

# A COMPLETE OBSERVATION AND SUMMARY ANALYSIS OF BITCOIN HISTORICAL DATA (Jan 2012 - March, 2023)

## 1. Descriptive Statistical Analysis:

	Open	High	Low	Close	Volume_(BTC)	Volume_(Currency)	Weighted_Price	Year
count	3613769	3613769	3613769	3613769	3613769	3613769	3613769	3613769
mean	6009	6013	6004	6009	9	41762	6008	2016
std	8996	9003	8988	8996	30	151824	8995	2
min	3	3	1	1	0	0	3	2011
25%	443	444	443	443	0	452	443	2015
50%	3596	3598	3595	3597	1	3810	3596	2017
75%	8627	8632	8621	8627	7	25698	8627	2019
max	61763	61781	61673	61781	5853	13900672	61716	2021

### Observations and Summary

The dataset provides a comprehensive overview of cryptocurrency market trends, specifically focused on Bitcoin, with descriptive statistics revealing key insights.

**Mean:** The mean values for Open, High, Low, and Close suggest a relatively stable market, hovering around \$6000.

**Std:** However, the substantial standard deviations (std) indicate considerable volatility.

**Min to Max:** The range from the minimum to maximum values showcases the cryptocurrency's evolution since 2011, with a notable surge in 2017, as indicated by the median values.

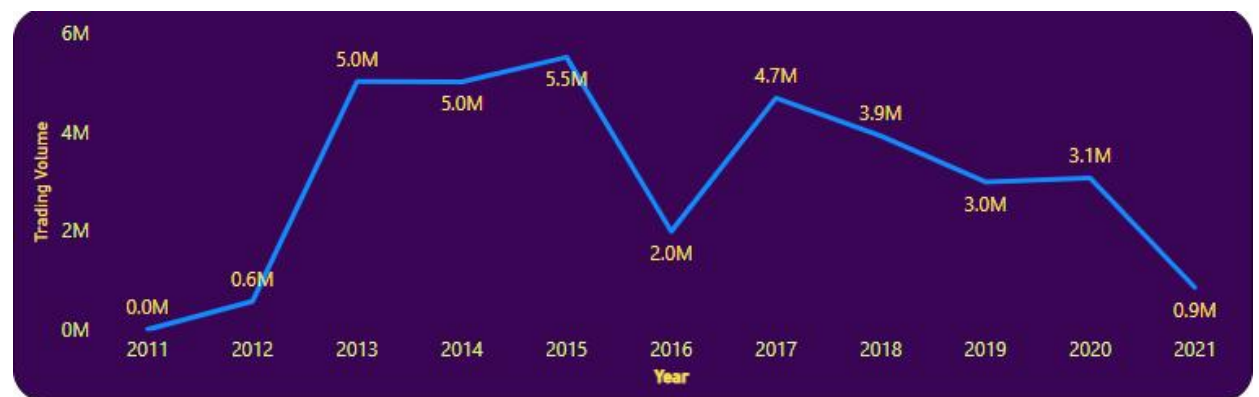
**25% to 75%:** The Volume statistics underline the varying degrees of market participation, with a median Volume\_(BTC) of 1 but a maximum of 5853, highlighting instances of heightened trading activity.

**The Weighted\_Price**, representing the average price weighted by volume, aligns closely with the mean values for Open, High, Low, and Close.

The temporal distribution of the data, illustrated by the Year statistics, spans from 2011 to 2021, capturing the cryptocurrency's journey over the past decade.

These statistics collectively paint a subtle picture of Bitcoin's market dynamics, reflecting both stability and volatility within the observed period.

## 2. Trading Volume By Year:



### Observations and Summary

This data represents the annual trading volume in Bitcoin (BTC) over the years, spanning from 2011 to 2021. Below is a summary of the trading volumes for each year:

**2011:** The trading volume in 2011 was approximately 95.32 BTC.

**2012:** The trading volume saw a significant increase in 2012, reaching around 567,948 BTC.

**2013:** The trend of increased trading volume continued in 2013, with the volume surging to approximately 5.03 million BTC.

**2014:** The trading volume in 2014 remained consistent with the previous year, hovering around 5.02 million BTC.

**2015:** The year 2015 witnessed the peak in trading volume, reaching approximately 5.53 million BTC.

**2016:** There was a notable decline in trading volume in 2016, with the volume dropping to around 1.99 million BTC.

**2017:** The trading volume rebounded in 2017, reaching approximately 4.70 million BTC.

**2018:** The trading volume decreased in 2018, amounting to about 3.93 million BTC.

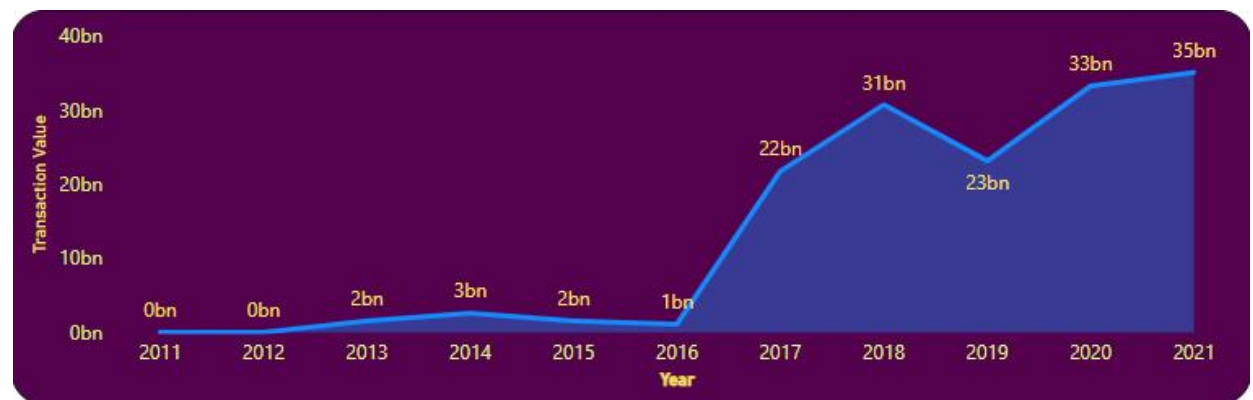
**2019:** Further decline was observed in 2019, with the trading volume dropping to around 2.99 million BTC.

**2020:** The year 2020 saw a slight increase in trading volume, reaching approximately 3.07 million BTC.

**2021:** The trading volume experienced a notable decrease in 2021, amounting to around 851,118 BTC.

In summary, the Bitcoin trading volume exhibited fluctuations over the years, influenced by market dynamics, technological developments, and global events. The years 2012 and 2013 stand out with substantial increases in trading activity, while subsequent years showed varying degrees of volatility and stabilization. This data provides insights into the evolving dynamics of the cryptocurrency market during this period.

### 3. Transaction Value By Year:



#### Observations and Summary

The data on transaction value by year provides valuable insights into the evolution of Bitcoin's financial activity over the past decade. Here are key observations:

**Early Years (2011-2015):** The transaction values in the early years, particularly in 2011, 2012, and 2015, were relatively modest, ranging from hundreds of millions to a few billion USD. This suggests a developing and nascent stage for Bitcoin as a financial asset during this period.

**Significant Increase in 2013-2014:** The year 2013 witnessed a notable uptick in transaction value, reaching 1.55 billion USD, and this trend continued in 2014, reaching 2.62 billion USD. This surge aligns with increased adoption and recognition of Bitcoin within the financial landscape.

**Stability and Fluctuations (2015-2019):** From 2015 to 2019, transaction values fluctuated but remained within the range of approximately 1 billion to 3 billion USD. This period reflects a level of stability in Bitcoin transactions, with variations possibly influenced by market sentiment, regulatory developments, and technological advancements.

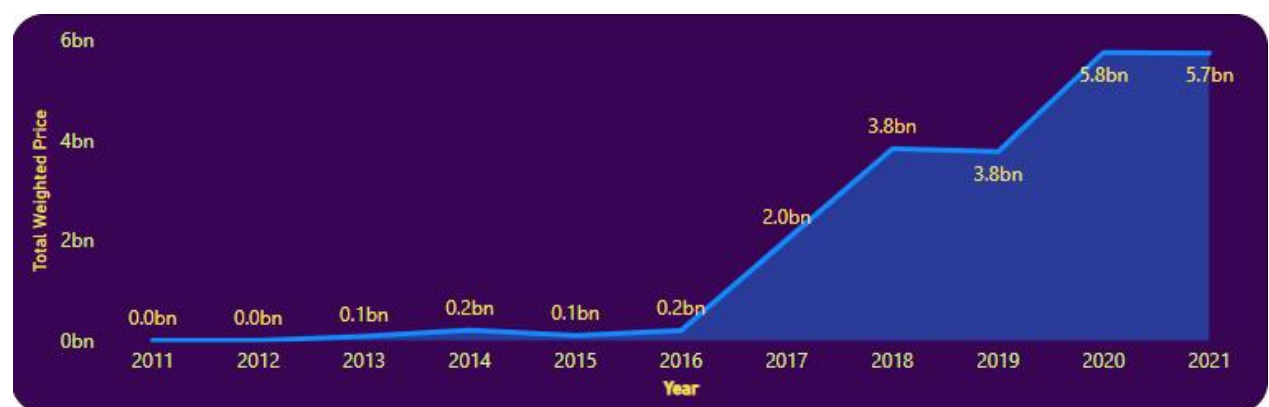
**Peak in 2017:** The year 2017 marked a significant turning point, with a remarkable surge in transaction value to 21.78 billion USD. This substantial increase aligns with the broader cryptocurrency boom during that period, characterized by heightened market interest, increased institutional participation, and skyrocketing Bitcoin prices.

**Sustained High Transaction Values (2018-2021):** Despite fluctuations, the years 2018, 2019, 2020, and 2021 maintained high transaction values, ranging from 23.16 billion to 35.12 billion USD. This suggests a sustained and growing interest in Bitcoin, with increased financial activity in the cryptocurrency market.

**Year 2021:** The data for 2021 indicates a transaction value of 35.12 billion USD, reinforcing the ongoing prominence of Bitcoin in the financial landscape. The sustained high transaction values in recent years highlight Bitcoin's role as a significant asset class and a store of value.

In summary, the observed transaction values depict the dynamic nature of Bitcoin's financial activity, with notable spikes in 2013, 2017, and sustained high values in subsequent years. These trends may be indicative of evolving market dynamics, increased adoption, and the growing integration of Bitcoin into the broader financial ecosystem.

#### 4. Weighted Price By Year:



#### Observations and Summary

The data on weighted prices by year provides insights into the valuation dynamics of Bitcoin over the past decade. Here are key observations:

**Early Years (2011-2015):** In the early years, from 2011 to 2015, the weighted prices were relatively modest, ranging from approximately 18 USD in 2011 to around 102 million USD in 2015. This period suggests a gradual establishment of Bitcoin's valuation with a significant increase in 2013, reflecting growing market recognition.

**Notable Increase in 2013-2016:** A significant increase in weighted prices is observed from 2013 to 2016, reaching a peak of approximately 1.97 billion USD in 2016. This period likely reflects a combination of factors, including increased adoption, heightened market interest, and the maturation of Bitcoin as a financial asset.

**Peak in 2017:** The year 2017 stands out with a substantial peak in weighted prices, reaching 2.01 billion USD. This aligns with the broader cryptocurrency boom during

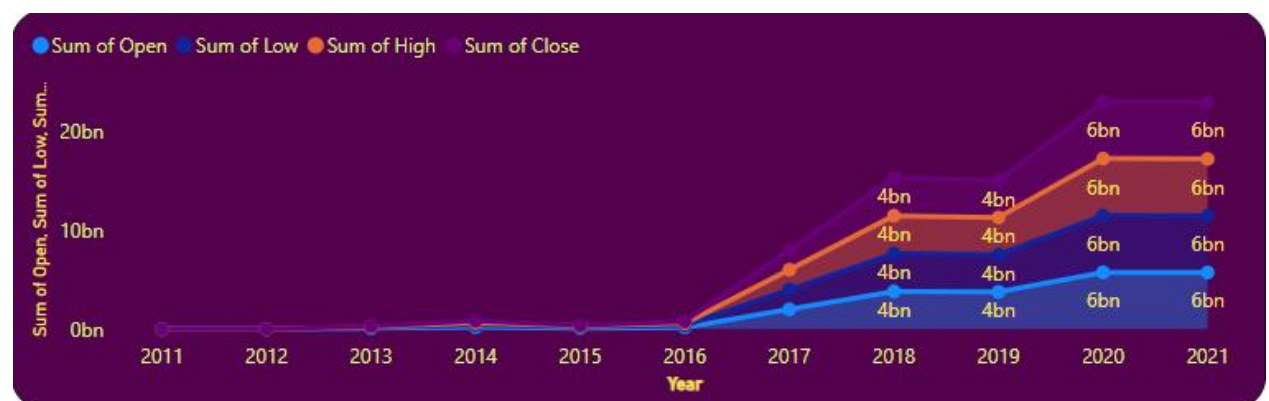
that period, characterized by heightened market speculation and increased institutional interest.

**Sustained High Valuations (2018-2021):** From 2018 to 2021, weighted prices remained consistently high, ranging from 3.77 billion to 5.76 billion USD. This sustained high valuation suggests that Bitcoin has maintained its status as a significant and valuable asset, attracting continued investor interest.

**Year 2020-2021:** The data for 2020 and 2021 indicates relatively stable weighted prices, with both years hovering around the 5.76 billion USD mark. This suggests that Bitcoin's valuation has reached a level of stability after the peak observed in 2017.

In summary, the observed trends in weighted prices reflect the evolving perception and valuation of Bitcoin in the financial markets. The peak in 2017 marked a period of exceptional valuation, while the subsequent years indicate sustained high levels, showcasing Bitcoin's resilience and recognition as a valuable asset class. The relatively stable valuations in recent years may suggest a maturation of the cryptocurrency market.

## 5. Total Open, Low, High, Close Price By Year:



### Observations and Summary

The provided data represents the summary statistics for Bitcoin price levels (Open, Low, High, and Close) for each year from 2011 to 2021. Here are key observations:

**Open Price:** The Open price shows a significant increase over the years, starting from approximately 18 USD in 2011 and reaching over 5.7 billion USD in 2021. There is a consistent upward trend, reflecting the overall growth and interest in Bitcoin during this period.

**Low Price:** The Low price exhibits a similar trend to the Open price, indicating that even the lowest daily prices have increased substantially. The Low price in 2011 was around 17.86 USD, while in 2021, it reached approximately 5.74 billion USD.

**High Price:** The High price reflects the highest daily trading price of Bitcoin, and it follows a consistent upward trajectory. From around 17.93 USD in 2011, the High price surged to about 5.75 billion USD in 2021.

**Close Price:** The Close price, representing the final trading price of the day, also shows a notable increase over the years. Starting from 17.93 USD in 2011, the Close price reached approximately 5.75 billion USD in 2021.

**Overall Trend:** The data suggests a remarkable long-term bullish trend in Bitcoin prices, with each year's metrics significantly surpassing the previous year. The cryptocurrency market, as reflected in Bitcoin prices, has experienced substantial growth and attention over the analyzed period.

It is important to note that these figures represent the aggregated summary for each year and provide an overview of the broader trend in Bitcoin prices. Individual factors, market events, and external influences can contribute to fluctuations within each year. The data underscores the dynamic and evolving nature of the cryptocurrency market during the specified timeframe.