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## How Can Exchanges Bring Institutional Money Into Cryptocurrency Markets?

By [Guest Contributors](#)

***Cliff Moyce is a partner at global IT consultancy DataArt. He has spent thirty years leading major change in the industry, and is an important commentator on business and technology matters such as cyber-security, exchange technologies, Cloud, AI/ML and Regtech.***

Issues with centralized digital currency exchanges (DCE's) are a barrier to institutional investors adopting cryptocurrencies. Risk management cannot be assured when high volatility is combined with low liquidity, limits on trade size, no valid valuation framework, insecure custody, poor monitoring, weak security, and an environment associated with hacks, frauds and thefts.

Other routes of access to the market for institutions are decentralized cryptocurrency exchanges, OTC trading, and derivatives, including futures contracts provided by mainstream incumbent exchanges. The latter two options will continue to grow in usage, but the biggest increase in institutional participation will come from DCE's fixing their problems and making their markets safe and liquid, perhaps through partnerships with mainstream incumbent exchanges.

Such a development will create a virtuous circle that will itself help to further develop cryptocurrency markets.

Institutional investors are being discouraged from the cryptocurrency asset class by the many barriers to effective risk management. Here's a look at those barriers, as well as solutions that could help transform the market and thus open it up to institutional money.

Centralized digital currency exchanges (DCEs) facilitate trading in cryptocurrencies by accepting fiat currencies and/or other cryptocurrencies in exchange for the assets that they list. As of July 2018 there are over 1500 cryptocurrencies (60% coins, 40% tokens) being traded worldwide on nearly 200 DCEs, with total daily traded value between \$1bn and \$5bn.

With only one significant exception, all are based on the blockchain concept. Cryptocurrencies are generating returns for investors that eclipse any other asset class currently. Such a high value market with the potential for good returns means that there is strong interest from institutional investors.

But DCEs are focused currently on retail transactions, and carry risks and uncertainty that make it difficult for institutional investors to utilize their platforms. These risks and uncertainties result in a general inability to manage risk to required standards.

Problems include:

- low liquidity combined with high volatility
- inability to trade in size
- security weaknesses
- custody vulnerabilities
- cyber-attacks, scams, and frauds
- no valid valuation framework / lack of price certainty and consistency
- regulatory uncertainty in some jurisdictions
- lack of (or poor) prime brokerage, custody and safekeeping services
- poor, immature, or overloaded operations processes including customer service processes
- slow transaction speeds

Relatively well-known examples of centralised DCEs include Coinbase, Gemini, Circle Poloniex, and Uphold. There are almost 200 more DCEs, with new DCEs launching all the time.

Not all centralized DCEs suffer from all of the problems listed above to the same extent (eg providers of 'stable coins' are trying to fix the issue of high volatility), but those problems are definitely typical of the market currently. Centralized DCEs can undoubtedly fix their problems through a combination of effort, problem solving skills, technological innovation, and partnerships and collaboration, but that has not happened yet on a market-wide basis.

It has certainly not happened to the degree required by institutional investors. The high volatility of cryptocurrencies presents an investment opportunity for institutional investors, but only if there is an ability to trade in size and sufficient liquidity to close positions quickly. Those latter two conditions are not being met currently.

Being required to trade in small amounts on decentralized DCEs means that the price of the currency can increase as your order goes down the book (if your order can be filled at all). Exchanges that limit daily trading amounts to \$50,000 or less are rarely going to be of interest to institutional investors.

The strong interest from institutions combined with an inability of centralized DCEs to satisfy their requirements, means that other options are required. Those options currently are: decentralized cryptocurrency exchanges, OTC platforms funded by liquidity providers, and, derivatives contracts, either from DCEs or from mainstream incumbent exchanges. These are discussed below.

**Decentralized DCEs.** Despite holding true to the original principles of Bitcoins, decentralized DCEs are too difficult for institutions to use, do not offer required features such as stop-loss, margin trading, etc; do not provide for on/off ramping for fiat, and provide too little liquidity. The one advantage of decentralized exchanges is that of security. Distributed networks protected by cryptography and decentralized consensus processes are highly secure by design; however, those security advantages are not enough to overcome the downsides for institutional investors and make them a viable option for cryptocurrency investment.

**OTC.** Over the counter (OTC) trading allows firms to have large orders filled in one go with assets provided on request by liquidity providers, but it brings with it issues of price transparency/ discovery and best

execution. Despite any potential pricing issues, OTC is often a better option than splitting large orders into thousands of trades as is happening now on centralized DCEs.

**Derivatives.** As well as centralized and decentralized DCEs and OTC trading, institutions can now access cryptocurrency markets by another route – futures contracts. Futures contracts are being offered by a small number of DCEs, and also (importantly) by mainstream incumbent exchanges such as CME and CBOE. Futures contracts avoid the issues of custody and safekeeping of assets discussed later in this article. Even with futures contracts being issued by DCEs, most institutional investors will still prefer to trade on mainstream exchanges rather than DCEs.

By definition, traditional exchanges bring mature, secure and compliant contracts, processes and technologies to the table, including clearing services. But futures contracts are only being issued on a tiny number of the universe of assets in the market. This is where futures contracts issued by individual DCEs for their main asset classes may be attractive.

Though the OTC and derivatives options described above are attractive, they also have limitations. If institutional investors want to access the cryptocurrency market as a whole, then centralized DCEs are going to have to fix their infrastructure problems – and that is where incumbent exchanges can provide another option, through partnerships.

**Partnerships.** DCEs partnering with incumbent exchanges such as Nasdaq, CME, CBOE etc would allow compliant, secure performing infrastructures to be deployed into the cash (coin / token) cryptocurrency market. However, there are peculiarities to custody and safekeeping in the 'physical' cryptocurrency markets that will still require further innovation.

It is from centralized DCEs that multiple high-profile thefts have taken place in recent years. Losses are approaching \$5 billion in the last seven years. Many of these losses are related to difficulties with custody and safekeeping when holding 'coins'. Criminal activity has been made easier by process weaknesses and failures of common sense (to be frank) by exchanges and users.

Implementing and operating more rigorous processes of the sort seen in traditional exchanges would go a long way to avoiding the problem. In one recent theft in Japan, coins were being stored by the exchange in a 'hot wallet' rather than a 'cold wallet', and it was this simple mistake that put them at higher risk of theft. Hot wallets are connected to the internet and are therefore vulnerable to hacking.

Holding large sums in hot wallets is the equivalent of carrying millions of dollars' worth of cash around in person, while holding a sign to say that you might be doing so. If you leave coins in a hot wallet on a DCE they are only as secure as the exchange's security – and that has been shown to be not very secure at all in some instances. Only money needed for upcoming transactions should be kept in hot wallets.

Even then, trading one cryptocurrency for another can be done over decentralized exchanges, directly from the holder's wallet and not from a wallet controlled by an exchange in their name. Risks of fraud or hacking can then only occur when a holder wants to exchange crypto assets for fiat currencies, but these can be minimized.

Still, these are solutions for the retail market; and do not come anywhere near to satisfying the needs of institutions.

A much safer alternative to hot wallets is cold (hardware) wallets such as Hardware Security (HSM) devices. HSM's are physical computing device that safeguard and manages digital keys for strong authentication and provides crypto-processing. Typically, they are plug-in cards or external devices that attach directly to a computer or network server. HSM's are highly secure and highly resilient, being designed for public key infrastructure and online banking. They typically contain anti-tamper and secure backup functionality, and can be stored offline such as in a safe.

Despite the excellent security of HSM's, all forms of self-custody should be regarded as vulnerable and therefore institutions are more likely to choose separate regulated custodians, exchange custodians or broker custodians as they do for other asset classes.

On top of security and custody issues, centralized DCEs need to solve for:

- price certainty: routing through a single point of access to multiple exchanges is one way of increasing confidence
- regulatory compliance (including anti-money laundering/know your customer)
- market surveillance to detect market manipulation and to limit market free fall
- modern, open APIs including leveraging FIX, the electronic communications protocol that has been the industry standard for the last 25 years
- people: seasoned professionals having specialist knowledge across brokerage services, execution, market data, trading platforms, clearing, settlement, algorithmic trading, and automated trading systems
- lower transaction fees

Again, partnerships with incumbent mainstream exchanges could be the quickest and easiest way to being compliant with accepted market standards for the requirements above.

In conclusion, centralized DCEs need to solve a multitude of process and technology problems to be acceptable trading venues for institutional investors. Partnering with mainstream incumbent exchanges may be the quickest way of achieving this objective, but that will still require technological innovation to solve problems such as custody and safekeeping.

Such a development will create a virtuous circle that will itself help to further develop cryptocurrency markets. Until this happens, OTC and futures markets will continue to be the safest way for institutions to access the cryptocurrency markets; but perhaps not for much longer.

*The views and opinions expressed herein are the views and opinions of the author and do not necessarily reflect those of Nasdaq, Inc.*

Original article can be found here: <https://www.nasdaq.com/article/how-can-exchanges-bring-institutional-money-into-cryptocurrency-markets-cm993022>