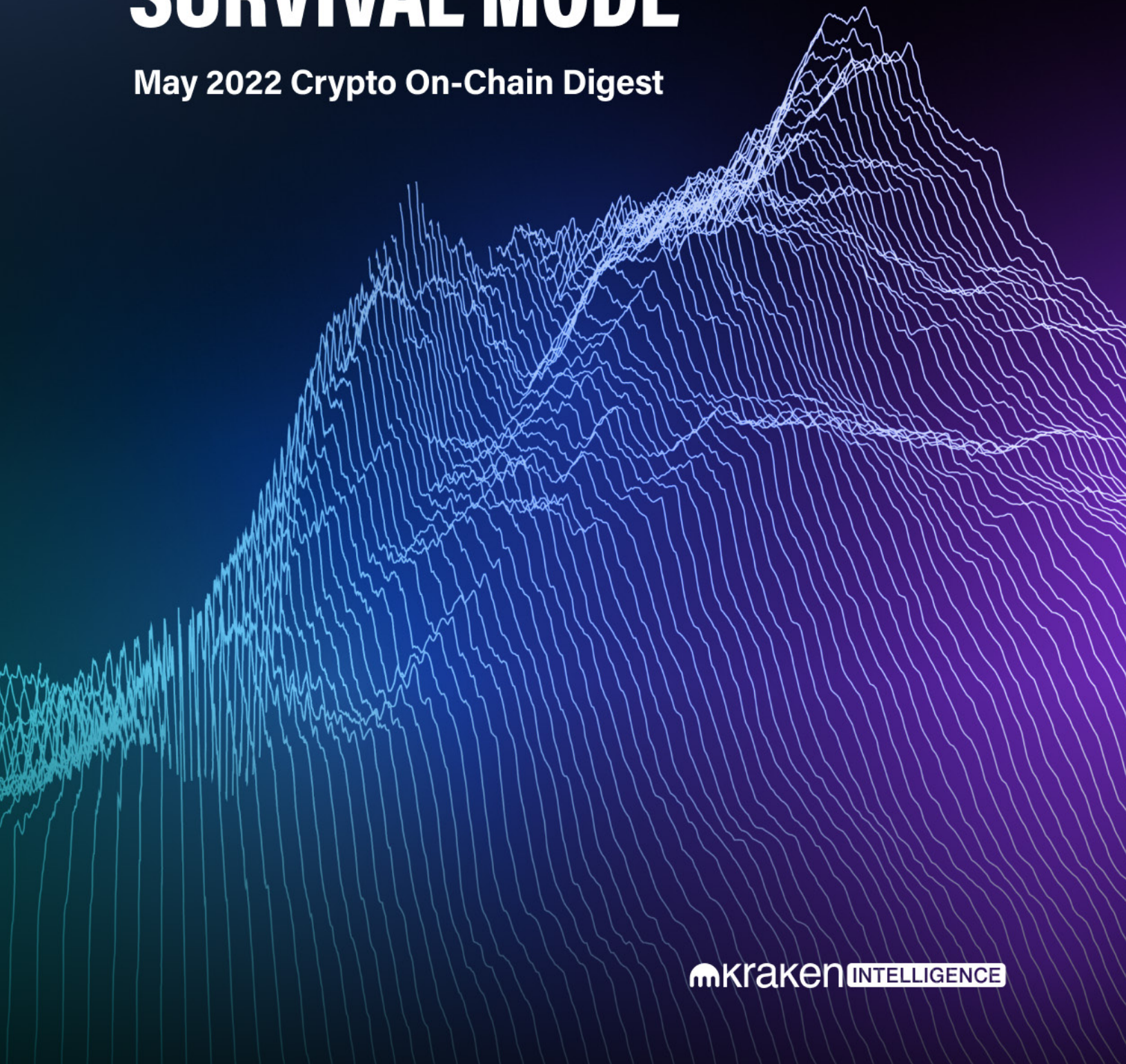# SURVIVAL MODE

May 2022 Crypto On-Chain Digest

kraken INTELLIGENCE

Introduction

Cryptoasset prices crashed in early May as BTC fell nearly -32% from $39,500 to $27,000 within a week and brought the rest of the crypto market down with it. The broader macroeconomic environment continues to keep market participants on their toes. Over the last month, US inflation rates hovered at 40-year highs of 8.3%, the Federal Reserve hiked interest rates by 50 basis points, Russia continued to occupy Ukrainian territory, and the Terra ecosystem experienced a large-scale death spiral. Risk-on assets declined rapidly as market participants withdrew their risk appetite and scrambled to identify the short-term narratives in the market.

Between the declining asset prices and the hectic macroeconomic environment, it is difficult to anticipate what lies ahead. However, on-chain data can help filter out the signal from the noise by providing evidence of trends in network usage and demand. The Kraken Intelligence team analyzed several core on-chain metrics across select cryptoassets to surface recent network performance.
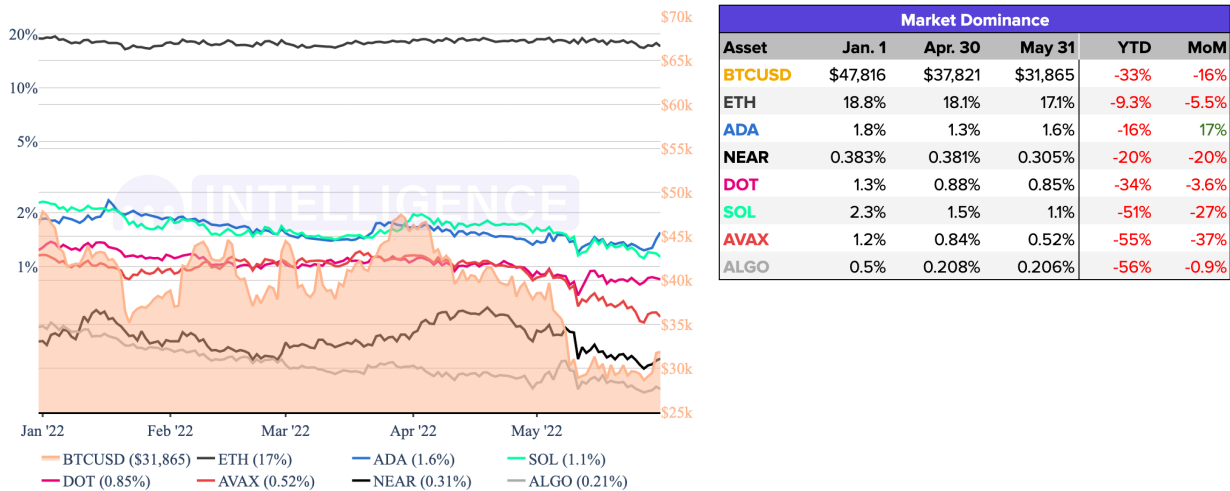
On-chain fundamentals

Core on-chain metrics for measuring adoption and general network supply and demand dynamics include market capitalization dominance, transaction fees, daily settlement value, active addresses, new addresses, transaction count, and circulating supply growth, to name a few. Readers can use these data points to analyze any blockchain network's demand and supply dynamics. Please note that the on-chain data coverage in this report spans April 30, 2022 to May 31, 2022.

Total Market Capitalization Dominance
Looking at the total market capitalization share, or market dominance, of the selected cryptoassets in this report, helps describe which assets are seeing rising or falling demand and, more generally, whether the market sentiment is rotating between BTC and altcoins. Moreover, we decided to compare BTCUSD price with the market dominance of altcoins to analyze how dominance shifts relative to BTC price performance.

INTELLIGENCE
ORDO AB CRYPTO

Figure 1: Total Market Capitalization Dominance
Source: Kraken Intelligence, CoinGecko

Market Dominance					
Asset	Jan. 1	Apr. 30	May 31	YTD	MoM
BTCUSD	$47,816	$37,821	$31,865	-33%	-16%
ETH	18.8%	18.1%	17.1%	-9.3%	-5.5%
ADA	1.8%	1.3%	1.6%	-16%	17%
NEAR	0.383%	0.381%	0.305%	-20%	-20%
DOT	1.3%	0.88%	0.85%	-34%	-3.6%
SOL	2.3%	1.5%	1.1%	-51%	-27%
AVAX	1.2%	0.84%	0.52%	-55%	-37%
ALGO	0.5%	0.208%	0.206%	-56%	-0.9%

While BTCUSD has trended lower year-to-date, altcoins performed worse, leading to a decline in altcoin market dominance. Specifically, nearly all observed cryptoassets dropped in market dominance this year and in May, though ADA saw a +17% increase month-over-month. ETH market dominance fell by -9% this year, the least within the cohort. ETH is followed by ADA (-16%), NEAR (-20%), DOT[1] (-34%), SOL (-51%), AVAX[2,3] (-55%), and ALGO (-56%). In May, ALGO saw the smallest month-over-month decline at -0.9%, followed by DOT (-3.6%), ETH (-5.5%), NEAR (-20%), SOL (-27%), and AVAX (-37%).
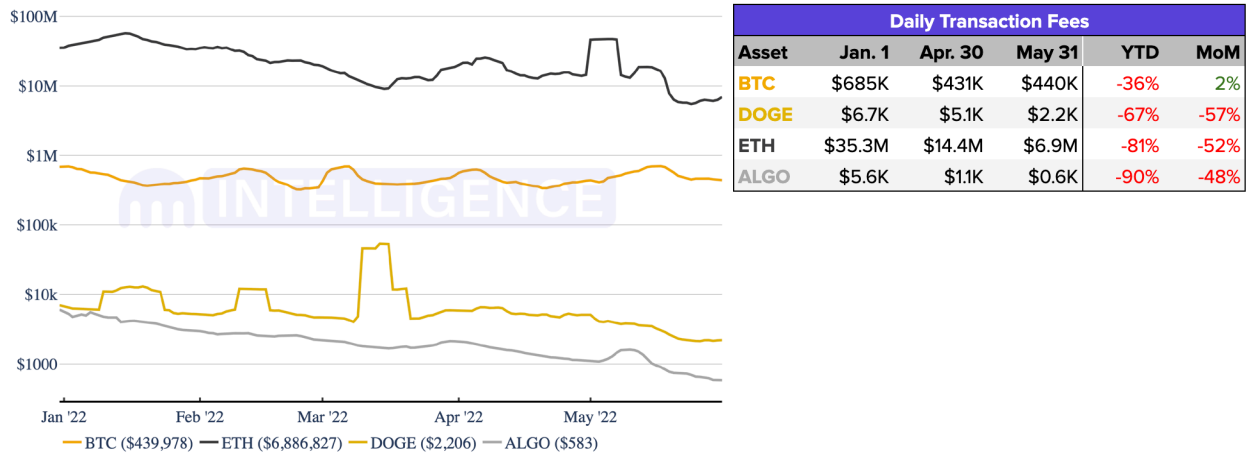
AVAX fell disproportionately following the Terra ecosystem death spiral. In particular, the Luna Foundation Guard (LFG) held nearly 2M AVAX in its treasury, which was subsequently liquidated.[4] Likewise an additional 1.1M AVAX were purchased by Terraform Labs with a one-year lockup, which may have further pressured the market.[5]

Transaction Fees
Transaction fees are a proxy for network demand because they represent the cost market participants are willing to pay to include a transaction on a protocol's ledger. Note that this figure does not include SOL and ADA because of their static fee rate, which does not respond to varying levels of network congestion.

INTELLIGENCE
ORDO AB CRYPTO

Figure 2: Layer-1 Cryptoasset Transaction Fees (7-Day Moving Average)
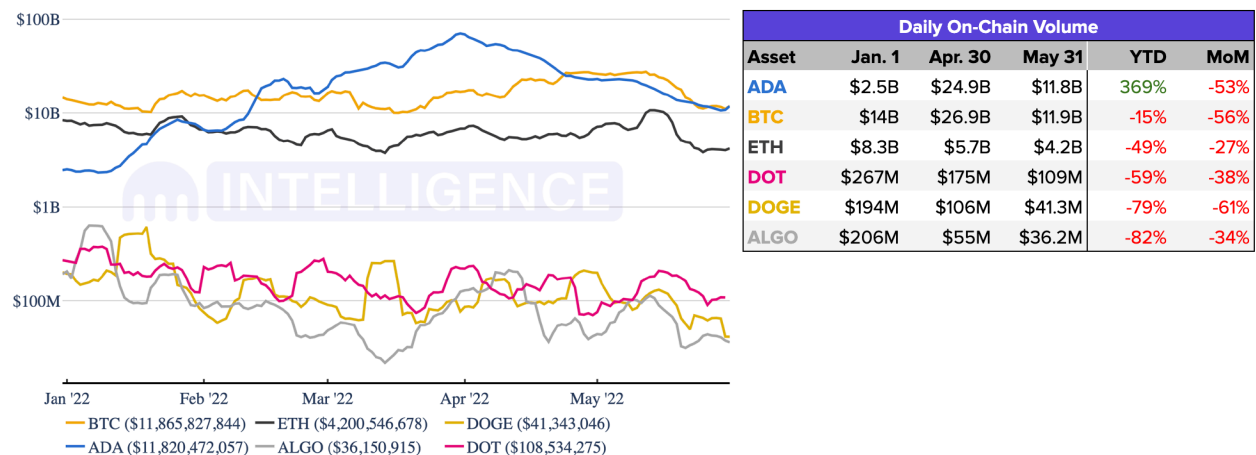
Source: Kraken Intelligence, Coin Metrics

Daily Transaction Fees					
Asset	Jan. 1	Apr. 30	May 31	YTD	MoM
BTC	$685K	$431K	$440K	-36%	2%
DOGE	$6.7K	$5.1K	$2.2K	-67%	-57%
ETH	$35.3M	$14.4M	$6.9M	-81%	-52%
ALGO	$5.6K	$1.1K	$0.6K	-90%	-48%

BTC ($439,978) — ETH ($6,886,827) — DOGE ($2,206) — ALGO ($583)

Based on our analysis, because transaction fees are a proxy for network demand, on-chain demand is trending down year-to-date, though we observed an uptick of +2% for BTC in May. ALGO (-90%) took the biggest hit year-to-date, followed by ETH (-81%), DOGE (-67%), and BTC (-36%). DOGE (-57%) fell the most this month, followed by ETH (-52%) and ALGO (-48%).

Daily Adjusted Settlement Value

Network transaction volume, also known as on-chain settlement value, is another strong reference for network demand as it measures the aggregated value of funds market participants are transferring. Specifically, the metric captures the USD equivalent value of a cryptoasset's on-chain transfer activity during that day.

Figure 3: Daily On-Chain Transfer Volume (7-Day Moving Average)

Source: Kraken Intelligence, Coin Metrics

Daily On-Chain Volume					
Asset	Jan. 1	Apr. 30	May 31	YTD	MoM
ADA	$2.5B	$24.9B	$11.8B	369%	-53%
BTC	$14B	$26.9B	$11.9B	-15%	-56%
ETH	$8.3B	$5.7B	$4.2B	-49%	-27%
DOT	$267M	$175M	$109M	-59%	-38%
DOGE	$194M	$106M	$41.3M	-79%	-61%
ALGO	$206M	$55M	$36.2M	-82%	-34%

BTC ($11,865,827,844) — ETH ($4,200,546,678) — DOGE ($41,343,046)
ADA ($11,820,472,057) — ALGO ($36,150,915) — DOT ($108,534,275)
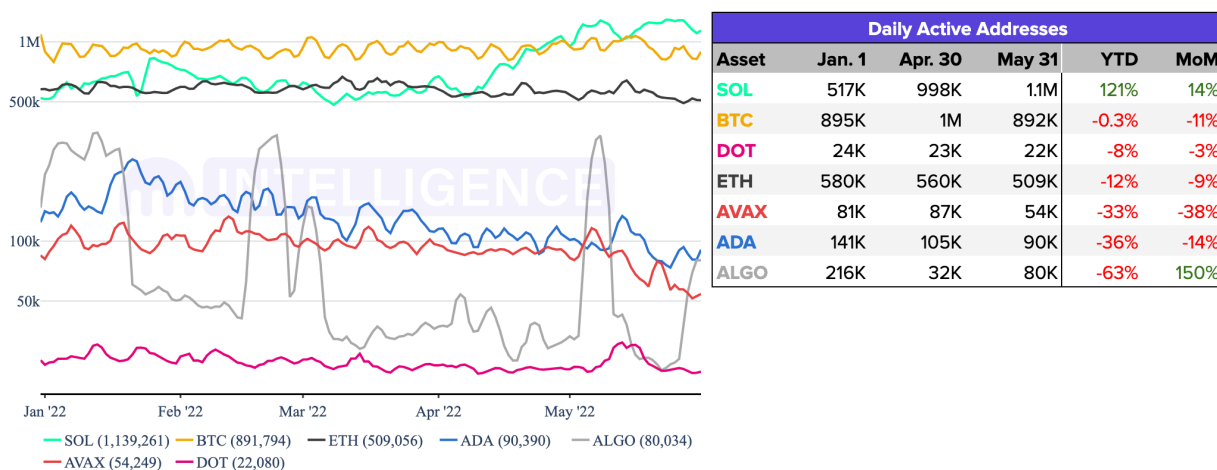
INTELLIGENCE
ORDO AB CRYPTO

As on-chain transaction volume is another proxy for network demand, cryptoassets have seen mixed demand in 2022. This year, on-chain volume only rose for ADA (+369%), though it has steadily declined by nearly -85% since March 31. On the other hand, BTC (-15%), ETH (-49%), DOT (-59%), DOGE (-79%), and ALGO (-82%) saw on-chain volume fall. The entire cohort saw daily on-chain volume fall in May, with DOGE (-61%) dropping the most, followed by BTC (-56%), ADA (-53%), DOT (-38%), ALGO (-34%), and ETH (-27%).

Daily Active Addresses

Analyzing the number of active addresses per day can help identify network demand from existing and new market participants. A rising number of active addresses may indicate increasing demand among market participants and vice-versa.

Figure 4: Daily Active Addresses

Source: Kraken Intelligence, CoinMetrics, SolScan, Avalanche Network

Daily Active Addresses					
Asset	Jan. 1	Apr. 30	May 31	YTD	MoM
SOL	517K	998K	1.1M	121%	14%
BTC	895K	1M	892K	-0.3%	-11%
DOT	24K	23K	22K	-8%	-3%
ETH	580K	560K	509K	-12%	-9%
AVAX	81K	87K	54K	-33%	-38%
ADA	141K	105K	90K	-36%	-14%
ALGO	216K	32K	80K	-63%	150%

SOL (1,139,261) — BTC (891,794) — ETH (509,056) — ADA (90,390) — ALGO (80,034)
AVAX (54,249) — DOT (22,080)

Based on our analysis of active addresses, SOL (+121%) was the only cryptoasset to experience rising activity year-to-date. Conversely, BTC (-0.3%), DOT (-8%), ETH (-12%), AVAX (-33%), ADA (-36%), and ALGO (-63%) posted declines in network activity year-to-date. The outlook was slightly brighter on a month-over-month basis as SOL and ALGO saw active addresses rise +14% and +150%, respectively. In May, AVAX active addresses dropped the most at -38%, followed by ADA (-14%), BTC (-11%), ETH (-9%), and DOT (-3%).

Daily New Addresses

Like daily active addresses, analyzing the number of daily new addresses can help identify network demand from newer market participants. The caveat is that existing market participants may also create new wallet addresses.

Figure 5: Daily New Addresses

Source: Kraken Intelligence, CoinMetrics, Avalanche Network
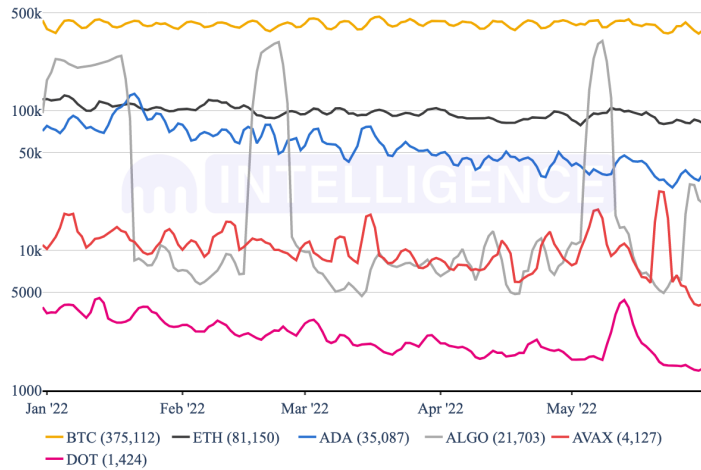
Daily New Addresses					
Asset	Jan. 1	Apr. 30	May 31	YTD	MoM
BTC	383K	435K	375K	-2%	-14%
ETH	121K	92K	81K	-33%	-12%
ADA	78K	44K	35K	-55%	-20%
AVAX	10.2K	8.3K	4.1K	-59.6%	-50%
DOT	3.5K	1.8K	1.4K	-59.8%	-19%
ALGO	165K	10K	22K	-87%	116%

Legend: BTC (375,112), ETH (81,150), ADA (35,087), ALGO (21,703), AVAX (4,127), DOT (1,424)

Daily new addresses have fallen for the entire cohort year-to-date. ALGO new addresses took the biggest hit in 2022 at -87%, followed by DOT (-59.8%), AVAX (-59.6%), ADA (-55%), ETH (-33%), and BTC (-2%). However, ALGO (+116%) was the only cryptoasset in the cohort that saw new addresses rise in May. AVAX (-50%) fell the most month-over-month, followed by ADA (-20%), DOT (-19%), BTC (-14%), and ETH (-12%).

Daily Transaction Count

A blockchain network's daily transaction count is another great indicator of on-chain demand as it identifies times when network participants are particularly active or inactive.

Figure 6: Total Daily Transactions

Source: Kraken Intelligence, CoinMetrics, SolScan, Avalanche Network
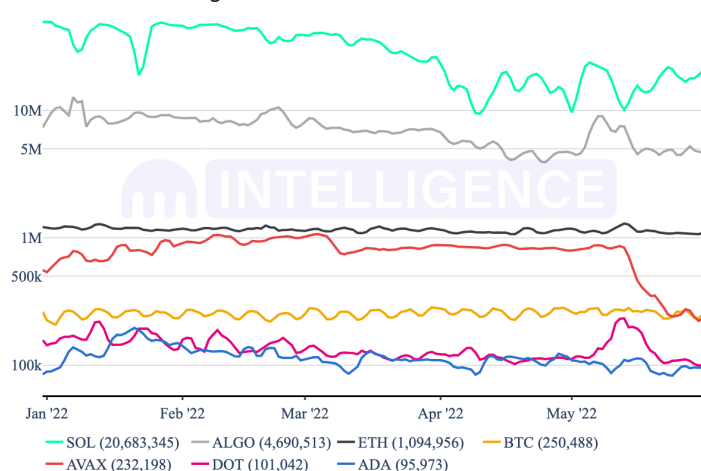
Daily Transaction Count					
Asset	Jan. 1	Apr. 30	May 31	YTD	MoM
BTC	225K	273K	250K	11%	-8%
ADA	89K	116K	96K	8%	-18%
ETH	1.2M	1.18M	1.09M	-9%	-7%
DOT	143K	111K	101K	-30%	-9%
ALGO	8.4M	4.7M	4.7M	-44%	-1%
AVAX	537K	794K	232K	-57%	-71%
SOL	49.8M	11.9M	19.7M	-60%	65%

Legend: SOL (20,683,345), ALGO (4,690,513), ETH (1,094,956), BTC (250,488), AVAX (232,198), DOT (101,042), ADA (95,973)
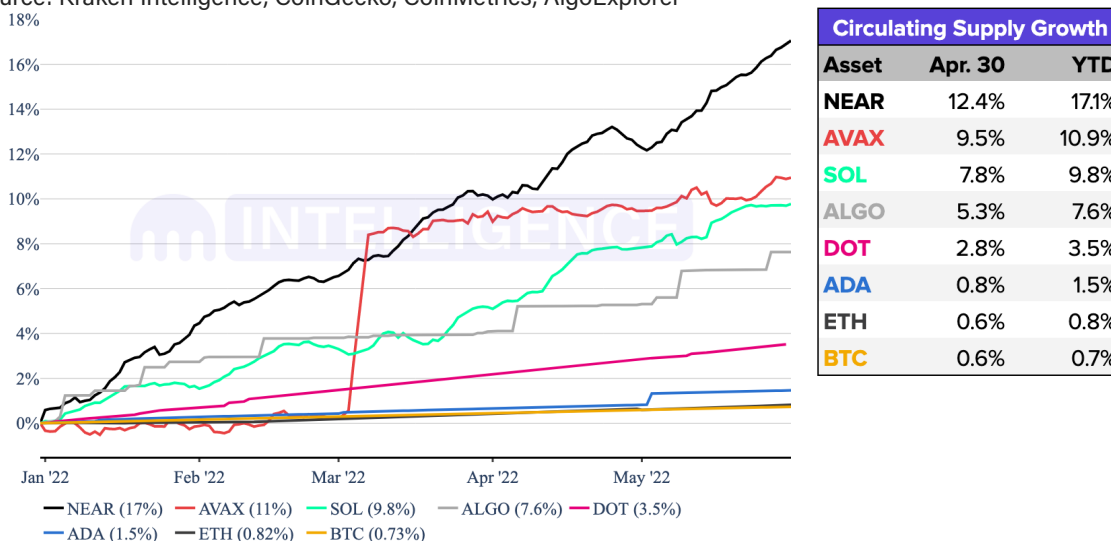
While daily transaction count fell for most altcoins this year, BTC and ADA saw transaction count rise +11% and +8%, respectively. SOL[6,7] (-60%) is the worst performer year-to-date in terms of transaction count, followed by AVAX (-57%), ALGO (-44%), DOT (-30%), and ETH (-9%). Only SOL (+65%) saw transaction count rise in May. On the other hand, AVAX transactions fell the most in May at -71%, followed by ADA (-18%), DOT (-9%), BTC (-8%), ETH (-7%), and ALGO (-1%).

Circulating Supply Growth

A cryptoasset's circulating supply growth provides a look at on-chain liquidity. The metric includes tokens that have been unlocked from vesting and/or minted by the protocol. This data sheds light on the supply dynamics of a cryptoasset. For instance, an influx of immediately marketable supply can pressure market activity.

Figure 7: Circulating Supply Growth

Source: Kraken Intelligence, CoinGecko, CoinMetrics, AlgoExplorer

Circulating Supply Growth		
Asset	Apr. 30	YTD
NEAR	12.4%	17.1%
AVAX	9.5%	10.9%
SOL	7.8%	9.8%
ALGO	5.3%	7.6%
DOT	2.8%	3.5%
ADA	0.8%	1.5%
ETH	0.6%	0.8%
BTC	0.6%	0.7%

NEAR (17%) — AVAX (11%) — SOL (9.8%) — ALGO (7.6%) — DOT (3.5%)
ADA (1.5%) — ETH (0.82%) — BTC (0.73%)

NEAR saw the most significant influx of immediately marketable supply in 2022 with a +17.1% rise in circulating supply growth, followed by AVAX (+10.9%), which underwent a large unlock of supply overnight in early March,[8] SOL (+9.8%), ALGO (+7.6%), DOT (+3.5%), ADA (+1.5%), ETH (+0.8%), and BTC (+0.7%).

INTELLIGENCE
ORDO AB CRYPTO

State of the market

On-chain indicators, such as BTC's spent output profit ratio (SOPR) and market value to realized value (MVRV) z-score help determine where the market stands from an on-chain perspective. These metrics suggest a continuation of last month's negative sentiment.

Spent Output Profit Ratio (SOPR)

The SOPR is a metric used to estimate where a UTXO-based cryptoasset, like BTC, is in a bear or bull cycle. SOPR attempts to measure whether market participants are selling at a profit or loss. It is calculated by taking a spent output (i.e., BTC sent in a transaction) and dividing its realized USD value by its USD value at creation. In short, SOPR is the price "sold" (sent) divided by the price "paid" (received). Note that the SOPR is only an estimate of profitable BTC sales as not every on-chain transaction is a sale.

Consider the following framework when attempting to interpret a crypto asset's SOPR:

- **SOPR < 1 —** Indicates market participants are selling BTC at a loss, signaling a potential bottom.

- **SOPR > 1 —** Signals that market participants are selling most BTC for a profit; history suggests a local top might be close.

- **SOPR = 1 —** Implies market participants are selling a relatively high amount of BTC at or around the price purchased, meaning market participants are uncertain about where price may trend.

Last month, Bitcoin's SOPR broke into oversold territory and struggled to break back above into neutral territory. The trend continued downward in May, though the indicator has rebounded slightly since finding a local bottom of 0.99398x on May 14, when BTC was trading hands at $30,050. Should BTC's SOPR continue on this upward trajectory as prices rebound, it could indicate BTC demand is returning. However, if BTC's SOPR fails to break out of the oversold territory and hold as prices continue dropping, network demand could continue to fall.

Figure 8: Bitcoin Spent Output Profit Ratio (SOPR) (7-Day Moving Average)

Source: Kraken Intelligence, Coin Metrics

BTCUSD — Spent Output Profit Ratio (SOPR) (0.9983x)

Market Value to Realized Value Ratio (MVRV) Z-Score

As a reminder, the MVRV z-score compares the difference between a crypto asset's market cap and realized value relative to the standard deviation of its market cap to lend insight into how much BTC's market cap has deviated above or below its average market cap. MVRV z-score is calculated accordingly:

$$MVRV\ Z - Score = \frac{Market\ Cap - Realized\ Cap}{Standard\ Deviation\ (Market\ Cap)}$$

The three metrics that comprise the MVRV z-score include:

- **Market Value (MV):** BTC's price multiplied by coins in circulation, i.e., market capitalization

- **Realized Value (RV):** The price of each BTC when it was last moved multiplied by coins in circulation.

- **Z-Score:** A numerical measurement that explains a value's relationship to a group's average, measured in standard deviations. For example, in a normal distribution a z-score of 0 means that a value is identical to the average, and a z-score of 1.0 means that a value is one standard deviation above the average.

INTELLIGENCE

ORDO AB CRYPTO

The MVRV z-score helps us better understand when BTC might be "overbought" or "oversold." A reading above 5 has historically indicated that BTC is "overbought," while readings below 1 have suggested that BTC is "oversold." BTC's MVRV z-score continues to sit below a reading of 1 as prices falter, implying BTC is in oversold territory, which has historically served as a strong level of support. However, BTC's MVRV z-score still has room to fall before reaching the multi-year lows recorded in March 2020 during the initial phases of the COVID-19 pandemic. However, if the indicator breaks up into neutral territory and holds as prices rebound, it could imply that network demand is rising.

Figure 9: Market Value to Realized Value Ratio (MVRV) Z-Score (30-Day Moving Average)
Source: Kraken Intelligence, CoinMetrics, SolScan, Avalanche Network
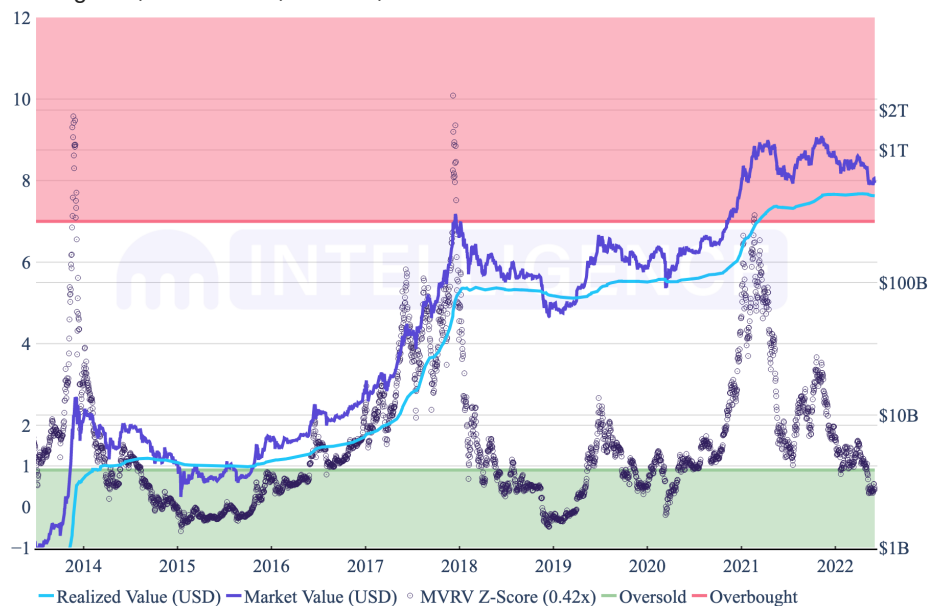
Conclusion & outlook

Cryptoasset prices crashed in early May as BTC fell nearly -32% and brought the rest of the crypto market down with it. Furthermore, the macroeconomic environment has kept market participants skeptical about cryptoasset performance in the short term. Over the last month, US inflation rates hovered at 40-year highs of 8.3%, the Federal Reserve hiked interest rates by 50 basis points, Russia continued to occupy Ukrainian territory, and the Terra ecosystem experienced a large-scale death spiral. Risk-on assets declined rapidly as market participants withdrew their risk appetite and scrambled to identify the short-term narratives in the market.

INTELLIGENCE
ORDO AB CRYPTO

Fundamental on-chain data, such as transaction fees, transaction count, active addresses, new addresses, circulating supply growth, and more, indicate that general cryptoasset network demand declined further in May, continuing the downtrend year-to-date. BTC outperformed altcoins in many regards year-to-date; BTC was the first or second-best performer in every on-chain metric we tracked and saw the smallest circulating supply growth year-to-date.

Still, BTCUSD has trended lower year-to-date. However, altcoins performed worse, leading to a decline in altcoin market dominance. ETH market dominance fell by -9% this year, the least within the cohort. ETH is followed by ADA (-16%), NEAR (-20%), DOT (-34%), SOL (-51%), AVAX (-55%), and ALGO (-56%). In May, ADA (+17%) was the only cryptoasset to see dominance increase month-over-month. ALGO saw the smallest month-over-month decline at -0.9%, followed by DOT (-3.6%), ETH (-5.5%), NEAR (-20%), SOL (-27%), and AVAX (-37%).

On-chain metrics such as transaction fees suggest growth in network demand remains negative year-to-date, though BTC saw growth in May. ALGO (-90%) took the biggest hit year-to-date, followed by ETH (-81%), DOGE (-67%), and BTC (-36%). DOGE (-57%) fell the most this month, followed by ETH (-52%) and ALGO (-48%).

Network transaction volume presents a more mixed sentiment in 2022. This year, on-chain volume only rose for ADA (+369%), though it has steadily declined by nearly -85% since March 31. On the other hand, BTC (-15%), ETH (-49%), DOT (-59%), DOGE (-79%), and ALGO (-82%) saw on-chain volume fall. The entire cohort saw daily on-chain volume fall in May, with DOGE (-61%) dropping the most, followed by BTC (-56%), ADA (-53%), DOT (-38%), ALGO (-34%), and ETH (-27%).

New addresses and active addresses provide a mixed sentiment of on-chain demand, though it's leaning negative. SOL (+121%) was the only cryptoasset to experience rising activity year-to-date. Conversely, BTC (-0.3%), DOT (-8%), ETH (-12%), AVAX (-33%), ADA (-36%), and ALGO (-63%) posted declines in network activity year-to-date. The outlook was slightly brighter on a month-over-month basis as SOL and ALGO saw active addresses rise +14% and +150%, respectively. In May, AVAX active addresses dropped the most at -38%, followed by ADA (-14%), BTC (-11%), ETH (-9%), and DOT (-3%). As for new addresses, ALGO took the biggest hit in 2022 at -87%, followed by DOT (-59.8%), AVAX (-59.6%), ADA (-55%), ETH (-33%), and BTC (-2%). However, ALGO (+116%) was the only cryptoasset in the cohort that saw new addresses

INTELLIGENCE

ORDO AB CRYPTO

rise in May. AVAX (-50%) fell the most month-over-month, followed by ADA (-20%), DOT (-19%), BTC (-14%), and ETH (-12%).

Network transaction count also presents a mixed sentiment in 2022. This year, BTC and ADA saw transaction count rise +11% and +8%, respectively. SOL (-60%) is the worst performer year-to-date in terms of transaction count, followed by AVAX (-57%), ALGO (-44%), DOT (-30%), and ETH (-9%). Only SOL (+65%) saw transaction count rise in May. On the other hand, AVAX transactions fell the most in May at -71%, followed by ADA (-18%), DOT (-9%), BTC (-8%), ETH (-7%), and ALGO (-1%).

The circulating supply of these cryptoassets suggests that immediately marketable supply rose the most this year for NEAR (+17.1%), followed by AVAX (+10.9%), which underwent a large unlock of supply overnight in early March, SOL (+9.8%), ALGO (+7.6%), DOT (+3.5%), ADA (+1.5%), ETH (+0.8%), and BTC (+0.7%).

On-chain indicators like BTC's SOPR and MVRV z-score continue to signal oversold conditions while BTC struggles to break back into neutral territory. Should these indicators break back into neutral territory as prices rebound, it could suggest network demand is returning.

Endnotes

1. Network activity for Polkadot reflects activity on the Polkadot relay chain only and does not include activity from any parachains. Importantly, Polkadot's relay chain does not support smart contracts itself, and is considered a Layer-0 network, so one should be cautious when comparing on-chain metrics directly to other smart contract-enabled, Layer-1 protocols such as the ones included in this report.

2. Avalanche's architecture consists of three chains — the Exchange Chain (X-Chain), Platform Chain (P-Chain), and Contract Chain (C-Chain). The numbers in this report reflect activity on Avalanche's C-Chain, which supports smart contracts and is EVM-compatible.

3. https://docs.avax.network/overview/getting-started/avalanche-platform-overview/

4. https://twitter.com/avalancheavax/status/1527367371689603072

5. https://twitter.com/avalancheavax/status/1527367370695553035

6. Transactions on Solana are defined differently than on other account-based blockchains, with consensus votes and failed transactions being recorded on the ledger. Therefore, in an effort to bring transaction counts semantically aligned with other networks, Solana transactions have been filtered to include non-vote, successful transactions only.

7. https://docs.solana.com/developing/programming-model/transactions

8. https://twitter.com/fomosaurus/status/1493790872953098244?s=20

INTELLIGENCE

ORDO AB CRYPTO

We appreciate your feedback!

Please visit https://surveys.kraken.com/jfe/form/SV_enFIDuUTKiHQFYG to participate in a brief survey. For all future Kraken Intelligence content, sign up here. For comments, suggestions, or questions related to this article or future topics you'd like to learn more about, you may also direct your communication to intel@kraken.com or to your account manager.

Kraken provides access to 173 cryptoassets spanning 555 markets with advanced trading features, industry leading security, and on-demand client service. With the acquisition of Crypto Facilities, Kraken now offers seamless access to regulated derivatives on 5 cryptocurrencies with up to 50x leverage. Sign up for a free account in minutes at www.kraken.com/sign-up. We look forward to welcoming you.

For multi-exchange charting, trading, portfolio tracking, and high resolution historical data, please visit https://cryptowat.ch. Create a free Cryptowatch account today at https://cryptowat.ch/account/create.

For OTC-related execution services or inquiries, please direct your communication to otc@kraken.com or to your account manager.

INTELLIGENCE
ORDO AB CRYPTO

Disclaimer