$9,206	\$24,480	\$22,605
Realized Value (mlns)	\$79,524	\$101,309	\$171,112	\$463,063	\$431,142
Market Value / Realized Value	0.82	1.29	3.15	1.89	0.91
Hash Rate	40.5 EH/S	94.3 EH/S	153 EH/S	179.2 EH/S	201.5 EH/S
Transfer Volume (USD, mlns)	\$2,127,287	\$1,893,560	\$2,327,727	\$13,106,605	\$8,408,192
Avg Daily Transfer Volume (USD, mlns)	\$5,828	\$5,188	\$6,360	\$35,909	\$49,171
Avg Transaction Value (USD)	\$26,518	\$18,073	\$21,266	\$138,824	\$191,049

Source: Glassnode¹, Bloomberg, Eaglebrook Advisors

	Level	Last Week%	MTD%	QTD%	YTD%	1 Year%	3 Year%	5 Year%	% off 52Wk High	90D Annualized Vol.
Bitcoin	\$20,427	-24.6%	-35.7%	-55.4%	-55.9%	-43.0%	113.6%	642.9%	-69.8%	67.5%
Ether	\$1,120	-22.7%	-42.6%	-66.1%	-69.6%	-50.4%	310.8%	220.1%	-76.7%	85.9%
S&P 500	3,675	-5.8%	-11.0%	-18.6%	-22.3%	-10.5%	30.7%	64.8%	-23.4%	27.1%
Nasdaq Composite	10,798	-4.8%	-10.6%	-23.9%	-30.7%	-22.5%	37.7%	83.1%	-32.8%	36.7%
Bloomberg Barclays Agg	2,085	-0.9%	-2.8%	-5.9%	-11.5%	-11.4%	-3.9%	2.6%	-12.6%	7.9%
Gold Spot \$/Oz	\$1,839	-1.7%	0.1%	-5.1%	0.5%	4.2%	32.4%	47.9%	-10.3%	16.3%
DXI Index	\$105	0.5%	2.9%	6.5%	9.4%	13.5%	8.4%	7.1%	-0.8%	8.5%
WTI Crude	\$110	-9.2%	-4.5%	9.3%	42.3%	52.9%	93.4%	153.4%	-11.4%	60.0%

Source: Bloomberg, Eaglebrook Advisors

"Tantrum Table"

Asset	High Since 9/30/21	Max Drawdown	Low Close Date	Rally From Low	YTD Price % Change
ARK Innovation ETF	11/1/2021	-70.8%	6/13/2022	6.1%	-59.0%
iShares MSCI USA Momentum ETF	11/3/2021	-32.8%	6/17/2022	0.0%	-28.4%
Invesco S&P 500 High Beta ETF	11/8/2021	-30.9%	6/16/2022	1.8%	-26.4%
iShares Russell 2000 Value ETF	11/8/2021	-24.0%	6/16/2022	0.3%	-18.8%
iShares Russell 2000 Growth ETF	11/8/2021	-40.7%	6/16/2022	1.7%	-32.6%
Barclays US Aggregate Index	11/9/2021	-13.3%	6/14/2022	1.3%	-11.5%
Bitcoin	11/9/2021	-73.7%	6/18/2022	14.9%	-55.9%
Ether	11/9/2021	-81.2%	6/18/2022	24.0%	-69.6%
Us Breakeven 30 Year	4/21/2022	-0.56	2/18/2022	0.33	0.07
Us Breakeven 10 Year	4/21/2022	-0.47	5/25/2022	0.03	0.00
Us Breakeven 5 Year	3/25/2022	-0.90	6/17/2022	0.00	-0.07
Gold Spot \$/Oz	3/8/2022	-11.8%	6/14/2022	1.7%	0.5%
Nasdaq Composite Index	11/19/2021	-33.7%	6/16/2022	1.4%	-31.0%
S&P 500 Info Tech Index	12/27/2021	-30.7%	6/16/2022	1.0%	-28.8%
S&P 500 Index	1/3/2022	-23.6%	6/16/2022	0.2%	-22.9%

Source: Bloomberg, Eaglebrook Advisors



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DISCLOSURES

¹Realized Price, Source: Glassnode. Realized Price is the Realized Cap divided by the current supply. Realized Capitalization, Source: Glassnode. Realized Cap values different part of the supplies at different prices (instead of using the current daily close). Specifically, it is computed by valuing each UTXO by the price when it was last moved. Market Cap / Realized Cap, Source: Glassnode. Market Value to Realized Value (MVRV) is the ratio between market cap and realized cap. It gives an indication of when the traded price is below a "fair value". Hash Rate, Source: Glassnode: The average estimated number of hashes per second produced by the miners in the network. Total Transfer Volume, Source: Glassnode. Data is change-adjusted, annual sum: The total amount of coins transferred on-chain, adjusted by change volume. Only successful transfers are counted. Avg Daily Transfer Volume, Source: Glassnode. Data is change-adjusted, daily average: The total amount of coins transferred on-chain, adjusted by change volume. Only successful transfers are counted. Avg Transaction Value, Source: Glassnode. The mean value of a transfer, adjusted by change volume. Only successful transfers are counted.

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Volatility Risk: Digital currency is a speculative and volatile investment asset. Investors should be prepared for volatile market swings and prolonged bear markets. Digital currency can have higher volatility than other traditional investments such as stocks and bonds and market movements can be difficult to predict.

Economic Risk: The economic risk associated with digital currency is in the lack of widespread or continuing digital currency adoption. The market and investors could decide that digital currency should not be valued at the current market capitalization due to a variety of factors. **Regulatory Risk:** Digital currency could be banned or highly regulated by governments that would deter investors from buying or holding digital currency.

Technical Risk: Digital currency is a dynamic network with a codebase that is updated to add new security and functionality features. The updated code that is merged by the core developers could potentially have an error that threatens the security or functionality of the digital currency network.

Cybersecurity Risk: Digital currency exchanges and wallets have been hacked and digital currency has been stolen in the past. This is a potential risk that clients must be comfortable with when investing and holding digital currency. Theft is less likely when holding digital currency at a qualified custodian in offline systems (cold storage) with institutional security and controls.

The indexes presented are unmanaged portfolios of specified securities and the performance shown is gross of fees which do not reflect any initial or ongoing expenses. Indexes cannot be invested in directly. Returns for digital assets may differ significantly from the returns of indexes which hold securities. Returns are for the time periods shown.

BGN, Bloomberg Generic Price: A real-time composite based on quotes from multiple contributors that provides a market indication of where assets are priced. BGN uses both executable and indicative pricing, depending on the type of quotes available in the marketplace at the time of pricing. This methodology is used for bitcoin and ether.

The S&P 500 Index is an unmanaged value-weighted index of 500 common stocks that is generally considered representative of the U.S. stock market.

The NASDAQ Composite Index is a broad-based capitalization-weighted index of stocks in all three NASDAQ tiers: Global Select, Global Market and Capital Market.

The Bloomberg US Aggregate Bond Index is a broad-based flagship benchmark that measures the investment grade, US dollar-denominated, fixed-rate taxable bond market. The index includes Treasuries, government-related and corporate securities, MBS (agency fixed-rate pass-throughs), ABS and CMBS (agency and non-agency).

The ICE U.S. Dollar Index is a geometrically-averaged calculation of six currencies weighted against the U.S. dollar.

The Gold Spot price is quoted as US Dollars per Troy Ounce.

Bloomberg's spot crude oil price indications use benchmark WTI crude at Cushing, OK ; and other U.S. crude oil grades trade on a price spread differential to WTI, Cushing.

The Volatility Index (VIX) shows the market's expectations of 30-day volatility. It is constructed using the implied volatilities of a wide range of S&P 500 index options. The VIX is a widely used measure of market risk.

ARK Innovation ETF is an actively managed exchange-traded fund incorporated in the USA. The Fund will invest in equity securities of companies relevant to the theme of disruptive innovation. Relevant themes are those that rely on or benefit from the development of new products or services in scientific research relating to Genomics Revolution, Web x.0, and Industrial Innovation.

iShares MSCI USA Momentum Factor ETF is an exchange traded fund incorporated in the USA. The Fund seeks to track the performance of an index that measures the performance of U.S. large and mid capitalization stocks exhibiting relatively higher momentum characteristics, before fees and expenses.

Invesco S&P 500 High Beta ETF is an exchange-traded fund incorporated in the USA. The Fund tracks the S&P500 High Beta Index which consists of the 100 stocks from the S&P500 with the highest sensitivity to market movements, or beta, over the past year. The index is designed for investors initiating a bullish strategy or making a directional bet. The Fund is rebalanced quarterly.

iShares Russell 2000 Value ETF is an exchange-traded fund incorporated in the USA. The ETF tracks the performance of the Russell 2000 Value index and holds small cap US equities focused on low price to book ratios and lower forecasted growth. Its investments are primarily focused in the consumer discretionary, financial and industrial sectors. The ETF uses a representative sampling approach.

iShares Russell 2000 Growth ETF is an exchange-traded fund incorporated in the USA. The ETF tracks the performance of the Russell 2000 Growth Index and invests in over 1000 small cap US equities across all sectors. The ETF weights its holdings using a representative sampling indexing strategy, generally investing at least 90% of its assets in the underlying index.

US Breakeven Rates: The rates are United States breakeven inflation rates. They are calculated by subtracting the real yield of the inflation linked maturity curve from the yield of the closest nominal Treasury maturity. The result is the implied inflation rate for the term of the stated maturity.

Standard and Poor's 500 Information Technology Index is a capitalization-weighted index. The index was developed with a base level of 10 for the 1941-43 base period.

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