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SPECULATIVE, VIRAL, AND VOLATILE: VALUATION CONSIDERATIONS FOR CRYPTOCURRENCY ASSETS

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As interest in niche investment assets continues to grow, valuation professionals may be presented with the challenge of valuing highly illiquid cryptocurrency assets. These assets face high regulatory scrutiny and low volume in public markets, offering a unique mismatch of high paper value and poor capability to exchange for cash. However, valuation professionals should consider these assets in the same way they would approach the appraisal of other illiquid assets, with several well-tested tools at their disposal.

Introduction

Valuation professionals often keep a keen eye on trends in investment assets because today's hot investment is often included in tomorrow's tax filing. In recent years, the popularity of unique and trendy investment assets has increased. From special-purpose acquisition corporations to so-called "meme stocks" and everything in between, valuation professionals have been tasked with appraising a variety of investments that require specialized comprehensive analysis for adequate disclosure in transfer tax filings.

Perhaps no nascent asset category has attracted more interest and caused more headaches than cryptocurrency. Bitcoin and Ethereum have become common and highly liquid investments, but the volatile and lightly regulated nature of cryptocurrency has led to the creation of thousands of thinly traded cryptocurrencies without a stabilized pool of buyers and sellers, which can cause liquidity uncertainty. An unprepared valuation professional may have difficulty accounting for these factors in an appraisal.

THE VOLATILE AND LIGHTLY REGULATED NATURE OF CRYPTOCURRENCY HAS LED TO THE CREATION OF THOUSANDS OF THINLY TRADED CRYPTOCURRENCIES.

Even as "crypto" has become a common talking point of financial media, the breadth of the cryptocurrency market still catches many off guard. According to CoinMarketCap, the global cryptocurrency market is approximately $2.6 trillion (or 9.2 percent of first-quarter 2024 U.S. gross domestic product1). However, Bitcoin represents approximately $1.3 trillion of this total, with Ethereum following at $454 billion.

Of the remaining $739 billion, $155 billion is composed of so-called “stable coins,” or cryptocurrencies that are pegged to a unit of currency, primarily the U.S. dollar. The other $584 billion consists of alternative coins, or “altcoins,” and represents the greatest source of complexity to a valuation professional.

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Bitcoin and Ethereum dominate the cryptocurreny market, making up more than 70 percent of the value. However, market analysts track more than 10,000 cryptocurrencies.

Similar to the trends noted in market capitalization, volume falls off rapidly as one looks further than the 50 largest cryptocurrencies. As of early June 2024, the 24-hour volume of the 100th-largest cryptocurrency was under $15 million. According to CoinMarketCap, the 24-hour volume of the 200th-largest cryptocurrency was under $3.5 million. Despite these relatively low figures, both cryptocurrencies traded at a market capitalization in the hundreds of millions of dollars, highlighting the divergence of paper value relative to the liquidity an investor can realize.

A valuation professional may rely on market price as the primary indication for a block of cryptocurrency within the top 200, 500, or even 1,000 listed names, but CoinMarketCap tracks over 10,000 individual cryptocurrencies, with thousands more unreported and traded peer-to-peer in ultraspeculative investment channels. Some of these cryptocurrencies report millions of dollars in market capitalization, with liquidity in the low thousands.

Liquidity is not the only concern affecting the market for cryptocurrency. The elevated level of interest that U.S. regulators have shown in cryptocurrency presents a unique opportunity for valuation professionals—a highly scrutinized asset category with opaque value that can change by the minute. Further, as securities laws in this area continue to be actively written and creatively interpreted, many exchanges continue to advertise the new listings of very thinly traded cryptocurrencies, leading to a valuation professional evaluating the account of a client who has invested in a high-tech version of penny stocks.

Valuation Considerations

The penny stock offers insight on how a valuation professional can approach evaluating thinly traded cryptocurrency assets. Much has been written on valuation considerations for public equities that have a low float—the percentage of a company’s total authorized and outstanding shares that are available to be traded in the public market. These equities tend to be significantly more volatile and less liquid than those with higher floats, similar to low-market-capitalization cryptocurrencies.

Some valuation professionals find it applicable to value cryptocurrencies through the lens of legacy alternative investments, such as art, collectibles, or antiques. Viewing cryptocurrency as analogous to these assets, which have been long covered by analysts and have regulatory precedent, may allow a valuation professional to narrow the list of applicable valuation methods to consider in the analysis of a block of cryptocurrency.

Two valuation tools for capturing illiquidity in traditional asset valuation that valuation professionals can apply to cryptocurrency valuation are the Black-Scholes option pricing model (the "Black-Scholes Model") and a discount for lack of marketability ("DLOM").

The Black-Scholes Model, created in 1973 by Fischer Black, Robert Merton, and Myron Scholes, is one of the more commonly applied models for valuing financial options. Many valuation professionals are familiar with the model's methodology, wherein it approximates the cost to purchase a put option to hedge an investment based on a number of inputs. Two critical inputs of the Black-Scholes Model, volatility and time to expiration, are particularly relevant to highly illiquid cryptocurrency holdings.

As extremely volatile assets, cryptocurrencies cannot always be valued appropriately by methods that rely entirely on qualitative factors. Although identifying a proxy for the volatility of a cryptocurrency previously may have been difficult due to limited data, the recent approval and launch of Bitcoin exchange-traded funds ("ETFs") provided valuation professionals with a dependable and highly liquid data point. In addition, the Black-Scholes Model's time-to-expiration input allows a practitioner to account for lockup and vesting periods on certain cryptocurrency investments, a facet that has become more popular as cryptocurrency is offered to more institutional investors.

Valuation professionals also can consider the application of a DLOM to an illiquid cryptocurrency asset. The DLOM is one of the most commonly applied valuation adjustments and could be useful to a valuation professional who values cryptocurrency since the DLOM has a history of being accepted by regulatory bodies when being applied to other illiquid asset holdings. This discount typically is applied to a private business interest and considers the factors that make that interest less marketable or easily convertible into cash or a cash equivalent when compared to a publicly traded interest.

The DLOM typically considers a variety of factors, such as put rights, previous transactions of an interest, potential buyers, transfer restrictions, and distributions generated by the interest, among others. Although not all these factors are applicable to cryptocurrency, the DLOM is uniquely useful to a valuation professional for cryptocurrency because many of the most common studies used to provide a quantitative level for the DLOM are based on features that may be comparable to cryptocurrency holdings.

Specifically, valuation analysts may rely on restricted stock or pre-initial public offering ("IPO") studies. These studies evaluate the level of discount applicable to stock interests under certain lockup periods and before the major liquidity event of an IPO. Cryptocurrencies increasingly are subject to these restrictions because early investors, development team members, and other insiders frequently are paid in cryptocurrency before trading is available to the public or under significant time-based lockups. However, the valuation professional may consider the DLOM in context of other potential asset-specific adjustments to the value of a cryptocurrency holding because the stocks that are evaluated in these studies are inherently less risky than cryptocurrency.

TWO VALUATION TOOLS FOR CAPTURING ILLIQUIDITY IN TRADITIONAL ASSET VALUATION THAT VALUATION PROFESSIONALS CAN APPLY TO CRYPTOCURRENCY VALUATION ARE THE BLACK-SCHOLES OPTION PRICING MODEL AND A DISCOUNT FOR LACK OF MARKETABILITY.

A valuation adjustment that could be considered a subset of the DLOM is a blockage discount. This discount is sometimes used when the sale of an asset faces potential issues when being absorbed into the market, such as when an investor attempts to sell a significant amount of stock in an over-the-counter entity. The blockage discount accounts for the time delay associated with selling this sort of asset in a manner that will not place excessive downward pressure on the market for the asset. As discussed, these issues are prevalent in cryptocurrency, with thin liquidity exacerbated by the propensity of investors to react quickly to even moderate changes in the underlying price of a cryptocurrency.

The blockage discount and, largely, the DLOM cover many of the unique aspects of highly illiquid cryptocurrency similar to the Black-Scholes Model but diverge from that model in meaningful ways as well. Because the Black-Scholes Model is an entirely quantitative calculation, its ability to account for future expectations of liquidity is limited by the forward-volatility metrics available to the valuation professional. The blockage discount and DLOM afford more discretion to account for unique events, such as the additional anticipated future liquidity stemming from the announcement of the approval, but prior to the active trading, of the Bitcoin ETFs.

Cryptocurrency remains one of the quickest-changing asset categories in terms of innovation and regulation, so the valuation professional should consider whether anticipated changes are captured appropriately in any solely quantitative data they use.

Fringe Cases

A valuation professional also may be faced with certain fringe cases that have become popular in the financial news media, such as nonfungible tokens ("NFTs") and so-called "meme coins." NFTs are a form of cryptocurrency derivative commonly represented by unique pieces of digital art or memberships to private enthusiast clubs and communication channels. NFTs have a series of exchanges popular with the enthusiast but have significantly lower volume than traditional cryptocurrencies on average.

"Meme coins" are an ultravolatile subset of cryptocurrencies that explicitly do not offer investors anything outside of extreme speculation and are best compared to the "meme stock" craze that affected GameStop. Although these assets can seem complex, it is important to understand that they are effectively different presentations of highly illiquid cryptocurrencies and, as a result, can be approached using the methods previously discussed in this article.

Conclusion

Highly illiquid cryptocurrencies and other nascent assets may seem challenging to value. The technology underpinning these assets can be complicated, but the assets possess many of the same characteristics of illiquidity that the valuation profession long has tackled.

Consequently, the prudent valuation professional can approach cryptocurrency and other like assets in many of the same ways he or she approaches more traditional investments by applying many of the same methods used in their everyday work that long have been held as standards of business and asset valuations.

Reference:

1 U.S. Bureau of Economic Analysis, "Gross Domestic Product, First Quarter 2024 (Second Estimate) and Corporate Profits (Preliminary)," May 30, 2024, https://www.bea.gov/news/2024/gross-domestic-product-first-quarter-2024-second-estimate-and-corporate-profits.

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