What Will it Take to Validate the Crypto Wallet?

Services providers such as attorneys, certified public accountants, fund administrators and insurance policy writers are supporting an emerging ecosystem of digital assets. As crytpo comes under assault for recent poor performance, market participants with a long-term outlook should take notice of the open source protocol movement. Financial rewards for these holders could be a curvilinear function of time.

By Brett I. Ladendorf

A popular networking site states that we are the average of the five people with whom we spend the most time. This generality requires clarification as to what characteristics are averaged and why five is the number. If one searches for liquidity for a convertible or a high-yield bond, five providers of "outs" seems like a good number, but what is the justification for arriving at five? Perhaps it's the greatest number of options available. The term "arbitrary" comes to mind here.

In 2018, cryptocurrency investors and traders must feel that the value of their holdings are arbitrary. With respect to Bitcoin, price discovery is aided by the creation of additional Bitcoin. More data points from marginal transactions in cash markets could lead to the waning of the arbitrary factor. With VWAE calculations (volume weighted average across exchanges), like the VWAP (volume weighted average price) calculation in equity markets, traders can assess how meaningful transactions become and consider historical interpretations of this data.

Let's be clear: on a timescale, I think we are in the very early stages of the cryptocurrency market. While some are calling the death of Bitcoin, due in large part to its poor year-to-date performance, remember where it was just two years ago. Though we trade and invest around calendar dates for tax reasons and seasonality patterns, calendar performance is arbitrary and represents nothing more than a stick measure of that performance against other assets.

Over the long term, the legalities and applications of Bitcoin and other crypto will become better known for market participants. In the next 10 years, present and future data points created by transactions of cryptocurrencies will create a digital trail for traders, data scientists, regulators, legal experts, policy writers, investors, custodians and tax experts.

As the proprietor of a consulting practice for emerging alternative fund managers, I think there are four critical factors for digital assets to achieve commercial viability. Managers have many financial, operational and strategic challenges beyond the portfolio risks that accompany a new asset class. Service providers such as Omega Edge LLC help management companies in an increasingly complex and resource constrained environment with on-demand financial management services. Fund managers can focus on asset selection while service providers specialize in these four critical areas that support front office operations.

The following factors in the digital universe will codify the validity of these digital mediums of exchange:

Fungibility

A trait of currencies, commodities and other goods with interchangeable values across geographies, either physical or digital, will be a key determinant on whether a crypto gains

traction. Fungibility, as it's termed, occurs when a quantity of a good may be replaced by another equal quantity in paying a debt or settling an account. Identical in specification is important. Increases in transaction volume of fungible assets across and between legitimate institutions may further enhance visibility and ultimately recognition. In the case of some cryptocurrencies, divisibility drives transactions, increases adoption and establishes credibility of the digital asset.

The emergence of exchanges such as Coinbase, Bitmex and Kraken improves price discovery and yields proof of fungibility. Leadership at the storied commodities exchanges, where fungibility is a given, is launching new crypto contracts. Though contracts such as ETH for the crypto Ethereum offer no physical delivery, the underlying reference rates are based on transactions and order book activity from companies specializing in aggregating crypto data.[i]

Chicago, the traditional hub for these commodities exchanges, has drawn venture capital firms, entrepreneurs, limited partners and accelerators to build infrastructure for digital assets. Professionals from around the Midwest are building companies that contribute to an ecosystem of crypto. Coinigy, a Milwaukee- based aggregator of exchange data, brings information from over 30 different entities around the world. Similar companies have worked with fintech accelerator programs such as Fintank to promote services.

Though transactions are made digitally, many thought leaders and entrepreneurs are meeting up in person. Topics of discussion are often economic value, price discovery and commercial applications of crypto and of the blockchain technology behind the adoption. As pros come together to for discuss the fungibility of crypto-currencies, the viability of this newer class of transaction medium will become better understood.

Custody

Cold storage and digital wallets allow buyers to store their assets off line. Speculators in the futures markets worry only about the net asset value (NAV) struck against long / shorts by traditional auditors and accounting firms. The Bitcoin futures contract trades on the Globex system of the CME Group. Custodial service providers have no issues including these standardized contracts in their services.

Nilesh Sudrania of **Sudrania Fund Services** is seeing strong demand from crypto funds and speculators. His business offers administrative services to a variety of money managers including commodity trading advisors, hedge funds and proprietary trading operations. Sudrania can produce reporting and strike NAV daily on standardized contracts from the major commodities exchanges. The visibility and established infrastructures surrounding these institutions makes it easy for his firm to do business with custodians on behalf of his clients.

The futures markets are a natural extension of liquidity in the cash markets, reflecting the need for natural longs to offset principal risk. These markets are supported by a time-tested ecosystem of futures exchanges, demutualized organizations, futures commission merchants, trust departments, universal banks and other custodians providing securities to end users with ownership status held online through servers. But cryptocurrencies present a great challenge to custodians, particularly when it comes to anti-money laundering (AML) controls. Custodians

accept dollar deposits and aren't yet willing to accept crypto, according to Nilesh. But for those who can figure out a way, protection of digital assets, offline, will be big business. Protection for online will be even bigger.

Richey May views custody as one of the most important issues facing digital asset fund managers. When performing an audit of a fund that holds digital currencies, the manager must be able to demonstrate that digital assets represented on the balance sheet at the end of the accounting period exist, that the fund owns or controls those digital assets, that the assets are reported at the appropriate and consistently applied measurement basis, and that all digital assets owned and controlled by the fund are represented on the balance sheet. Third party custodians are beginning to fill an important role in the digital asset sector and provide an additional layer of security that limited partners as well as service providers of digital asset funds expect to see. For those funds that determine that self-custody is the appropriate route, the controls put in place should address the above concerns and fund managers should be prepared for auditors to test and question the existence of the assets of the suitability of the internal controls.

Insurability

Asset managers have a responsibility to develop and maintain risk procedures concerning the assets of their investors as well as concerns for their personal liabilities to the management companies. Insurance carriers are slow to underwrite in the crypto markets, but some are writing policies, a sign that data points are sufficient for risk management professionals to assess.

From crypto funds to custodial firms, and from trading platforms to exchanges, institutions are assessing the risk-reward opportunities to transact. The rapid increase in Initial Coin Offerings (ICOs) and crypto trading exposes operators to personal as well as business risk. More carriers are offering Director & Officers Insurance (D&O) and Errors and Omissions (E&O) Insurance contracts to crypto fund managers. According to **Jeff Hufford** of the global insurance brokerage **Gallagher & Co**, policy terms are being offered in the market, but buyers need to be aware of the deductibles, exclusions and limits. It's on the custodial side where there are fewer carrier partners willing to underwrite policies, particularly for the "hot" wallets. This is where there is a real need in the marketplace.

It's not clear what the recourse will be for digital asset owners but the world-wide increase in crypto assets will draw the interest of thieves. In January 2018, the Tokyo-based exchange, Coincheck, was hacked, reporting a loss of US$534 million of crypto, according to Reuters[ii]. Gallagher is witnessing US$1 million to US$2 million limits with tight underwritings on hot wallets. Many intermediaries and managers are pursuing self-insurance here according to Hufford. Cold storage, on the other hand, is better understood by insurers. Policy writers evaluate the "vaulting" process of fund managers, where pricing is dependent on how well market participants are following standard storage guidelines and procedures. Carriers are writing contracts on cold storage; "hot" or online is more susceptible to cyber theft.

The risk markets, enhanced by the creation of insurance contracts, are indispensable for most highly functioning economies. Insurers in these markets must perform strenuous due diligence

to ascertain valid contracts in this “Electronic Cash System,” as Satoshi coined it in the seminal 2010 paper. Risk professionals with a trained eye must review the 64-character “private keys” for authenticity. Currently, there isn’t much competition as Wild West scenarios keep equity stakeholders behind these insurers awake at night.

With this scarcity of mitigation and transfer services, there’s opportunity for the bold. More competition over time should lead to a sophisticated market for trading insurance contracts with structured finance offering opportunities to mitigate or transfer risk, even if to the chagrin of author and statistician, Nassim Taleb[iii].

Insurance towering and re-insurance markets will further validate the efficacy of cyber-assets. Sophisticated insurance carrier programs have experience drawing investors to their structured products. Insurance-linked Securities (ILS) are offered to institutions through captives[iv]. The securitization process may allow insurance markets behind crypto to flourish.

Business interruption insurance helps managers offset security breach and operational downtime risk. Continuity is critical for managers on both sides of the market. As with any other asset class there are times when the fiduciary must transact times of need. A fiduciary also considers data protection an obligation, all the way down to the info kept on limited partners at the management company level. Personally Identifiable Information (PII) policies have existed for some time and should become a big part of the insurance markets in crypto. Under PII policies, no assets are covered. Data of people or of institutions contained therein are covered.

Cybersecurity hacks continue to threaten hotkeys. As a result, cold storage and the simple act of shredding remain viable actions. Many managers figure, why pay the premium for insurance when they’re in the risk business anyway?

Legality

Tokens, some of which are now considered securities per the Securities & Exchange Commission (SEC), come from ICOs. These assets along with source keys are attracting the attention of legal professionals. Some ICOs are fraudulent; many simply fail to attract enough attention for critical mass and market adoption. Time will test the endurance of those “coins” that gain immediate acceptance.

The distinction between “token” securities and that of “utility” grows in importance as entities that provide ICOs come under scrutiny from the SEC. In April 2018, William Hinman, Director of Corporation Finance at the SEC, said that it was conceivable for some tokens to be exchanged on decentralized networks without being connoted as a security.

According to **Nicole Kalajian** of **Stradley Ronon** in Chicago, if a person buys a digital asset without the expectation of a return on investment, it's less likely that that the token will be considered a security by the SEC. However, in most cases where the SEC sees an organization initiate an ICO, there's likely to be a centralized entity with asymmetrical information, a key factor for an asset to be considered a security.

Some representatives of financial intermediaries are considering the adoption of blockchain, the technology behind Bitcoin, to be too slow. Enterprise-wide adoption hasn't happened at financial institutions, yet we are nearly a decade into its existence. The lack of widespread use of blockchain and of the difficult-to-value cryptos are headwinds that fuel the ire of skeptics. However, crypto market participants believe that open source protocols, once the backbone of the Internet architecture, have been corrupted by large, publicly held but power-centric technology companies. These second-generation coders and coding-enterprises harvest the network efforts of the Internet for the benefit of a few, according to the article "Beyond the Bitcoin Bubble" by Steven Johnson in the New York Times Magazine. Those companies considered issuers in the public markets and coined FANG stocks are eradicating the power of open source, as alluded to in Johnson's piece published in January 2018[v]. Crypto investors are betting on a long-term outcome where a third generation of Internet peer to peer networks and self-generated contracts circumvent the powerful enterprises that are aggregating much of the world's personal data.

Summary

If the inherent Bitcoin scarcity, a specific design by Satoshi, and the four factors listed above are maintained over time, then the thesis of weary Bitcoin holders will be validated. Third party services providers will assist in the validation of these markets. For the investor, the optionality offered by these currencies offers an intriguing opportunity. Critics not considering the time scale involved in such a ground-breaking, disruptive and utterly powerful technology may want to consider how long it's taken Amazon to reach 49% market share of all online retail spend in the U.S.[vi] or how long it's taken renewable energy to contribute 17% of electricity generation in the U.S.[vii] For the development of the crypto markets, operators of big balance sheets and other providers of capital will perhaps draw forward liquidity, reduce transactional friction and earn what is currently a huge risk premium for holding these volatile digital assets.

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The author does not own Bitcoin.

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