Group 58: RYO Hayahiko (3035712987) , Wat Ka Hin (3035708716), Tang Kai Chi (3035806520)

How does Fed Interest Rate Changes Impact Bitcoin?

1. Introduction

1.1 Introduction of Fed interest rate

Fed interest rate, or Fed funds rate, is the interest rate that banks charge each other for overnight loans of reserve balances and is decided by the Federal Open Market Committee (FOMC). Changes in Fed interest rate can cause ripple effects throughout the economy as shown in Figure 1 For example, in general, if the Fed interest rate increases, cost of borrowing will increase, USD value will increase and riskier asset value will decrease.

1.2 Introduction of Bitcoin

Bitcoin is a decentralized digital currency created in 2009 with 21 million limited supply. It is generally considered as a riskier asset compared to traditional investments including stocks and bonds due to its higher volatility. Also, there is a unique feature of purchasing bitcoin using Tether (USDT) which is a stablecoin that is pegged to the value of the US dollar.

1.3 Introduction of the relationship between Fed interest rate and Bitcoin

The research will analyze both the direct relationship and indirect relationships of Fed interest rate and bitcoin in section 2 and 3 respectively. For the indirect relationships, determinants include “valuation of USD”, “cost of borrowing” and “investor’s sentiments”.

Figure 1 shows the relationships between Fed interest rate and the above 3 determinants. For example, If the Fed interest rate increases, the cost of borrowing will increase, USD value will increase, investor’s sentiment on riskier assets will decrease. causing risker asset value including bitcoin price will decrease. The relationship also holds true in converse.

2. Direct relationship between Historical Fed interest rate and Bitcoin price (BTC / USDT)

Based on the overall statistical findings, Figure 2 shows the general result of the relationship between Fed interest rate and BTC / USDT. When the actual Fed interest rate change is positive, BTC / USDT will be negative; when the actual Fed interest rate change is negative, BTC / USDT will be positive.

2.1 Long term (monthly basis) - Graphical-driven perspective

For a long term perspective (monthly basis), Figure 2.1.1 matched Fed interest rate (white line) and BTC / USDT (orange line) to compare changes. Figure 2.1.1 is derived from the Fed interest rate (Figure 2.1.3) and BTC / USDT from Binance during 2019 to 2023 (Figure 2.1.4).

First, from a graphical perspective, The lines of Fed interest rate and BTC / USDT are in opposite trend directions most of the time, indicating the negative correlation of Fed interest rate and BTC / USDT.

Second, in Figure 2.1.1, from the TradingView's correlation indicator (yellow line which comprised of 47 monthly data points), 93.62% (44/47) is below 0.00 line with at least a certain extent; 2.13% (1/47) is on the 0.00 line; 6.38% (3/47) are very slightly above 0.00 line. In the correlation parameter, the length is set to be 20 months and current correlation (01/03/2023) is -0.80.

The estimated average of correlation indicator data (red horizontal line) is -0.41 (from 01/07/2019 to 01/03/2023) in the range of -1 to +1, showing Fed interest rate has significant negative correlation to BTC / USDT price level in the long term (monthly basis), which is consistent with the result in Figure 2.

2.2 Short-term (12 hours basis) - Data-driven perspective

For a short-term perspective (12 hours basis), Figure 2.2.1 and 2.2.2 shows the data of Fed Funds Rate and BTC / USDT price levels. BTC / USDT price data are extracted from Binance, with Candlestick opening price at 14:00 of each Fed meeting being used. And the BTC / USDT price of "farthest point reached within 12 hours" is used as the short-term analysis to analyze the immediate effect of Fed interest rate changes on BTC / USDT price levels.

The data from Investing.com are aggregated and separated into 2 groups of 2 time horizons (2019-2020 and 2022-2023) since Federal Reserve has 2 different targets during these 2 time horizons, namely "Fed Rate Hikes: 2022-2023 Taming Inflation" and "Fed Rate Cuts: 2019 Mid-Cycle Adjustment & 2020 Coping with Covid-19". And only data of rate changes (actual) not equal to 0 are extracted.

Figure 2.2.3 and 2.2.4 mainly show "Rate Change (Actual) (basis point)" and "BTC / USDT price changes percentage (within 12 hours)" and correlation of them are shown in Figure 2.2.5 and Figure 2.2.6. Correlation results are -0.328066 and -0.350277 in both 2022-2023 and 2019-2020 respectively, indicating that even if the Fed has different goals (cut and raise interest rate) at different time horizons, the negative correlations still hold and are continuously significant.

The significant 12-hours basis negative correlations indicate the relationship in Figure 2.2.7 again. When the actual Fed interest rate change is positive, BTC / USDT will be negative within 12 hours; when the actual Fed interest rate change is negative, BTC / USDT will be positive within 12 hours. And these results are consistent with the result in Figure 2.

3. Analysis of possible determinants

3.1 Valuation of USD

The Federal Reserve's interest rate policies can affect the value of cryptocurrencies through their impact on the US dollar. As the world's reserve currency, the US dollar is widely used in international trade and is held in significant quantities by central banks and financial institutions globally. By raising interest rates, the Fed increases the cost of borrowing, which can dampen economic activity and reduce the amount of money circulating in the economy, leading to an appreciation of the US dollar relative to other currencies.

The relationship between interest rates, the US dollar, and Bitcoin has been the subject of academic research and analysis. For example, a study by Chaim, Laurini, and Melo (2020) found evidence that interest rate changes in the US can significantly affect the value of Bitcoin. A stronger US dollar can make Bitcoin more expensive for buyers in other countries, as most Bitcoin trading is conducted in USDT, a digital asset designed to maintain a stable value relative to Bitcoin. USDT is frequently used as a trading pair for Bitcoin on cryptocurrency exchanges, allowing traders to buy and sell Bitcoin using USDT instead of fiat currencies like USD or EUR. An appreciation in the value of the US dollar against other currencies can increase the value of USDT, leading to an increase in the price of Bitcoin and a decrease in demand for it.

Conversely, if the Fed lowers interest rates, it can lead to a weaker US dollar, which can increase demand for Bitcoin. Since Bitcoin is not directly tied to any specific currency or economy, its value is determined by market demand and supply. Thus, when the US dollar weakens, investors may perceive Bitcoin as a more attractive investment option because it is viewed as a store of value that is not directly tied to any central bank or government. Consequently, An depreciation in the value of the US dollar against other currencies can decrease the value of USDT, leading to an decrease in the price of Bitcoin and an increase in demand for it. This is supported by a study conducted by Katsiampa (2019) examining the relationship between the US dollar, Bitcoin, and other cryptocurrencies. The author found that changes in the value of the US dollar have a significant effect on the value of Bitcoin and other cryptocurrencies, particularly during periods of economic uncertainty. The author also suggests that this may be due to investors seeking alternative investments during times of currency volatility.

3.1.1 Past example 1: Appreciation in US Dollars causing decrease in Bitcoin price

When the Federal Reserve raised interest rates in December 2015, it signaled to investors that the US economy was strong and growing, and that the US dollar was likely to appreciate in value. This made the US dollar more attractive to investors seeking higher returns on their investments, and they started buying more dollars. As more dollars flooded into the market, the value of the US dollar increased relative to other currencies, including Bitcoin. This led to a decrease in the value of Bitcoin, which is not backed by any government and is not subject to the same economic policies as traditional currencies. Investors started selling off their Bitcoin holdings and buying US dollars, which led to a decline in the value of Bitcoin. The fall in the value of Bitcoin from around $460 to $360 over that few weeks was seen as a reflection of the increasing strength of the US dollar and the impact of the Federal Reserve's interest rate decision on the global currency markets.

3.1.2 Past example 2: Depreciation in US Dollars causing increase in Bitcoin price

In March 2021, the Federal Reserve continued to keep interest rates low in order to support the US economy through the ongoing COVID-19 pandemic. This commitment to low interest rates, coupled with the rise in Treasury yields, led to a strengthening of the US dollar in the short term. As the value of the US dollars began to decline relative to other currencies, Bitcoin experienced a surge in value. This was driven by a number of factors, including the perception of Bitcoin as a potential store of value and a hedge against inflation, particularly as the US government continued to provide economic stimulus measures in response to the pandemic. Furthermore, the rise in the value of Bitcoin was also driven by increased demand from institutional investors, who saw it as a viable alternative to traditional assets like gold and stocks. This increased demand for Bitcoin helped to drive up its price even further, reaching a high of over $60,000 by the end of March 2021.

Overall, these two cases highlight how the Federal Reserve uses interest rates to impact the value of the US dollar and the demand for Bitcoin. While a stronger dollar can make Bitcoin more expensive for international buyers, a weaker dollar can increase demand for Bitcoin as a potential store of value, particularly in times of economic uncertainty.

3.2 Cost of borrowing

Raising the Fed interest rate increases the cost of borrowing, causing investors, especially institutional investors, to become less willing to borrow money to invest in Bitcoin. This is because the higher cost of borrowing reduces the potential return on investment, as a larger portion of the profit would need to be used to repay the borrowed money. Institutional investors, such as hedge funds, are particularly affected by the cost of borrowing because they often use leverage to magnify their potential returns. Leverage means borrowing money to invest, which can increase potential profits, but also increases

the risk of losses. When the cost of borrowing money to invest in Bitcoin increases, the amount of leverage choices available to institutional investors decreases, reducing their demand for Bitcoin. The decrease in demand for Bitcoin among institutional investors can have a significant impact on Bitcoin's price since they are often responsible for a large portion of Bitcoin's trading volume, so any reduction in their demand can lead to a decrease in the price. Conversely, when Fed interest rates are low, borrowing money to invest in Bitcoin becomes more attractive because the interest payments on the borrowed money are lower. This means that investors can keep more of their profits and potentially earn higher returns on their investment.

3.2.1 Hypothetical Example: A increase in cost of borrowing

Suppose that a hedge fund wants to invest in Bitcoin, with an initial investment of $1 million. The hedge fund could use its own capital to finance the investment, or it could borrow $1 million at a 5% interest rate, with the intention of purchasing $2 million worth of Bitcoin. If the price of Bitcoin were to increase by 20%, the hedge fund would earn a profit of $400,000 ($2 million x 20% - $1 million in borrowing costs). However, if the interest rate were to increase to 10%, the cost of borrowing would increase, reducing the amount of leverage the hedge fund can use. This would make it less attractive to invest in Bitcoin and could reduce demand for the cryptocurrency, causing a decrease in its price. Furthermore, institutional investors, such as hedge funds, often use leverage to finance their investments, which magnifies their potential returns. Therefore, an increase in borrowing costs could have a significant impact on their investment decisions and could reduce demand for Bitcoin among institutional investors.

3.2.2 Past Example: A decrease in cost of borrowing

During the COVID-19 pandemic in 2020, the Federal Reserve reduced the benchmark interest rate, which led to a decrease in the LIBOR rate (Figure 3.2.2). As a result, borrowing costs for institutional investors decreased, which made it more attractive for them to use leverage to invest in bitcoin. MicroStrategy, a business intelligence firm that invested heavily in bitcoin during 2020 and 2021, raised $650 million through a convertible senior note offering with an annual interest rate of just 0.75%, an extremely low cost of borrowing. The company used the funds to purchase more bitcoin, increasing its holdings to over 70,000 BTC. The increased demand from institutional buyers like MicroStrategy is driven in part by low borrowing costs. It contributes to the rise in the demand for bitcoin and the surge in prices during that period. For example, in March 2021, the price of bitcoin reached an all-time high of over $60,000, partly due to increased institutional demand. (MicroStrategy, 2020)

3.3 Investor sentiments

3.3.1 The relationship between FOMC and investors' sentiments

Indubitably, the Federal Open Market Committee's (FOMC) meeting is one of the significant events that might affect interest rates. The FOMC controls monetary policy as a component of the US Federal Reserve System by determining the federal funds rate and adjusting the money supply. The FOMC conducts periodic meetings throughout the year to deliberate on the state of the economy and arrive at decisions that can significantly affect financial markets. As a result, the results of FOMC meetings can significantly affect investor sentiment and influence investment decisions. This is due to the possibility that the FOMC's decision could have significant effects on a variety of economic indices, including interest rates, inflation, and economic growth, which could then affect the performance of different asset classes.

For instance, in the event that the FOMC decides to raise interest rates, it can lead to a decline in bond, stock and bitcoin prices, as higher interest rates can increase the cost of borrowing and reduce consumer spending. Conversely, if the FOMC chooses to lower interest rates, it can stimulate borrowing and consumer spending, which can drive up stock prices and other riskier assets including bitcoin.

Investors closely monitor FOMC meetings and the decisions emanating from them, as they can be a primary cause of market volatility and can impact the performance of their portfolios. Some investors may adjust their investment strategies in anticipation of an impending FOMC meeting, while others may wait to evaluate the outcome of the meeting before making any investment decisions.

Hence, it is reasonable to infer that the anticipation of an impending FOMC meeting and its interest rate decisions can significantly influence investors' investment strategies, and the associated shifts in investor sentiment can impact market demand and ultimately affect the price of Bitcoin, at least in theory.

3.3.2 FOMC meeting affecting the investment sentiments towards Bitcoin

In the post-COVID-19 era, particularly from 2021 onwards, as the inflation rate has surged due to the implementation of economic stimulus policies, the Federal Open Market Committee (FOMC) has adopted a more hawkish stance, as evidenced from its meeting on 17th March and continued until its latest meeting in March 2023. The adjustment of interest rates by 25 to 75 basis points has led to a more cautious investment approach among investors.

The research project applied the Up/Down Volume indicator (Figure 2.2.3 and Figure 2.2.4) to observe the market's total buying or selling volume within 2 hours, which reflects investor sentiment and Bitcoin demand.

In Figure 2.2.3 during the time period of “Fed Rate Hikes: 2022-2023 Taming Inflation”, BTC / USDT Up/Down Volume (within 2 hours) indicator gives a mean of +14.953K volume. The very significant “Down” volume shows when FOMC announces raising Fed interest rate at 14:00 New York time, investor’s sentiment becomes more pessimistic in general, huge selling pressure of BTC / USDT will occur, bringing bitcoin price down.

In Figure 2.2.4 during the time period of “Fed Rate Cuts: 2019 Mid-Cycle Adjustment & 2020 Coping with Covid-19”, BTC / USDT Up/Down Volume (within 2 hours) indicator gives a mean of +0.539K volume. The “Up” volume shows when FOMC announces cutting Fed interest rate at 14:00 New York time, investor’s sentiment becomes more optimistic in general, some buying pressure of BTC / USDT will occur, bringing bitcoin price up.

3.3.3 Special case: Interest rate hikes causing the financial market turmoil and raising unconfidence sentiments towards banking sectors

As explored in the preceding section, the elevation of interest rates can heighten the cost of borrowing for both corporations and households, which curtails their access to funds and constrains their spending, leading to a reduction in pressure on prices. This phenomenon is referred to as 'tightening financial conditions' on Wall Street and within the Federal Reserve, as indicated by (Rennison,2023). While the Federal Reserve does not welcome a banking crisis, the ensuing turbulence has resulted in a significant decrease in bank lending, which has slowed down the economy. The tightening of interest rates has contributed to a banking crisis, which is anticipated to further restrict financial conditions.

The sudden surge in interest rates has resulted in a decline in the value of bonds held by global banks and has eroded trust in some institutions. The value of treasury bonds and mortgage bonds held by Silicon Valley Bank has plummeted due to the rapid increase in interest rates over the past year, resulting in significant losses in the bank's securities portfolio, which has damaged its balance sheet and driven some depositors away. This has triggered a devastating 48-hour bank run. Although Silicon Valley Bank may have been particularly vulnerable to these events, it is evident, as noted by (Zahn,2023), that it is not the only susceptible bank.

The banking turmoil underscores a clear failure of bank management and supervision, which intensifies investors' criticisms of the central government and the financial system. Consequently, demand for the decentralized asset, Bitcoin, has surged as a hedging and risk diversification strategy. Since the onset of the global banking meltdown in March, Bitcoin prices have escalated from approximately $20,000 USD to around $30,000 USD.

In summary, consistent interest rate hikes have the potential to disrupt the financial market and foster a bearish outlook among investors in extreme situations. In the short run, the interest rate hike can instigate investor anxieties about the market and erode their investment sentiment. However, as interest rates progressively rise and start to disrupt the financial industry, it can create opportunities and direct attention towards decentralized cryptocurrencies such as Bitcoin, which are perceived as a safe haven. Demand for Bitcoin may increase as a hedging or diversification strategy, which could eventually drive Bitcoin prices upward. In the long run, as the market anticipates a potential halt or decrease in federal interest rates, the Bitcoin price could plausibly be pushed up further due to the aforementioned factors.

4. Conclusion

4.1 Summary of direct & indirect relationships between Fed interest rate and bitcoin price

In conclusion, our analysis indicates a negative relationship between Fed interest rate and Bitcoin price. When the Fed interest rate increases, it causes a direct decrease in Bitcoin price and vice versa. Our findings are supported by both Figure 1 and 2, which demonstrate that changes in Fed interest rate can also impact several determinants including cost of borrowing, USD valuation, investor's sentiments towards risky assets which also indirectly affect the bitcoin price. Our results are consistent with the estimated average of correlation indicator data, which suggests a negative correlation between Fed interest rates and Bitcoin price in both long term and short term. In the long term (monthly basis), this correlation is estimated to be -0.41. In the short term (12 hours basis), the results are -0.328066 and -0.350277 in both 2022-2023 and 2019-2020 respectively.

4.2 Future Forecast

Different hypotheses regarding Fed interest rates have emerged in the financial market. The Federal Reserve anticipates maintaining Fed interest rates at a high level for the remainder of the year. Conversely, market analysts project that the Federal Reserve will reduce rates by September due to prevailing economic vulnerabilities (Simon, 2023). Based on the results in this research and the current macroeconomic environment, BTC / USDT price level is estimated to start entering a horizontal channelized zone (sideways drift) with a range between historical key levels of 28800 and 32450. It is estimated that the sideways drift will continue before both the inflation and Fed interest rate are being further lowered. After that, bitcoin price may start to gain upward momentum and eventually reach its milestone of 100,000 USDT per bitcoin.

Graphs and Exhibits

Figure 1 Relationship between Fed interest rate change and bitcoin price change percentage

Fed interest rate	Cost of borrowing	USD value	Investor's sentiments on riskier asset	Risker asset value
increases	increases	increases	decreases	decreases
decreases	decreases	decreases	increases	increases

Figure 2 Relationship between Fed interest rate change and bitcoin price change percentage

Rate Change (Actual) (basis point)	*BTC / USDT price changes*
positive	negative
negative	positive

Figure 2.1.1 Correlation indicator of Fed interest rate & BTC / USDT and Estimated average of correlation indicator data

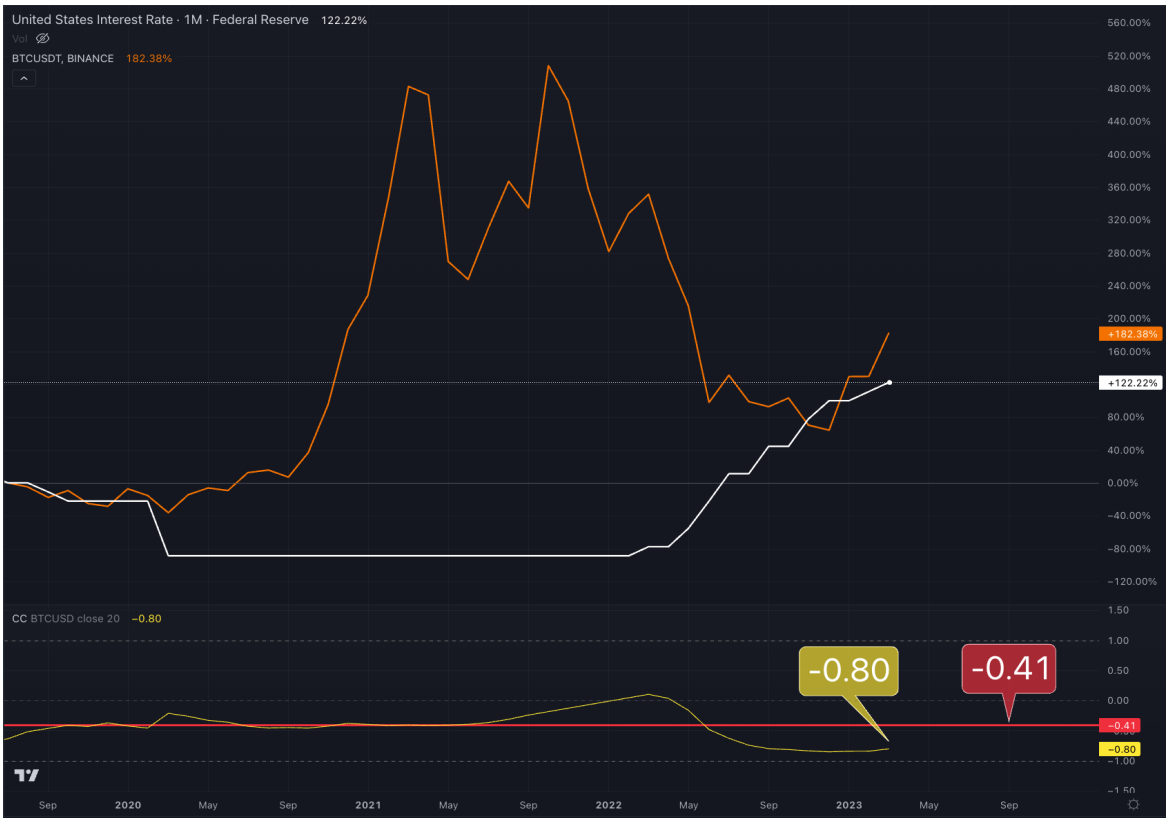


Figure 2.1.2 Fed interest rate (monthly)	Figure 2.1.3 BTC / USDT (monthly)
	

Figure 2.2.1 Fed Rate Hikes: 2022-2023 Taming Inflation					
FOMC Meeting Date (YYYY-MM-DD)	Federal Funds Rate (Previous)	Federal Funds Rate (Actual)	Federal Funds Rate (Forecast)	BTC / USDT price (starting point) (Candlestick opening)	BTC / USDT price (farthest point reached within 12 hours)
2023-03-22	4.75%	5.00%	5.00%	28516.34	26601.80
2023-02-01	4.50%	4.75%	4.75%	23075.53	24225.00
2022-12-14	4.00%	4.50%	4.50%	18222.21	17314.00
2022-11-02	3.25%	4.00%	4.00%	20438.28	20031.24
2022-09-21	2.50%	3.25%	3.25%	19494.80	18125.98
2022-07-27	1.75%	2.50%	2.50%	21618.72	24106.96
2022-06-15	1.00%	1.75%	1.50%	21117.26	22995.73
2022-05-04	0.50%	1.00%	1.00%	38395.31	36001.00
2022-03-16	0.25%	0.50%	0.50%	40426.70	41478.82

Figure 2.2.2 Fed Rate Cuts: 2019 Mid-Cycle Adjustment & 2020 Coping with Covid-19					
FOMC Meeting Date (YYYY-MM-DD)	Federal Funds Rate (Previous)	Federal Funds Rate (Actual)	Federal Funds Rate (Forecast)	BTC / USDT price (starting point) (Candlestick opening)	BTC / USDT price (farthest point reached within 12 hours)
2020-03-15	1.25%	0.25%	NA	5302.78	4444.00
2020-03-03	1.75%	1.25%	NA	8717.89	8847.99
2019-10-30	2.00%	1.75%	1.75%	13518.26	14100
2019-09-18	2.25%	2.00%	2.00%	10185.84	9653
2019-07-31	2.50%	2.25%	2.25%	10024.48	10341.78

Figure 2.2.3 Fed Rate Hikes: 2022-2023 Taming Inflation					
FOMC Meeting Date (YYYY-MM-DD)	Rate Change (Actual) (basis point)	Difference between Actual & Forecast Rate Change (Actual - Forecast)	BTC / USDT price changes (farthest point reached within 12 hours)	BTC / USDT price changes percentage (within 12 hours)	BTC / USDT Up/Down Volume (within 2 hours) (Unit: K)
2023-03-22	+25.00	0.00%	-1914.54	-0.067138	-67.383
2023-02-01	+25.00	0.00%	+1149.47	+0.049813	+14.761
2022-12-14	+50.00	0.00%	-908.21	-0.049841	-49.254
2022-11-02	+75.00	0.00%	-407.04	-0.019916	-53.914
2022-09-21	+75.00	0.00%	-1368.82	-0.070215	-32.913
2022-07-27	+75.00	0.00%	+2488.24	+0.115097	+42.125
2022-06-15	+75.00	0.25%	+1878.47	+0.088954	+1.114
2022-05-04	+50.00	0.00%	-2394.31	-0.062359	+8.213
2022-03-16	+25.00	0.00%	+1052.12	+0.026025	+2.672
Mean	+52.78		-47.18	+0.001158	-14.953

Figure 2.2.4 Fed Rate Cuts: 2019 Mid-Cycle Adjustment & 2020 Coping with Covid-19					
FOMC Meeting Date (YYYY-MM-DD)	Rate Change (Actual) (basis point)	Difference between Actual & Forecast Rate Change (Actual - Forecast)	BTC / USDT price changes (farthest point reached within 12 hours)	BTC / USDT price changes percentage (within 12 hours)	BTC / USDT Up/Down Volume (within 2 hours) (Unit: K)
2020-03-15	-100	NA	-858.78	-0.161949	+0.095
2020-03-03	-50	NA	+130.10	+0.014923	-0.575
2019-10-30	-25	0.00%	+581.74	+0.043034	+1.374
2019-09-18	-25	0.00%	-532.84	-0.052312	+3.247
2019-07-31	-25	0.00%	+317.30	+0.031653	-1.447
Mean	-45.00		-72.50	-0.024930	+0.539

Figure 2.2.5 Correlation (2022-2023 Taming Inflation)

	Rate Change (Actual) (basis point)	*BTC / USDT price changes percentage (within 12 hours)*
Rate Change (Actual) (basis point)	1	
BTC / USDT price changes percentage (within 12 hours)	-0.350277	1

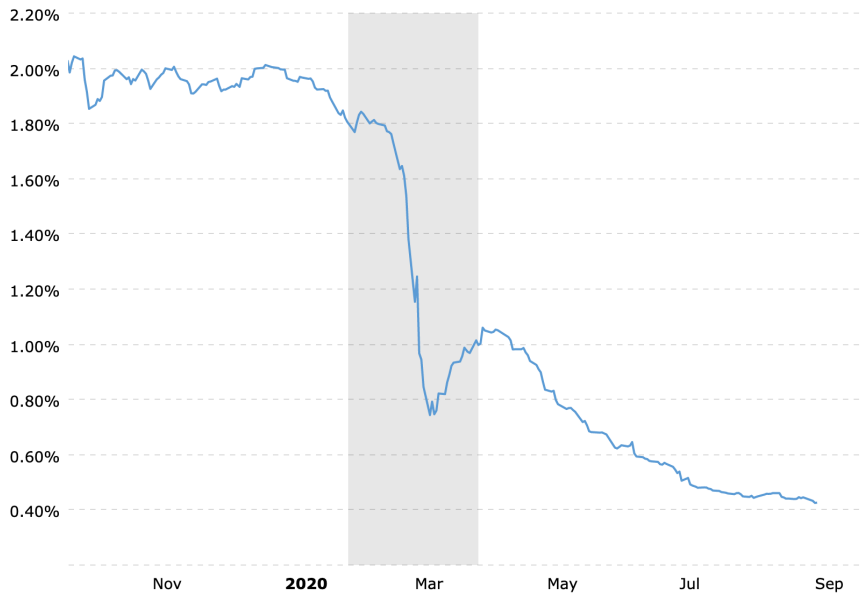
Figure 2.2.6 Fed Rate Cuts: 2019 Mid-Cycle Adjustment & 2020 Coping with Covid-19

Correlation (2019 Mid-Cycle Adjustment & 2020 Coping with Covid-19)	*Rate Change (Actual) (basis point)*	*BTC / USDT price changes percentage (within 12 hours)*
Rate Change (Actual) (basis point)	1	
BTC / USDT price changes percentage (within 12 hours)	-0.328066	1

Figure 2.2.7 Relationship between Fed interest rate change and bitcoin price change percentage (within 12 hours)

Rate Change (Actual) (basis point)	*BTC / USDT price changes percentage (within 12 hours)*
positive	negative
negative	positive

Figure 3.2.2 LIBOR rate in 2020



References

Chaim, P., Laurini, M. P., & Melo, L. F. (2020). Bitcoin and US interest rates: A causality analysis. Physica A: Statistical Mechanics and its Applications, 547, 124511. https://doi.org/10.1016/j.physa.2020.124511

Katsiampa, P. (2019). Volatility estimation for Bitcoin: A comparison of GARCH models. Economics Letters, 174, 118-121. https://doi.org/10.1016/j.econlet.2018.11.032

MicroStrategy. (2020, December 9). MicroStrategy completes $650 million offering of convertible senior notes due 2025. https://www.microstrategy.com/content/dam/website-assets/collateral/financial-documents/press-release-archive/MicroStrategy-Completes-650-Million-Offering-of-Convertible-Senior-Notes-Due-2025.pdf

Rennison, J. (2023, March 22). How the banking crisis has had the same effect as a fed rate increase. The New York Times. Retrieved April 14, 2023, from https://www.nytimes.com/2023/03/22/business/banking-crisis-interest-rates-lending.html

Zahn, M. (2023, March 21). The banking crisis threatens the Fed's inflation fight. Here's how. ABC News. Retrieved April 14, 2023, from https://abcnews.go.com/US/delicate-balance-banking-crisis-fight-inflation/story?id=97984223#:~:text=The%20rapid%20spike%20in%20interest,devastating%2048%2Dhour%20bank%20run.

Investing.com. Interest rate decision. Retrieved from https://www.investing.com/economic-calendar/interest-rate-decision-168

CoinDesk. (2016). Bitcoin price dips below $400 on back of falling yuan and strengthening dollar. Retrieved from

https://www.coindesk.com/markets/2016/03/04/bitcoin-price-dips-closer-to-400-following-network-disruptions/

Royal, J. (2022). How Fed rate hikes could impact stocks, according to an expert. Retrieved from https://finance.yahoo.com/news/fed-rate-hikes-impact-stocks-180001470.html

Rubin, J. (2023). Bitcoin Seesaws Around $28K as Investors Await Fed Interest Rate Decision. Retrieved from https://www.coindesk.com/markets/2023/03/20/bitcoin-seesaws-below-28k-as-investors-eye-fed-interest-rate-decision/

Pechman, M. (2023). How do the Fed's interest rates impact the crypto market? . Retrieved from https://cointelegraph.com/news/how-do-the-fed-s-interest-rates-impact-the-crypto-market

Group 58: RYO Hayahiko (3035712987) , Wat Ka Hin (3035708716), Tang Kai Chi (3035806520)