Bitcoin Suisse | Decrypt

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Bitcoin Derivatives in the Spotlight

The market for Bitcoin financial derivatives is growing rapidly. Both physically and cash settled futures are now available. What does this mean for cryptocurrencies? And what lessons can be learned from other markets?

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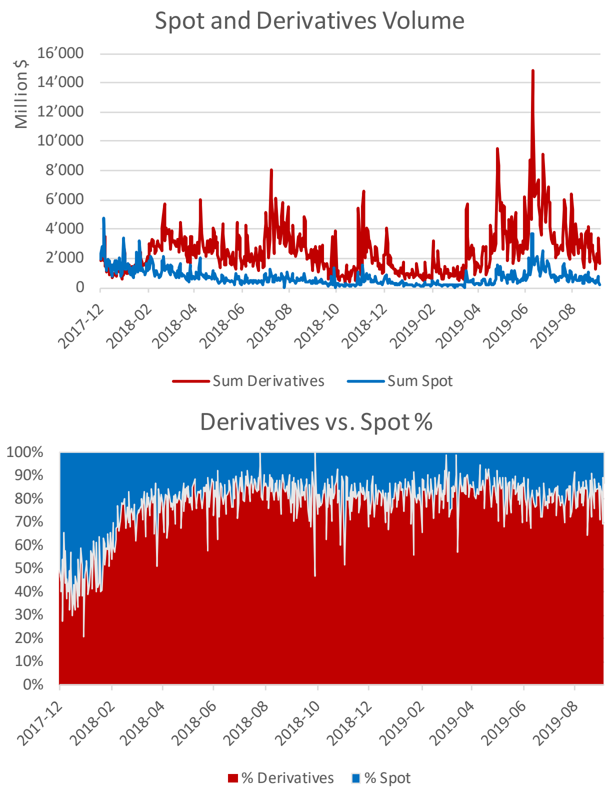
Yesterday, Bakkt officially launched their Bitcoin futures, which are physically settled – meaning that upon expiry of the futures contract, Bitcoin is delivered to the buyer. The physical settlement simplifies operational procedures for businesses relying on the Bitcoin price for future revenue, currently mostly Bitcoin miners. But even more importantly, this marks the first time that it is possible to acquire actual Bitcoin through traditional financial infrastructure.

Spot market price manipulation has long been a concern of regulators and a major roadblock, for example, to the approval of a Bitcoin ETF. The settlement of physical BTC futures does not rely on spot market prices – as opposed to cash settlement, which requires a reference rate from cryptocurrency exchanges. This allows for a unique price discovery mechanism and should provide further comfort to regulators by providing a Bitcoin price originating from fully regulated institutions.

Bitcoin derivatives markets have already outgrown the size of the spot market. With the launch of cash settled futures on the Chicago Mercantile Exchange (CME) in December 2017, betting on Bitcoin's price became possible through a fully regulated exchange. Additionally, unregulated cryptocurrency derivatives exchanges, such as BitMEX, have started to capture the lion's share of the daily Bitcoin trading volume (Illustration 1).

Illustration 1: Bitcoin derivatives markets have overtaken spot market volumes since early 2018. Derivatives currently account for ca. 80 % of the total trading volume.



Source: cryptodatadownload.com, BitMEX, investing.com, Bitcoin Suisse Research.

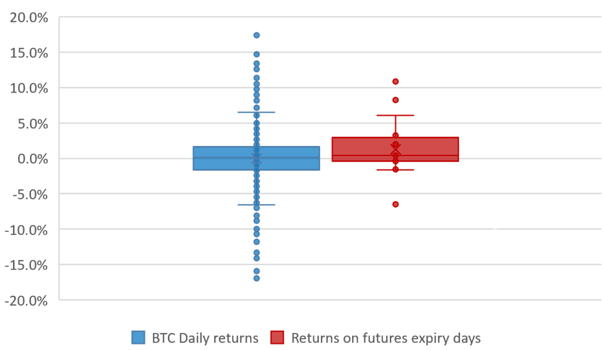
For spot markets, the five largest exchanges by actual volume[1] (Binance, Bitfinex, Kraken, Bitstamp, Coinbase) were considered. For derivatives, BitMEX's perpetual swap and CME futures were included; on September 19, 2019, BitMEX's perpetual swap accounted for 87 % of the derivatives volume shown.

The size of the derivatives markets indicates that they capture most of the price discovery currently; spot markets are linked to them through arbitrage. As such, events on the derivatives markets influence the overall Bitcoin price.

A common claim in the cryptocurrency community is that futures expiry on CME applies downwards pressure on the price. Illustration 2 shows a box and whiskers plot of the distribution of Bitcoin's daily returns since December 2017, along Bitcoin's daily returns on CME futures expiry days. The boxes and T-shaped whiskers capture 50 % and 100 % of all non-outlier observations, respectively.

While the number of futures expiries (n = 20) is too small to make a statistically significant assessment, the plot shows that until now, Bitcoin returns on futures expiry dates tend to be equal or slightly higher than they are on an average day.

Illustration 2: Daily returns of Bitcoin on futures expiry dates are similar to the overall average returns. Data since CME Bitcoin futures launch in 2017.



Source: coinmarketcap.com, barchart.com, Bitcoin Suisse Research.

Gold Futures Initially Made Gold's Price Go Down

The biggest question on everyone's mind regarding the Bitcoin futures is whether they will make the price of Bitcoin go up or down. To answer this question, we can learn from the history of futures on commodities that are also stores of value like gold and silver.

In 1974, the first gold futures contract was traded on the COMEX exchange in New York. Gold had an all-time high the day before futures trading began, then gold saw nearly 50 % drop in price over the next two years. Two years after the accumulation phase, gold started a new bull run and did a tenfold increase.

Illustration 3: After futures launch in 1974, gold dropped by almost 50 % before doing a tenfold increase.

Source: Gold.org, Incrementum AG.

Today, gold's estimated daily trading volume is 4,000 metric tons or approximately $240 billion.[2] The London Bullion Market Association (LBMA) does not normally publish trading volume data; however, in quarter 1 of 2011 they released a report showing 340,000 tons were cleared, even though there are only approximately 6,500 tons stored in London. Where did the extra gold come from? Hint: Fractional reserves.

A large debate inside of the community is whether central banks are systematically shorting gold futures or not. The Gold Anti-Trust Action Committee argues that central banks are able to short gold futures and incur losses indefinitely without going bankrupt because of their ability to print money. Although, this claim has not been proven, the majority of futures trades are cash settled and the majority of gold OTC trades are unbacked by real gold.[3]

Therefore, the answer to question one depends on whether or not central banks will sell short Bitcoin futures in an attempt to keep the price of Bitcoin low. Fractional reserves of futures can have a short-term downward pressure on Bitcoin's price because an infinite amount of

1. https://www.sec.gov/comments/sr-nysearca-2019-01/srnysearca201901-5164833-183434.pdf
2. https://www.gold.org/what-we-do/gold-market-structure/global-gold-market
3. https://www.bullionstar.com/blogs/bullionstar/infographic-comex-gold-futures-market/

paper based Bitcoin contracts can be issued in comparison to a limited number of buyers demanding the contracts. However, in the long run manipulation of any market is hard to sustain, even if there are fractional reserves of Bitcoin futures being trading. The market's liquidity should be larger than the liquidity of any single investor (or government institution) that is trying to alter prices.

In the 1970s, a Texan oil tycoon tried to corner the silver futures market with no luck. Stark opponents of inflation and big government, the Hunt family believed that the dollar would collapse because of artificially low interest rates and double-digit inflation eating away the currency's purchasing power. Sounds familiar right?

In the early 1970s, they decided to be proactive. The Hunt brothers began buying silver futures at $1.5 an ounce. In the mid-1970s, they took delivery on approximately 55 million ounces of silver that they stored in Switzerland and the US. The Commodities Futures Trading Commission (CFTC) was formed in 1975 and immediately put limits on the amount of silver that a single entity could buy or sell. They got the princely family of Saudi Arabia involved and children of the Hunt family to circumvent the limits. They took on leverage and pushed the price from $9 an ounce to over $50. In a final attempt to end speculation, the CFTC barred all new silver purchases. The price of silver started falling, and the margin account brokers demanded more liquidity from the Hunts in order to keep their positions open. The price fell from $48 to $11 within five months, and the Hunts lost approximately $2 billion.

Final Word: If large institutional players believe Bitcoin's price will appreciate in the long run, they could artificially suppress the price in the short run in order to accumulate at a discount, similar to the gold market. A simple way to ensure that the market is not saturated with unbacked short positions is to request physical delivery of gold. This is similar to the "Proof of Keys" event that occurs in early January when Bitcoiners remove their coins from exchanges in order to remind exchanges that fractional reserves can make a custodian go bankrupt if there is a run on the bank. However, this strategy only works when there are free markets. Government interventions, regulations, and too big to fail bailouts can artificially keep Bitcoin's price low as long as the majority of the market continues to use fiat.

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