COINMETRICS

MARKET INSIGHTS: SPOTTING AND
EXPLOITING MARKET VOLATILITY

MAY 2020

INTRODUCTION

Cryptoasset data has been increasingly amassing the interest of researchers and investors looking to build an edge in the market and inform their trading strategies. At Coin Metrics, we believe that the greatest insights can be generated when data is considered holistically. To that end, we have developed a comprehensive suite of data that includes network data, market data and indexes.

Below is a case study that highlights how any single data strategy might overlook some valuable insights and opportunities that can present themselves in a holistic data strategy.

Near midnight UTC on May 10, 2020, Bitcoin saw a rapid selloff that brought the price down to $8,000 from $9,500, an almost 16% decrease in less than 15 minutes. This move was preceded by a network data alert in the Coin Metrics monitoring system, which allowed for the following market action to be closely observed in real-time.

PART 1: SPOTTING AN ANOMALY

On the 9th of May at 23:05 UTC, Coin Metrics exchange flow data bot flagged an abnormally large deposit of 2,500 BTC on the Gemini exchange. Given the abnormally large nature of this deposit on an exchange that does not often provide liquidity to cover that volume, the bot triggered an alert notification.
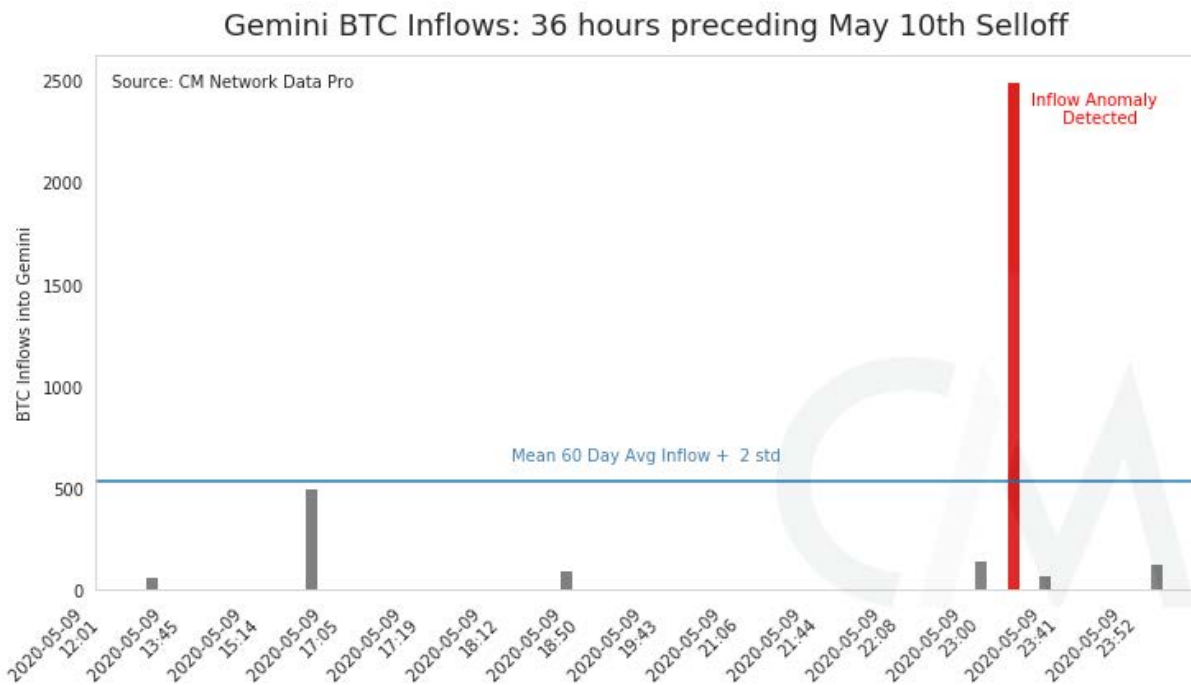
After the bot fired off the alert, the flow was validated and monitored through the Coin Metrics Pro Data Visualization Tool, which displays flows to and from major exchanges in real-time (block-by-block).


PART 2: IDENTIFYING THE SELL-OFF

Coin Metrics market monitoring can be customized to any of the >6,000 spot markets and >1,000 futures markets. For the purposes of this analysis, the market action that took place on USD-BTC markets at Bitflyer, Bitfinex, Bittrex, Coinbase, Gemini, ItBit, and Kraken is investigated.

This analysis reveals some market inefficiencies (or price decouplings) that occurred during the selloff. Here is a look at the trades during the 20 minute period when most of the action occurred.


BTC-USD Trades on Select Exchanges - Selloff on 2020-05-10 (Source: Coin Metrics Market Data)
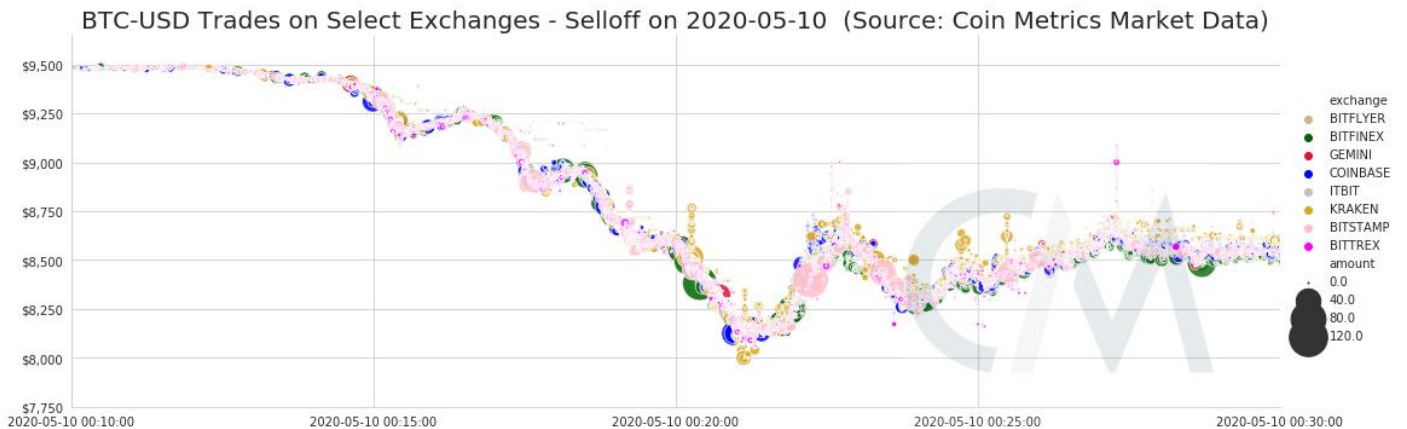
It's a lot to consume at once, so we break it down into four 5 minute phases:

Phase I: The Catalyst

Phase I - 00:10 - 00:15 (Source: Coin Metrics Market Data)
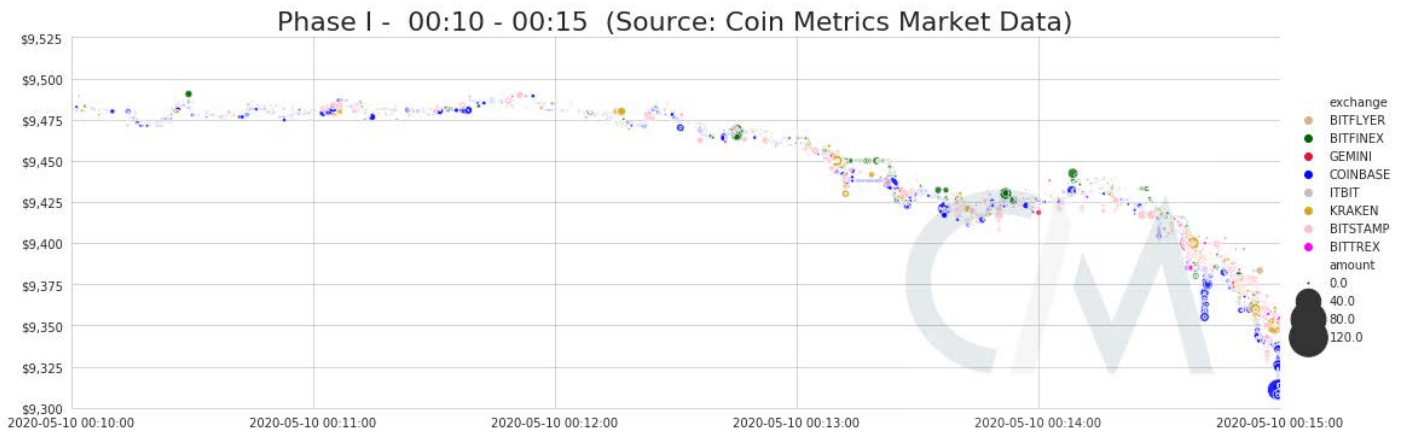
This period covers a large portion of the calm prior to the initial selling movements. In order to better examine the catalyst events, we zoom in between 00:14:30 and 00:14:50 UTC:

Trades Between 00:14:30 - 00:14:50 (Source: CM Market Data Feed)
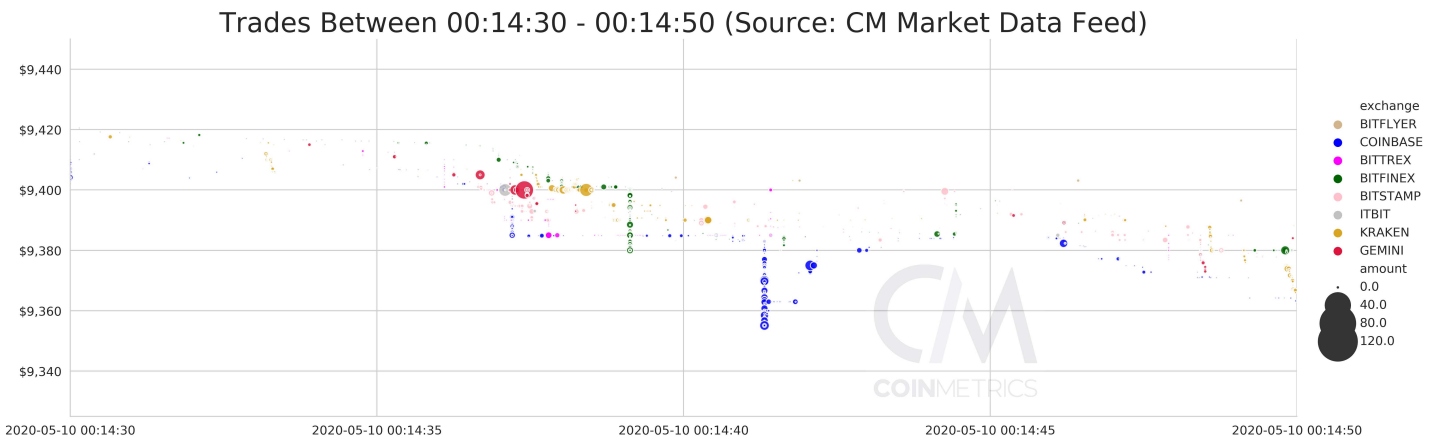
In this section around 14:40 UTC, the selling begins. The first large trades occur between 14:35 and 14:40, with a notable large trade on Gemini. What follows is a cascade of selling pressure, notably two market sell orders on Bitfinex and Coinbase that saw prices drop to ~$9,350. The price has dropped more than $50 in less than 10 seconds.
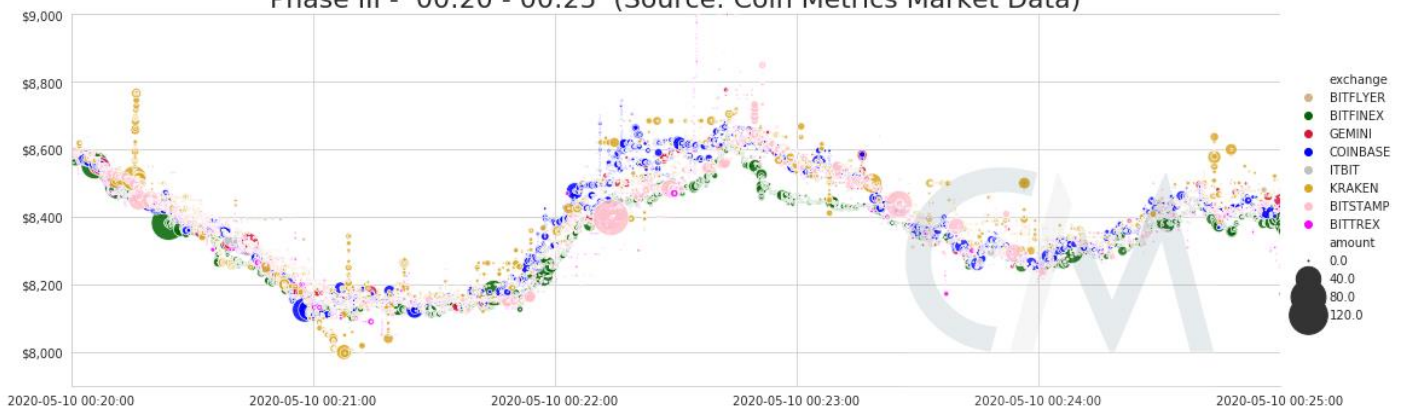
Phase II: Panic

Phase II - 00:15 - 00:20 (Source: Coin Metrics Market Data)
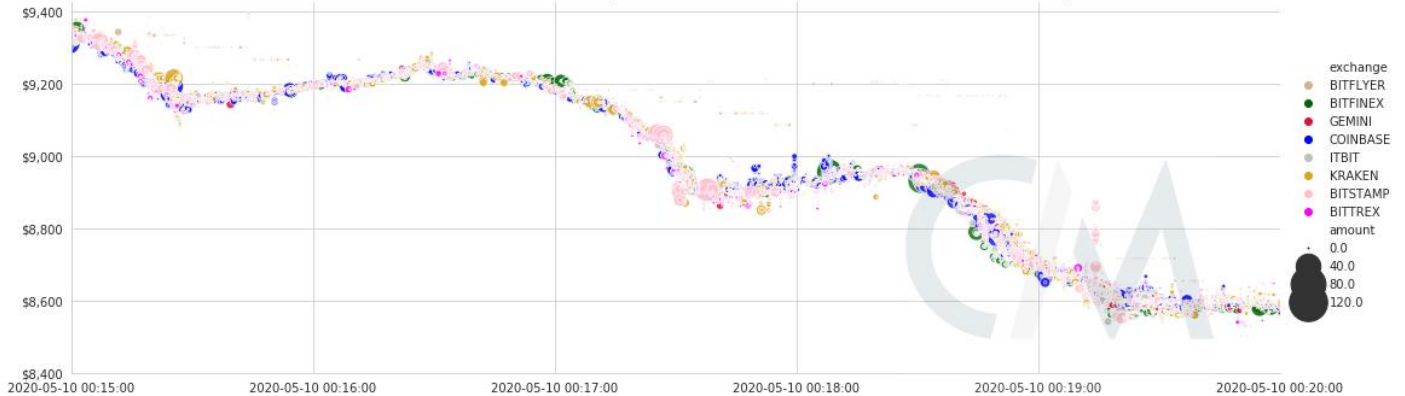
Looking at Phase II, you can see a wavelike pattern of selling pressure. Interestingly, Bitflyer's price consistently lagged the other exchanges, which could be valuable information for arbitrage traders.

Phase III: Buy the Dip

Phase III - 00:20 - 00:25 (Source: Coin Metrics Market Data)

Moving into Phase III, emotions change… once that $8,600 price range is broken ($875 from where we were 10 minutes ago), buyers re-enter the market, providing support above $8,000.

It can be distinctly seen that large market buy orders enter the market, particularly on Kraken, denoted by the vertical line patterns above that ranges $350 dollars (~4%) from midpoint. The buying pressure picks up around $8,200 until eventually settling (in Phase IV) prices in the $8,500 - 8,600 range.

Phase IV: The New Trading Range

Phase IV - 00:25 - 00:30 (Source: Coin Metrics Market Data)
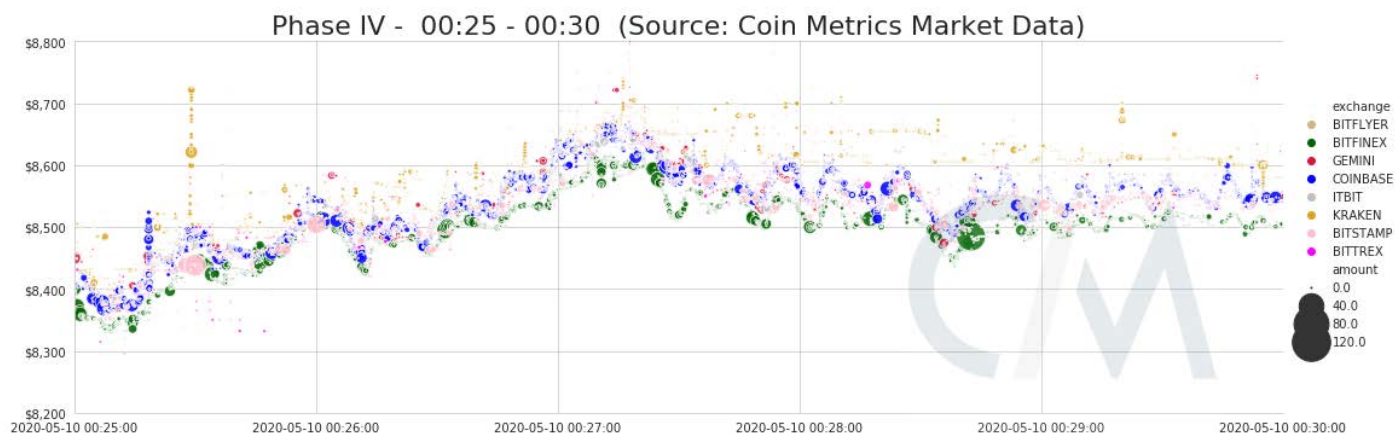
And finally, after the dip buying subsides, prices begin to level out around $8,500.

PART 3: COMPARING THE DISJOINTED PRICING ACROSS VENUES

It is clear from this data that trading across exchanges is not equal. The pricing varies widely. But why?

Not all liquidity is created equal. Taking a look at the liquidity during this period, it can start to be understood why these exchanges trade so differently.

Liquidity in BTC-USD Markets - 2020-05-10 00:00:00 to 01:30:00 UTC - Slippage From top of book
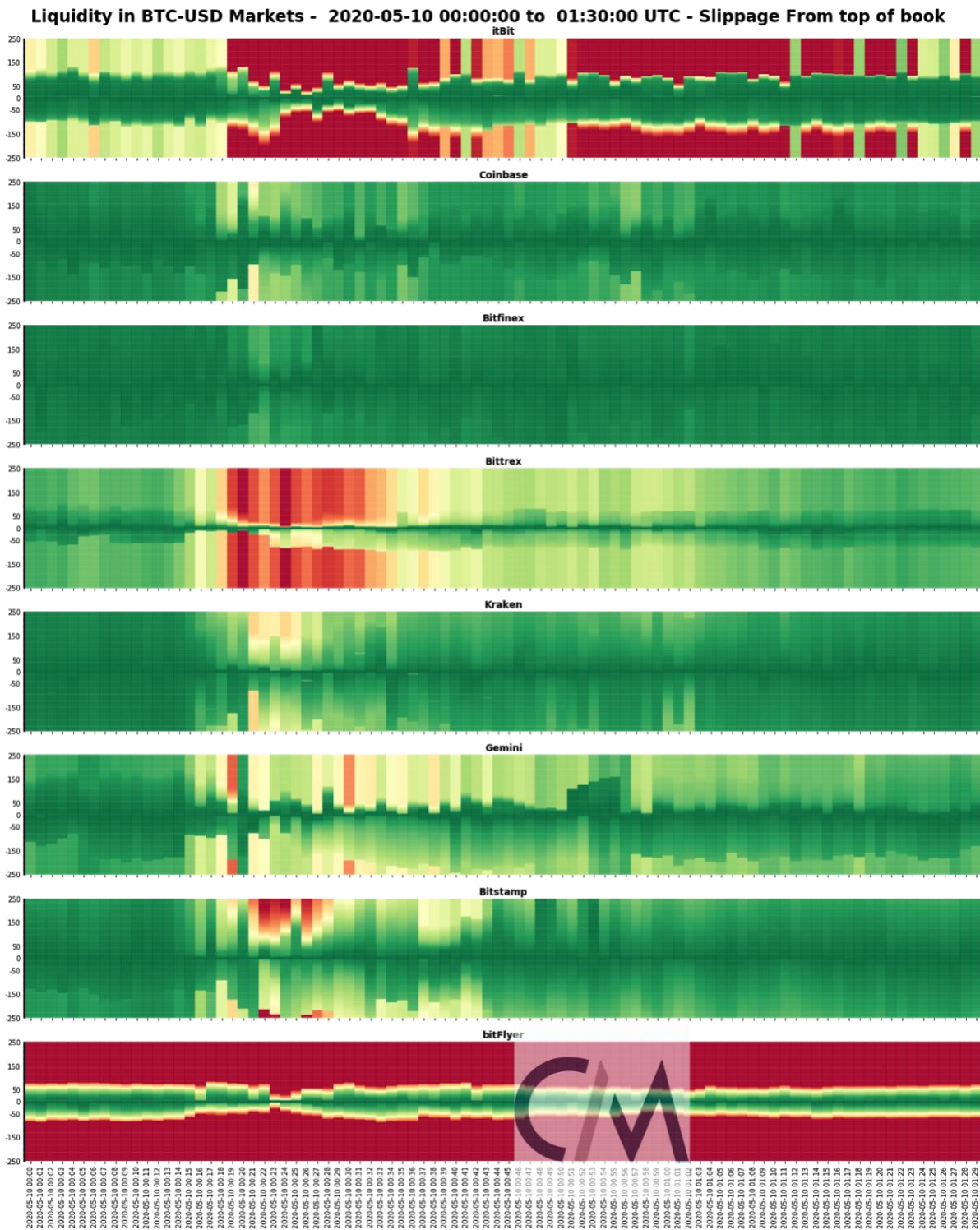
In the chart above we look at liquidity in terms of slippage during the period of time in focus. Each of the eight plots represents an exchange's BTC-USD market, with the x-axis representing a point in time and the y-axis representing the size of a market order in units of BTC. The y-axis ranges from -250 to 250 BTC, with negative numbers representing market sells and positive numbers market buys.

For each point in time and order size, colors range from green to red, representing the slippage from the top of the order book that the average execution cost of the order would incur. Dark green represents slippage of 0Bps and dark red represents slippage of 750Bps.

This data can help market participants determine which exchanges have the most liquidity and where they will subsequently have the lowest costs of execution.

CONCLUSION

As is evident above, it is only through the combination of network data (exchange flows) and market data (market trade behavior and order book data) that a holistic picture of the market could have been achieved during the market sell-off on May 10.

ABOUT COIN METRICS

Coin Metrics is a leading provider of transparent and actionable cryptoasset market and network data. Coin Metrics delivers mature data across multiple formats to various industry stakeholders, including financial enterprises, funds, media and research outlets, and data/application providers. Coin Metrics' data empowers people to make informed cryptoasset decisions.

To learn more, please visit coinmetrics.io or contact the Coin Metrics team at:

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