PERSPECTIVES

Crypto Analytics: Navigating the Data

Our perspectives feature the viewpoints of our subject matter experts on current topics and emerging trends.

INTRODUCTION

Fortune favors the brave. That's what many have come to believe as cryptocurrency has soared into mainstream consciousness over these past two years. With cryptocurrency companies spending over $2 billion on advertising via Super Bowl commercials, celebrity endorsements, and even arena purchases (thanks for the memories, Staples Center), it's no wonder that more and more Americans and institutions are adopting cryptocurrency at a faster rate.

Morgan Stanley, Goldman Sachs, and Citigroup have invested more than $2 billion in crypto and blockchain companies since August 2021. Fidelity now offers Bitcoin as part of their 401k plans. Blackrock enabled its Aladdin platform for institutional investors to use Coinbase Prime to trade, prime broker, and custody cryptocurrencies as part of the overall portfolio management approach. Companies such as Tesla, MicroStrategy, and Square have invested their reserves directly into Bitcoin. Some countries are investing in crypto as reserves alongside gold. Cryptocurrency is ingrained in our everyday lives, whether we believe in its staying power or not.

While cryptocurrency has become more common it has not lost its volatility. This article focuses on the risks of the rapidly growing cryptocurrency marketplace and what tools and capabilities are needed to protect companies from future crises that may emerge.

UNDERSTANDING CRYPTO COMPLEXITIES

As of November 2022, the overall cryptocurrency market has lost $2 trillion in just the past year (See: figure 1). Massive destabilizations to stablecoins – which are coins linked to a commodity or currency maintaining a consistent price – have collapsed entire coin ecosystems erasing billions in the matter of days. Extreme volatility and excessive leverage, as well as plain poor investment decisions, compounded by secrecy and lack of oversight, have led to the bankruptcies of crypto exchanges (e.g., FTX) and crypto hedge funds (e.g., Three Arrows Capital), and caused collateral damage to investment managers (e.g., Voyager Digital), OTC broker-dealers (e.g., Genesis Trading), and lending companies (e.g., Celsius Network and BlockFi).

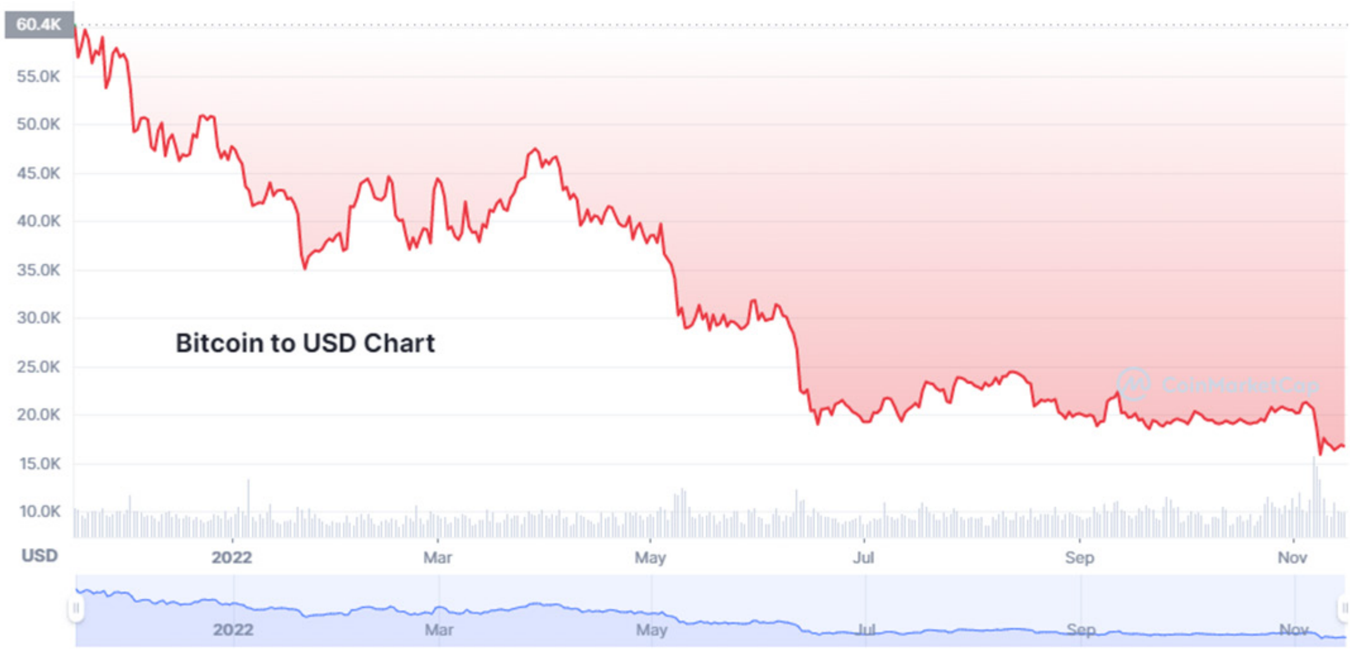

Figure 1 *- *Chart from CoinMarketCap.com*

Investors and analysts are still trying to wrap their arms around the staggering numbers trickling out of the FTX bankruptcy proceedings. The once crypto giant – with an estimated market cap of more than $32 billion – is now deep in the hole with more than 100,000 creditors vying to recoup up to an estimated $50 billion in assets. The sheer volume of transactions and complex relationships between users, creditors, and affiliated entities presents an extremely complicated web to untangle. That web is held together by extraordinary volumes of transactions across various systems and blockchains.

So, how do companies endeavor to protect themselves before it's too late? We must first better understand and be willing to accept the complexities of the crypto marketplace so we can confront the challenges head on and mitigate these associated risks. These include:

- Data integrity – The source of the data. Can this data be trusted? Can this data be verified independently?
- A profusion of coins – There are currently over 20,000 cryptocurrencies in circulation. Which coins are traded together? Which coin pairs are relevant to your needs?
- Volume of Transaction – Millions of crypto transactions occur every minute. Do you have the access and ability to see and collect this information?
- Cryptocurrency transfers across multiple chains through various DeFi protocols and token bridges often obscure the sources and destinations of funds, as well as the entities involved.
- Interpreting the data – Once a reliable data set is established, do you have the tools to comb through the millions of transactions and have a clear understanding?
- Lack of Maturity – Many crypto companies are run by extremely intelligent teams, but they lack experience and don't have an appreciation for the development of internal controls, segregation of duties, and corporate governance. What controls does your company need to implement to meet regulatory requirements, investor inquiries, and public scrutiny?

FINDING EXPERTS WITH THE RIGHT ANALYTICAL TOOLS

Gaining access to publicly available on-chain transactions, in addition to trades maintained by individual exchanges, provides a foundation for historical data analysis. The nature of blockchain data is such that it's possible to perform analytics on a granular scale, pinpointing trades by the minute, and correlating them to social media posts and other market events.

To provide effective analysis, crypto market experts need to have the tools and capabilities to:

- Collect on-chain data independently through application programming interface (API) using proven data identification and deduplication techniques.
- Decipher on-chain transactions which often involve smart contracts and multiple intermediate operations.
- Analyze hundreds of millions of records using Big Data technology.
- Utilize data visualization tools to generate impactful and clear insights.
- Re-create a timeline of events and transactions referencing data from multiple sources.
- Utilize traditional forensic accounting techniques coupled with on-chain data collection to assist in creating confidence.
- Translate Blockchain Analytics into meaningful and factual findings.

CONCLUSION

Those facing crypto challenges need to retain specialists armed with the ability to identify, collect, and analyze historical cryptocurrency transactions, as well as understand their patterns, and decipher the content of on-chain transactions. This provides a unique opportunity for companies and other organizations to mitigate risk and avoid potential calamities before they occur. While the crypto industry is currently lacking oversight, the regulatory environment will certainly evolve over time and require more diligence to prevent collapses like we are currently witnessing with FTX.

Are you prepared for the next crypto contagion? Remember, fortune favors the *prepared*.

Acknowledgments

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A Certified Bitcoin Professional and member of the Association of Certified Fraud Examiners, J.P.'s forensic accounting and financial investigation engagements include fact-finding and examinations into matters involving asset recovery, complex money flows involving cryptocurrency or blockchain, alleged Ponzi schemes, fraudulent financial reporting, and the misapplication of GAAP.

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