

# **Liquidity Or Leakage Plumbing Problem With Cryptocurrencies**

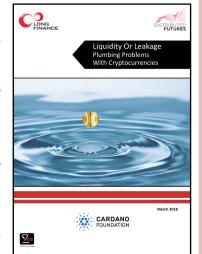
The governance of cryptocurrencies requires a more clearly defined link between their novel money supply algorithms and traditional economic and financial analysis.

### Overview

Liquidity is the probability that an asset can be converted into an expected amount of value within an expected amount of time. Any token claiming to be 'money' should be very liquid.

Cryptocurrencies often exhibit high price volatility and wide spreads between their buy and sell prices into fiat currencies. In other markets, such high volatility and wide spreads might indicate low liquidity, i.e. it is difficult to turn an asset into cash. Normal price falls do not increase the number of sellers but should increase the number of buyers. A liquidity hole is where price falls do not bring out buyers, but rather generate even more sellers.

If cryptocurrencies fail to provide easy liquidity, then they fail as mediums of exchange, one of the principal roles of money. However, there are a



number of ways of assembling a cryptocurrency and a number of parameters, such as the timing of trades, the money supply algorithm, and the assembling of blocks, that might be done in better ways to improve liquidity.

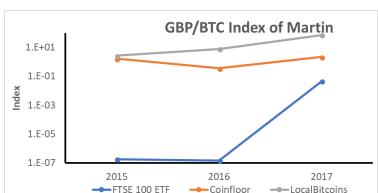
The report aims to help policy makers look critically at what's needed to provide good liquidity with these exciting systems.

# **Report Extracts**

#### The Index of Martin

The Index of Martin is a convenient metric that allows for the comparison of the liquidity levels of different classes of assets.

Martin (1975) proposes a liquidity index (MLI) given an assumption that a stationary distribution of price changes hold through the entire transaction time. A high value of MLI indicates less liquidity of a stock. The higher value of the ratio means the larger price dispersion corresponding to the traded volume.



The Index of Martin shows us that:

- The Bitcoin markets are at least two orders of magnitude more illiquid than the large-cap equity market ETFs. This would help explain the outsized returns (due to the illiquidity premium) observed in the Bitcoin markets.
- Bitcoin illiquidity increased at least an order or magnitude from 2016 to 2017. Again, this illiquidity uptick contributed to the enormous 2017 Q4 returns observed in the Bitcoin markets.
- There are material liquidity gaps between the different crypto-trading venues.

## Report Extracts The high failure rate of cryptoexchanges (due to operational Crypto-trading and its conversion to failures and software hacks) vastly fiat currencies is promulgated on lightly increases their illiquidity relative to regulated trading venues that have conventional assets. shallow capitalisation and, therefore, high default risk. The diversity of the transaction fee structures and anonymity rules **What Creates** create intra crypto-exchange The homogeneous incentives of Cryptoliquidity gaps. the large crypto-hoarders and Illiquidity? miners creates liquidity black holes in the cryptocurrency economy. Diverse order matching search frictions create liquidity gaps between crypto-exchanges and Crypto-hoarding their between cryptos and liquid fiatincreases illiquidity. denominated assets.

#### **Conclusions**

- Mutual Distributed Ledgers should employ best practice software development processes and information security protocols
- The impact of Meltdown and Spectre on MDLs and crypto-wallets has yet to be quantified but may be quite severe
- The extreme illiquidity and hyper-volatility make cryptocurrencies compelling assets for speculators, but diminish their value proposition for vendors and regulated financial service firms
- The Index of Martin is a simple liquidity monitoring metric that can indicate the occurrence of 'illiquidity pops' in the cryptocurrency markets
- ISDA standardisation of smart legal contracts will support scalability of these digital contracts, helping to cement their adoption by global investment banks
- The United Kingdom's common law system is inherently flexible enough to facilitate smart legal contracts and to quickly respond to the opportunities and challenges that they may present (including the question of enforceability)
- The OTC derivatives market must embrace transformational change to realise the cost-saving benefits of smart derivative contracts

#### To learn more about this and other Distributed Futures projects

www.distributedfutures.net
www.longfinance.net/Publications.html
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