

HEADLINES

Understanding Sep 25th's BTC Price Volatility with On-Chain Data
 Using Outflow for Anticipating Short Term BTC Price Changes
 BitMEX Futures and Outflow as Predictor of Low Liquidity
 BitMEX Margin and the Premium Establishing Directional Bias

WEEKLY PRICE OVERVIEW

BTC	\$10,181.08	-16.61%	LTC	\$75.48	-23.29%
ETH	\$217.68	-20.90%	BSV	\$122.61	-29.56%
XRP	\$0.29822	-10.48%	EOS	\$3.92	-26.36%
BCH	\$318.69	-27.44%	BNB	\$21.35	-23.81%

Understanding Sep 25th's BTC Price Volatility with On-Chain Data

The main reason for the crash in BTC prices is the liquidity decline caused by BITMEX's exchange policy that batches customers' BTC withdrawal requests at one time. Our analysis concluded that during this time the spread widened and the futures contracts were continuously liquidated. This ultimately caused a -12.5% plunge in 3 hours.

Using Outflow for Anticipating Short Term BTC Price Changes

On 19/09/25, BTC prices fell more than 16% within a 4 hour period, with over 8 percent of that taking place within a 15 minute period. Although technical analysis did point to a downside move, the speed with which it occurred was unexpected. This is in large part due to the \$550 million worth of contracts liquidated during this decline. Using our on-chain data, we can look into BitMex outflows as a leading indicator for mass liquidations and the large volatility that results. We can then more successfully hedge against this risk. (Profit from this risk)

BitMex, as the most liquid BTC exchange and the largest physically settled futures exchange, exerts a large impact on price. It is well understood that the effect of margin calls, specifically cascading margin calls on BitMex can cause large swings in price, such as September 25th. But a more in-depth look is required.

Bitmex Futures and Outflow as Predictor of Low Liquidity

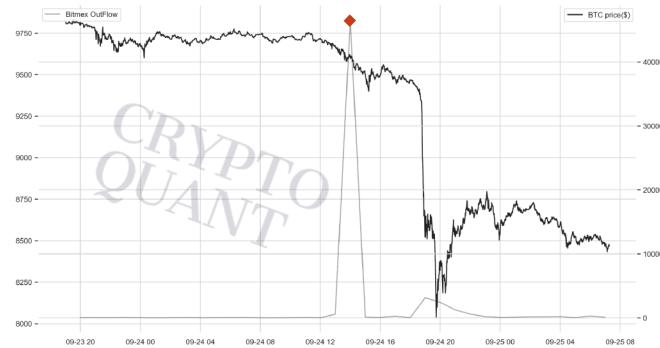
Flow models have been consistently used as a metric for understanding price. Here inflows and outflows of BTC and stable coins can be interpreted to have specific implications on price. Analysis regarding this is well established. But standard models of Inflow/Outflow aren't compatible with BitMex.

Traditional exchanges exchange between BTC and fiat. This is why Inflow/Outflow are used as indicators in order to understand market structure. For example, when large amounts of BTC are withdrawn from an exchange, it can be understood as an increase in the amount of Hodlers, drying supply down and price up.

Hourly Inflow and Ouflow of BitMEX (19-09-25)

BitMEX	inflow	outflow	in_out
2019-09-24 12:00:00	16.764565	0.000000	16.764565
2019-09-24 13:00:00	50.404333	607.811372	-557.407039
2019-09-24 14:00:00	2539.698894	49147.000341	-46607.301448
2019-09-24 15:00:00	465.048185	594.327507	-129.279322
2019-09-24 16:00:00	99.279636	0.000000	99.279636
2019-09-24 17:00:00	270.479855	0.000000	270.479855
2019-09-24 18:00:00	51.237382	0.000000	51.237382
2019-09-24 19:00:00	3146.564817	0.000000	3146.564817

Outflow and BTC Price



During these two periods (2019.09.23 ~2019.09.25, 2018.11.15 ~2018.11.21) during which BTC experienced a similar change in price, BitMEX Outflow has been overlaid onto the graph. The large Outflow that takes place immediately prior to high volatility is clearly illustrated.

Source: CryptoQuant

Conversely, Bitmex BTC outflows have a large impact on volatility, but this can lead price to increase as well as decrease. This is because of Bitmex special withdrawal policy. Deposits are constantly available, but withdrawals are only conducted once daily, at UTC 13:00. During this short time, outflows exceed inflows by large multiples. Immediately following this, a liquidity shortage, and an increase in the spread can often be observed.

These properties lead Bitmex margin positions to be exposed to a liquidity shortage and cascading liquidations.

This idea is supported by the Bitmex wallet Outflow data pulled from on-chain. Using this data, it is possible to anticipate these large volatility moves within BitMex. When the Outflow on BitMex exceeds a certain point, the potential for these large moves increases significantly. Based on on-chain data, it appears that when more than 5,000 BTC are withdrawn in one day, the exposure to this volatility increases significantly.

Looking at our on-chain data regarding inflows and outflows from BitMEX on 18-11-14, 19-04-02, and 19-09-25, we can see that there is a clear correlation price volatility and outflows. On each of these dates, the volatility occurred within a short period following the BitMEX daily withdrawal at 13:00 UTC. Once the liquidity dries up, price quickly responds, moving in one direction or another. On 19-09-24, on-chain, it was recorded that 49141 BTC was withdrawn from the BitMEX wallet. Volatility followed within 5 hours, with price falling over 8%.

Because of the precision of the on chain data, we can see the exact block in which the BitMEX outflows spiked.

BitMEX Price and Withdrawals (2019.09 ~ 2019.09)



Source: CryptoQuant

Without consistent and precise on-chain data, on-chain metrics like outflow lose their utility and become lagging instead of leading indicators. The shortness of the window here cannot be overemphasized.

BitMEX Margin and the Premium Establishing Directional Bias

Although Outflow allows us to obtain an understanding of incoming volatility, it falls short of providing insight into the direction which this volatility will lead. For this, the BitMEX Funding and Premium Index provided by NeoButane proves to be useful in gauging whether longs or shorts are overly margined, and thus more vulnerable to the incoming liquidity risk.

Again referring to 19-09-24, the premium was in favor of shorts, with longs paying the funding fee. Price responded as the indicators anticipated, and fell as longs were exposed to the liquidity risk and cascading liquidations ensued.

Conclusion

Currently, most on-chain data is used as long term metrics. These include NVT and MVRV as developed by Willy Woo and Adaptive Capital. Their and others work has shown the significance of on-chain analytics for long term positions. BitMEX Outflow is somewhat unique in that it is a short term on-chain metric. This ability to quickly identify a coming liquidity crisis illustrates and hedge accordingly ever furthers the ever-growing importance of on chain data in building a winning strategy when operating in BTC markets.

The purpose of the information that is provided is not for supporting any specific financial account or security. We do not want you to consider the information as an investment recommendation. We suggest you not to rely on the information we provide.



About Us

CryptoQuant provides personalized on-chain and market data, empowering them to value cryptocurrencies and uncover actionable signals.

We utilize machine learning technology to deanonymize bitcoin addresses and uncover the purpose of each transaction. We have rich entity address labels, such as exchanges and miners, and we extract meaningful information from them. Our team has a number of experienced machine learning experts, quantitative analysts, graph mining experts and engineers.

Based on the unique insights we gain, we periodically publish on-chain data based high quality reports. Moreover, we provide detailed historical data for various on-chain and market metrics, including all metrics included in this report. For further details, please contact us.

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