BTC Price History Analysis Visualized
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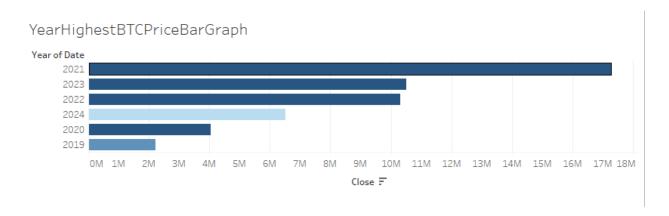
Introduction

The trajectory of Bitcoin (BTC) has captured the interest of observers, experts, and fans globally, as its extraordinary ascent to fame is transforming the financial terrain. Using Tableau graphics, this paper performs a thorough analysis of the history of Bitcoin prices from 2019 until 2024. This study aims to identify underlying trends and patterns by analyzing important indicators such closing prices, highs/lows, trading volume, and market capitalization. By doing so, it will provide investors and stakeholders with important information that will help them navigate the volatile cryptocurrency market. Comprehending the historical performance of Bitcoin is essential for making well-informed decisions and adopting a strategic stance within the dynamic digital asset market.

Results Analysis

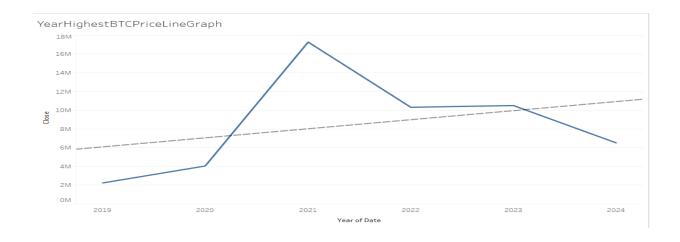
Closing Price Analysis

Figure 1: Bar Graph Summarizing BTC Closing Prices over the 5 Years



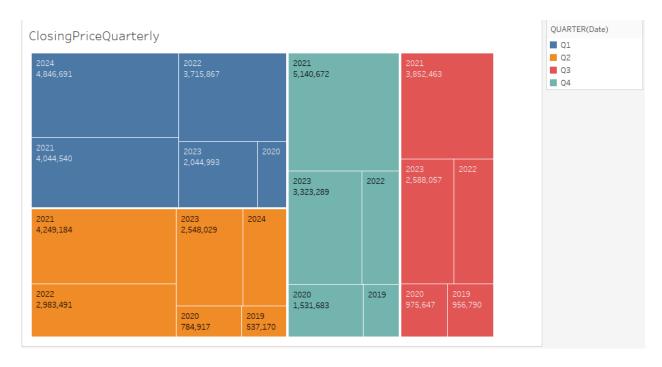
From figure 1 above, it can be seen that Bitcoin recorded higher prices in 2021 over a couple of months. This highest price record was however broken in 2024, March 14, when Bitcoin recorded its all-time high price of 73607.76.

Figure 2: Line Chart Indicating Trend of the BTC Price over the 5 Years



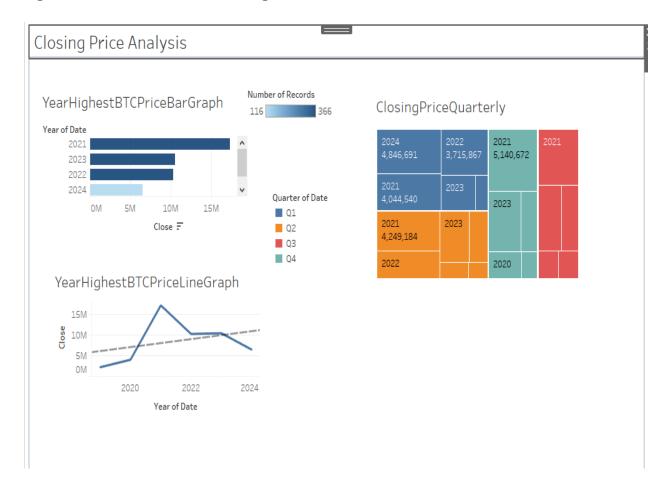
From figure 2, the line chart shows that Bitcoin has had an upward trend from 2019 to 2021 when Bitcoin attained its all time high and then the price started to drop significantly. From the trend, the price dropped significantly to 4684.824 in March 2020 which can be due to Covid-19. Therefore, 3rd March 2020 was the best time to buy Bitcoin because this is when Bitcoin was at its lowest between 2019 and 2024.

Figure 3: A Tree Map Illustrating BTC Price Quarterly over the 5 Years



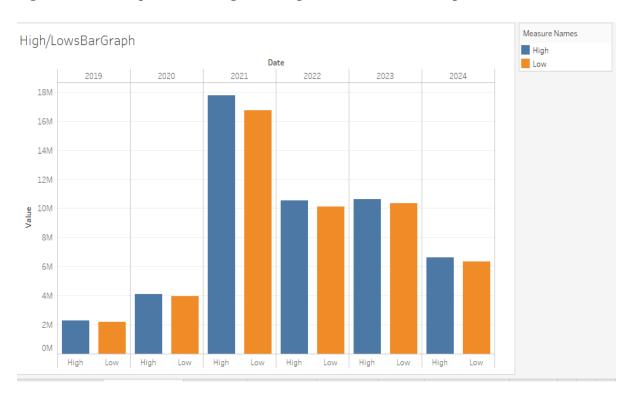
From figure 3, the tree map shows that generally, quarter 1 has been recording the highest Bitcoin prices, followed by quarter 2, then quarter 4 and lastly quarter 3 has been recording the lowest Bitcoin prices. Therefore, these results show that generally, the best time of the year to buy Bitcoin is during quarter 3.

Figure 4: Dashboard for the Closing Price



Highs/Lows

Figure 5: Bar Graph Illustrating BTC Highs and Lows over the period 2019-2024



From figure 5, the bar graph shows that BTC had most of its highs in the year 2021 a year in which BTC recorded its all time high due to the BTC halving event that happened in 2021. The all-time high recorded during this halving period was 67669.97 on 11th September, 2021. However, this all-time record has been broken this year, 2024 on 14th March, when BTC price hit a record of 73607.76 due to the current BTC halving event.

The bar graph also shows that BTC recorded most of its low prices in years 2019 and 2020, with 3rd March, 2020 recording the lowest price of 4684.824.

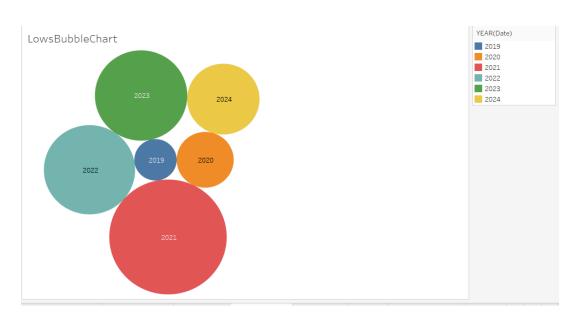
HighsAreaChart

18M
16M
14M
12M
8M
6M
4M
2019
2020
2021
2022
2023
2024

Figure 6: Area Chart Illustrating BTC Highs over the period 2019-2024

This area chart supports the results explained in figure 5 above.

Figure 7: Bubble Chart Illustrating BTC Lows over the period 2019-2024



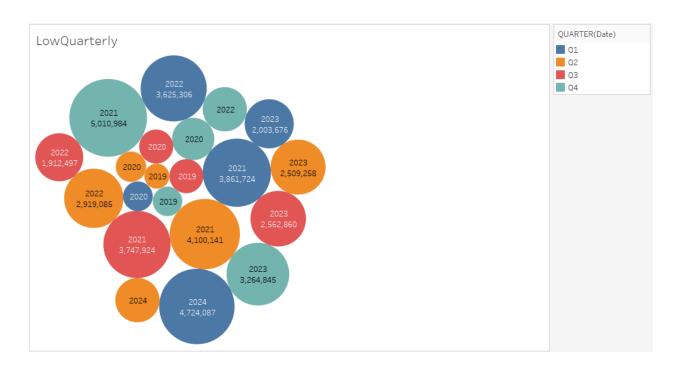
In figure 7, the bubble chart supports the findings that BTC recorded its lowest prices in the years 2019 and 2020 and its highest prices in the year 2021.

QUARTER(Date) HighQuarterly Q1 Q2 Q3 Q4 2022 2021 5,253,830 2020 2019 2019 4,396,283 2023 3,366,814 2024 2024 4,933,413

Figure 8: Bubble Chart Illustrating BTC Highs over the period 2019-2024 (Quarterly)

From figure 8, the bubble chart illustrates that BTC has been recording its highest prices in quarter 1, followed by quarter 2, then quarter 4 and lastly quarter 3 has been recording the lowest highs.

Figure 9: Bubble Chart Illustrating BTC Lows over the period 2019-2024 (Quarterly)



From figure 9, the bubble chart illustrates that quarter 3 recorded the lowest lows, followed by quarter 4, then quarter 2 and lastly quarter 1.

Figure 10: A Dashboard Illustrating Highs/Lows Analysis Summary

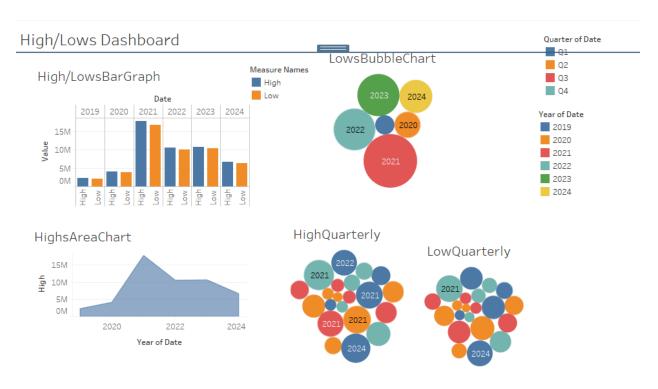


Figure 11: A Bar Graph Illustrating BTC Trading Volume over the Years 2019-2024

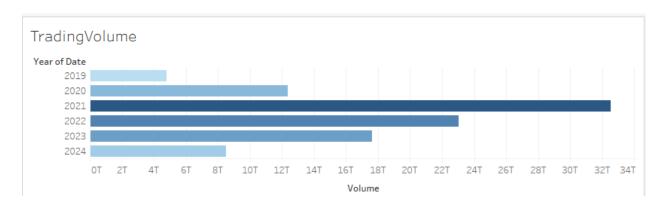
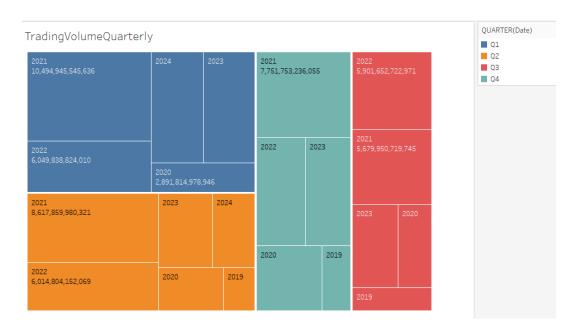


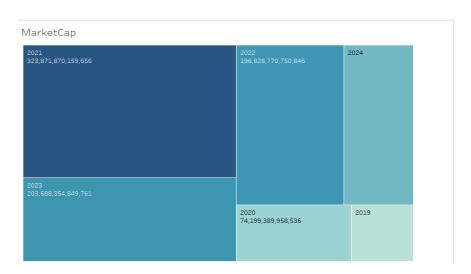
Figure 12: A Tree Map Illustrating Quarterly BTC Trading Volume over the Years 2019-2024



From figure 11, it can be seen that the year 2021 had the highest BTC trading volume and on the other hand, 2019 recorded the least BTC trading volume. From figure 12, Q1 recorded the highest BTC trading volume, followed by quarter 2, then quarter 4 and lastly quarter 3 recorded the least BTC trading volume.

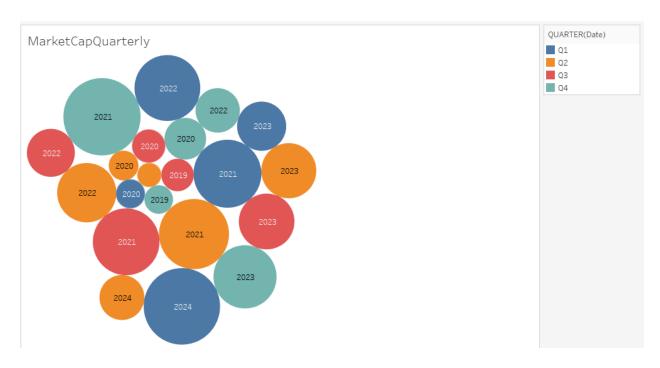
Market Cap

Figure 13: A Tree Map Illustrating BTC Market Cap over the period 2019-2024



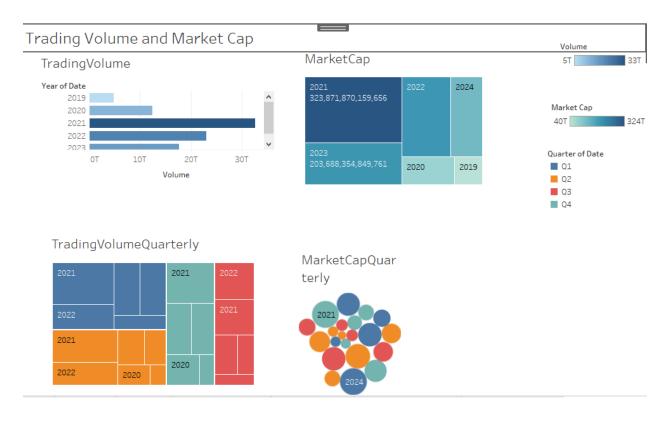
From figure 13 above, the Tree Map illustrates that 2021 recorded the highest market cap, followed by 2023, then 2022, then 2024, then 2020 and lastly 2019.

Figure 14: A Bubble Chart Illustrating Quarterly BTC Market Cap over the period 2019-2024



From figure 14, Q1 recorded the highest BTC market cap, followed by quarter 2, then quarter 4 and lastly quarter 3 recorded the least BTC market cap.

Figure 15: A Dashboard for BTC Trading Volume and Market Cap for the Period 2019 to 2024



Discussion

Utilizing Tableau visuals to analyze the price history of Bitcoin (BTC) offers important new insights into the trends and patterns that have been seen over the course of the five-year period between 2019 and 2024. Deeper exploration of the findings' ramifications and their applicability to bitcoin market participants and investors is the goal of this discussion section.

Results Interpretation

Figures 1 through 15 display a range of visualizations that illustrate different facets of Bitcoin's performance, such as closing prices, highs and lows, trading volume, and market capitalization. The analysis highlights a number of significant trends, including the following: **Closing Price Analysis**: BTC saw a notable price spike in 2021, which culminated in its all-time high on March 14, 2024. The upward trajectory from 2019 to 2021 highlights the increasing interest and investment in BTC, while the subsequent decline may be the result of market corrections or outside factors like the COVID-19 pandemic (Naeem et al., 280-306).

Seasonal Trends: BTC prices follow distinct seasonal patterns, with quarters 1 and 2 typically recording higher prices than quarters 3 and 4. Curiously, quarter three constantly displays lower pricing, indicating a beneficial entry point for purchasing Bitcoin, making it seem like a viable chance for investors.

Highs/Lows Analysis: The BTC highs and lows graphic draws attention to important turning points, including the record highs reached at the 2021 and 2024 BTC halving events (Fabus et al., 2023). On the other hand, the low points that were reached in 2019 and 2020—in particular, the lowest price that was noted on March 3, 2020—might provide information on investing strategies and market cycles.

Analysis of market capitalization and trading volume provide important background for comprehending the liquidity of bitcoin and the general dynamics of the market. The increase in trading volume in 2021 is a sign of increased activity and investor involvement, which is consistent with the general public's rising acceptance of cryptocurrencies. In the same way, market capitalization patterns highlight Bitcoin's strength and leadership in the world of digital assets.

Implications of the Results

The analysis's conclusions have important ramifications for all parties involved in the cryptocurrency industry, including institutional players, policymakers, and individual investors.

Investment Strategy Optimization: For investors looking to maximize their investment strategies, the trends in the historical price of Bitcoin offer important information. Investors can possibly maximize profits and minimize risks by properly timing their entry and exit points by recognizing patterns like historical lows and seasonal variations (Othman et al., 2020, pp. 314-330). Furthermore, analyzing highs and lows provides vital information for putting strategies like buy-and-hold or profit-taking into practice that are specific to each investor's risk tolerance and investing goals.

Risk management and diversification: Effective risk management requires an understanding of the inherent volatility of Bitcoin markets (Janjua et al., 2024, p. 67). Finding past lows—especially during times of market stress like the COVID-19 pandemic—highlights chances for a calculated build-up of Bitcoin assets at a discount. Furthermore, diversification across a range of asset classes, such as bonds, conventional equities, and cryptocurrencies, can improve portfolio resilience against market swings and lessen the inherent volatility of bitcoin.

Market Sentiment and Investor Confidence: Important information on market sentiment and investor confidence in Bitcoin can be gained by analyzing trading volume and market capitalization (Kapar and Olmo, 2021, pp. 45-63). Increased investor participation and market activity are reflected in the spike in trading volume that is seen during specific times, indicating that BTC is becoming more widely accepted as a viable asset class. In a similar vein, changes in market capitalization highlight Bitcoin's leadership and significance within the larger ecosystem of digital assets, bolstering investor confidence and long-term faith in its capacity as a medium of exchange and store of value.

Regulatory and Policy Considerations: Policymakers and regulatory bodies must give serious thought to the changing regulatory environment surrounding cryptocurrency. In order to promote innovation, maintain market integrity, and safeguard investor interests, regulatory decisions and policy interventions are informed by empirical evidence of the market dynamics and performance provided by the examination of Bitcoin's price history (Magnuson, 2018, p. 159). It

is possible for regulators to create well-informed rules that strike a balance between innovation, investor protection, and systemic stability by having a thorough grasp of how regulatory actions affect Bitcoin prices and market liquidity.

The findings highlight the complex dynamics of Bitcoin price dynamics and the wide-ranging effects they have on investors, authorities, and the larger financial system. Stakeholders may traverse the bitcoin market with more assurance, knowledgeable decision-making, and resilience in the face of changing market conditions by utilizing these insights.

Recommendations

Several conclusions and suggestions for investors and stakeholders can be made in light of the analysis:

Timing of Investment: Investors may choose to use the seasonal trends that have been noted to best position their entry and exit points. The third quarter may present chances to purchase Bitcoin at a discount.

Risk management: Diversification and dollar-cost averaging are two wise risk management techniques that can help reduce downside risks and increase long-term returns given the intrinsic volatility of cryptocurrency markets (Honerod-Bentsen and Knutli, 2023).

Market Awareness: By keeping a close eye on key market indicators like trade volume and market capitalization, one can gain important insights into the mood of the market and possible price fluctuations, which in turn helps one make well-informed decisions (Telli and Chen, 2020, p. 124913).

Volatility Prediction: To give a more thorough grasp of the dynamics of the cryptocurrency market, future research might examine the effects of macroeconomic variables, regulatory changes, and technological breakthroughs on BTC pricing (Baur and Dimpfl, 2021, pp. 2663-2683).

Other Assets Comparisons: Furthermore, comparisons with other cryptocurrencies and conventional asset classes may provide light on the relative merits and advantages of diversification for Bitcoin as an investment vehicle.

Conclusion

Utilizing Tableau visuals to analyze Bitcoin price history provides insightful information about the dynamics of the cryptocurrency market. Even if past performance cannot predict future outcomes, investors can still benefit from using the trends and patterns found to help them navigate the always changing world of digital assets. Investors can take informed decisions to successfully manage risks and capitalize on opportunities in this dynamic and rapidly moving market environment by comprehending the fundamental variables influencing Bitcoin prices and market behavior.

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