



Cryptocurrency Comparison

A Comparison between Bitcoin vs.
Other Cryptocurrencies and S&P 500



Questions

- 1. How has the cryptocurrency performed against the stock market?**
 - i. Compare the top 3 cryptocurrencies, Bitcoin, Ethereum and Litecoin against S&P**
- 2. How has the top cryptos like Ethereum and Litecoin performed compared to Bitcoin**
- 3. Can we spot a change in momentum in Bitcoin and how early?**

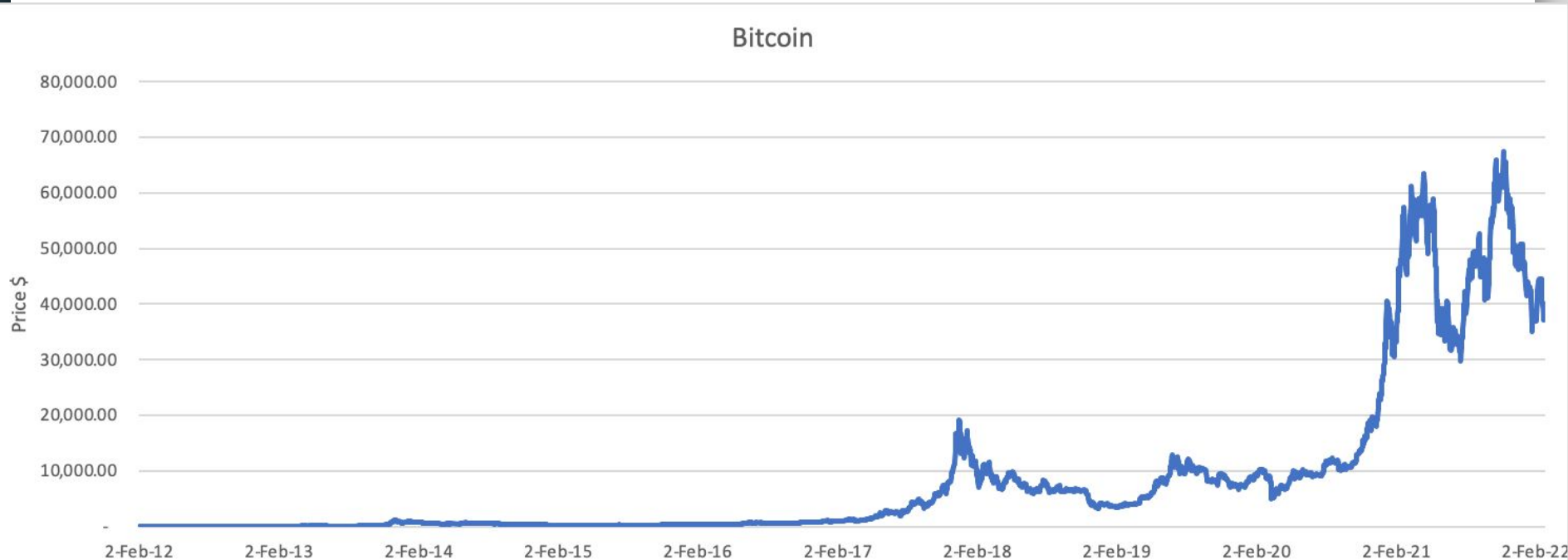
Data

1. **Bitcoin(BTC): Bitcoin is a decentralized digital currency created in January 2009.**
2. **Ethereum (ETH): Ethereum is a platform powered by blockchain technology and is called ether, or ETH. Ethereum is second in market value only to Bitcoin. It was created on July 30th 2015.**
3. **Litecoin (LTC): Launched in 2011, was among the first cryptocurrencies to follow in the footsteps of Bitcoin and has often been referred to as “silver to Bitcoin’s gold.”**

The data was downloaded from [investing.com](https://www.investing.com). The oldest data that I could download for the Etherium is from 2016.

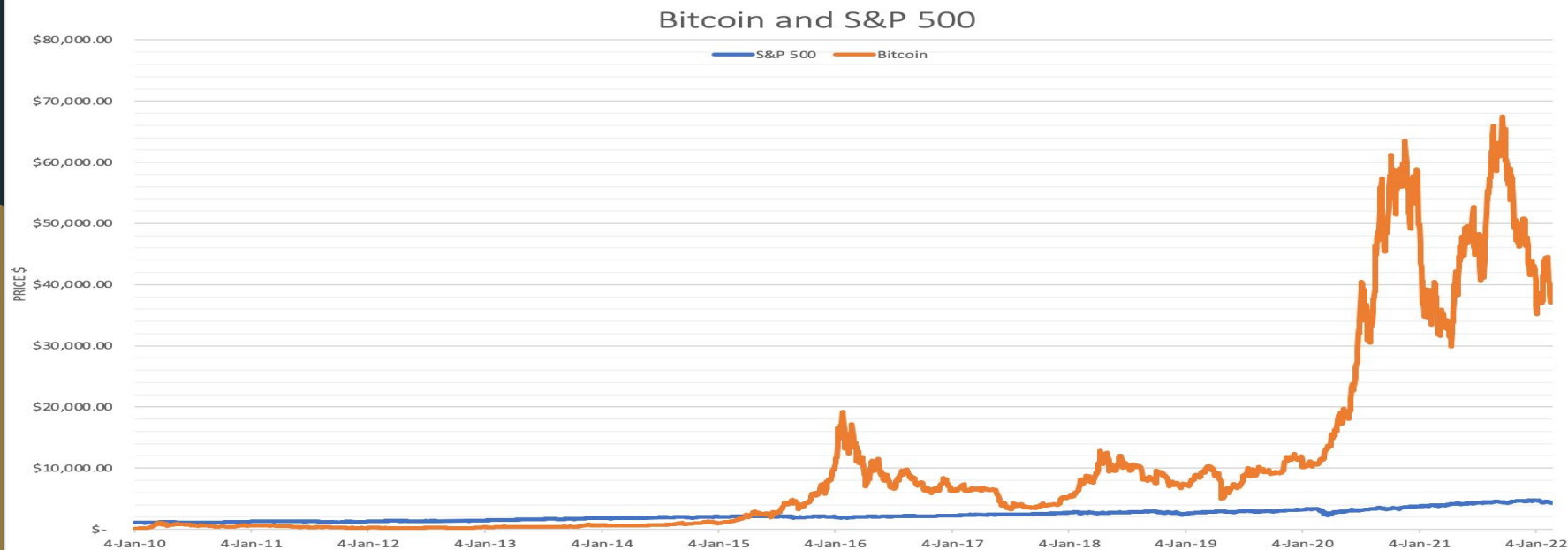
Bitcoin

This is a graph for Bitcoin price since 2012. Its price went up from about \$6 to about \$40,000 from in 10 years, which is what made this cryptocurrency so popular. However, there is a lot of volatility and large swings in price. In February 2021 the price went from \$60,000 down to \$30,000 in a few months.



Bitcoin compared to the S&P 500

S&P 500 has a continuous upward trend, but compared to Bitcoin the difference is huge.

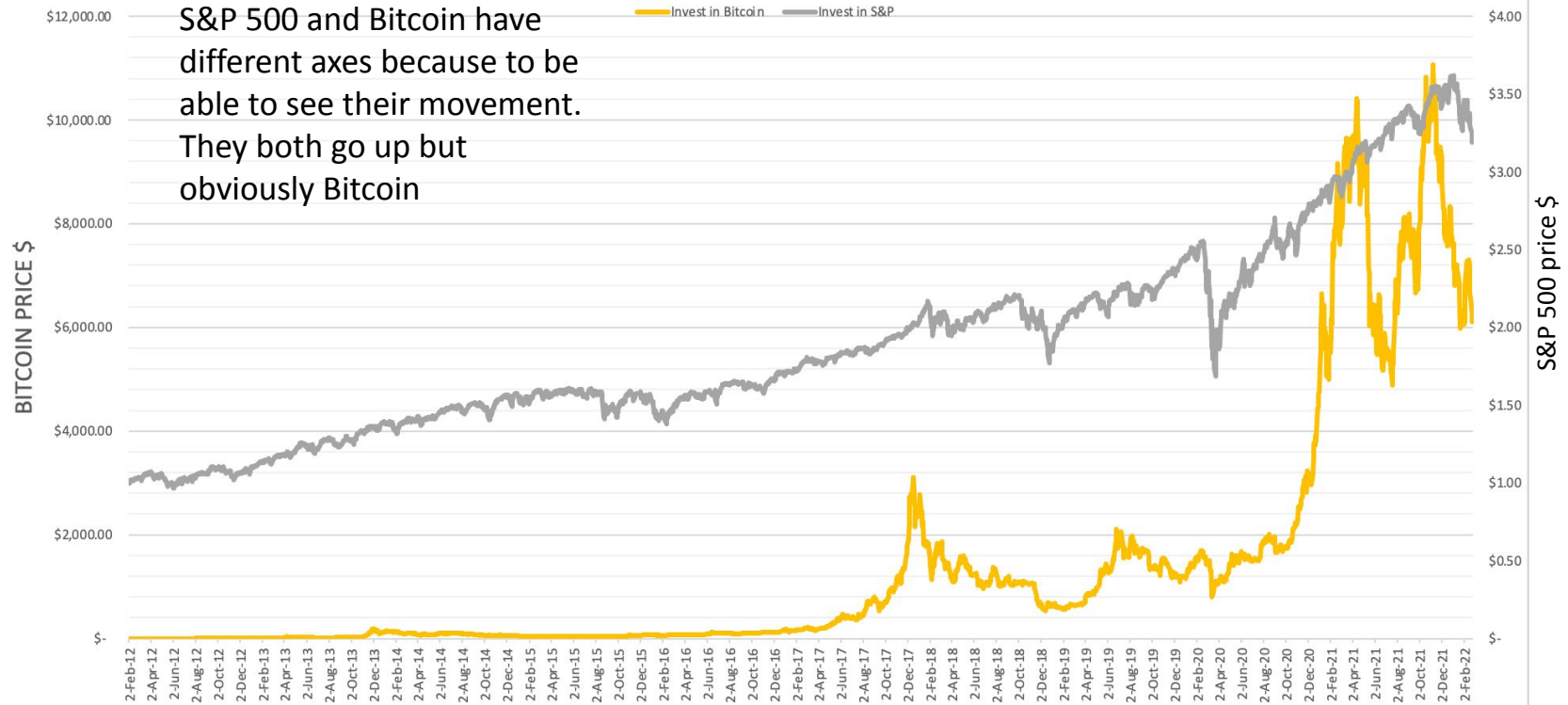


What if I invested \$1 in 2016 in Bitcoin and S&P 500, how much would my dollar be worth in 2022.

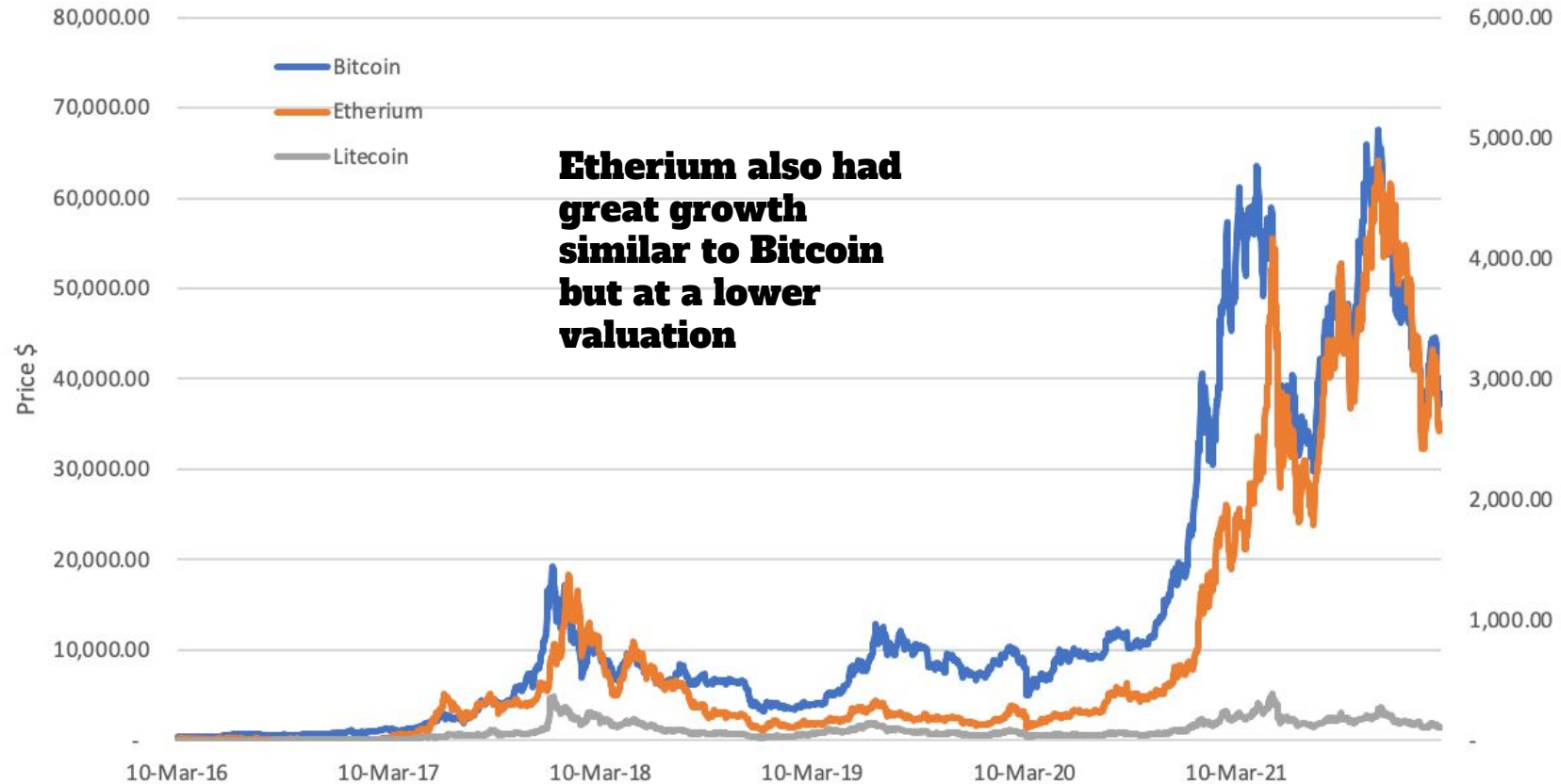
- ☐ **If I invested in S&P my dollar would be worth about \$3**
- ☐ **If I invested in Bitcoin, my dollar would be worth about \$6,000 dollars.**

This shows that extend of Bitcoin's incredible growth compared to the stock market.

Investing \$1 in S&P 500 VS. Bitcoin

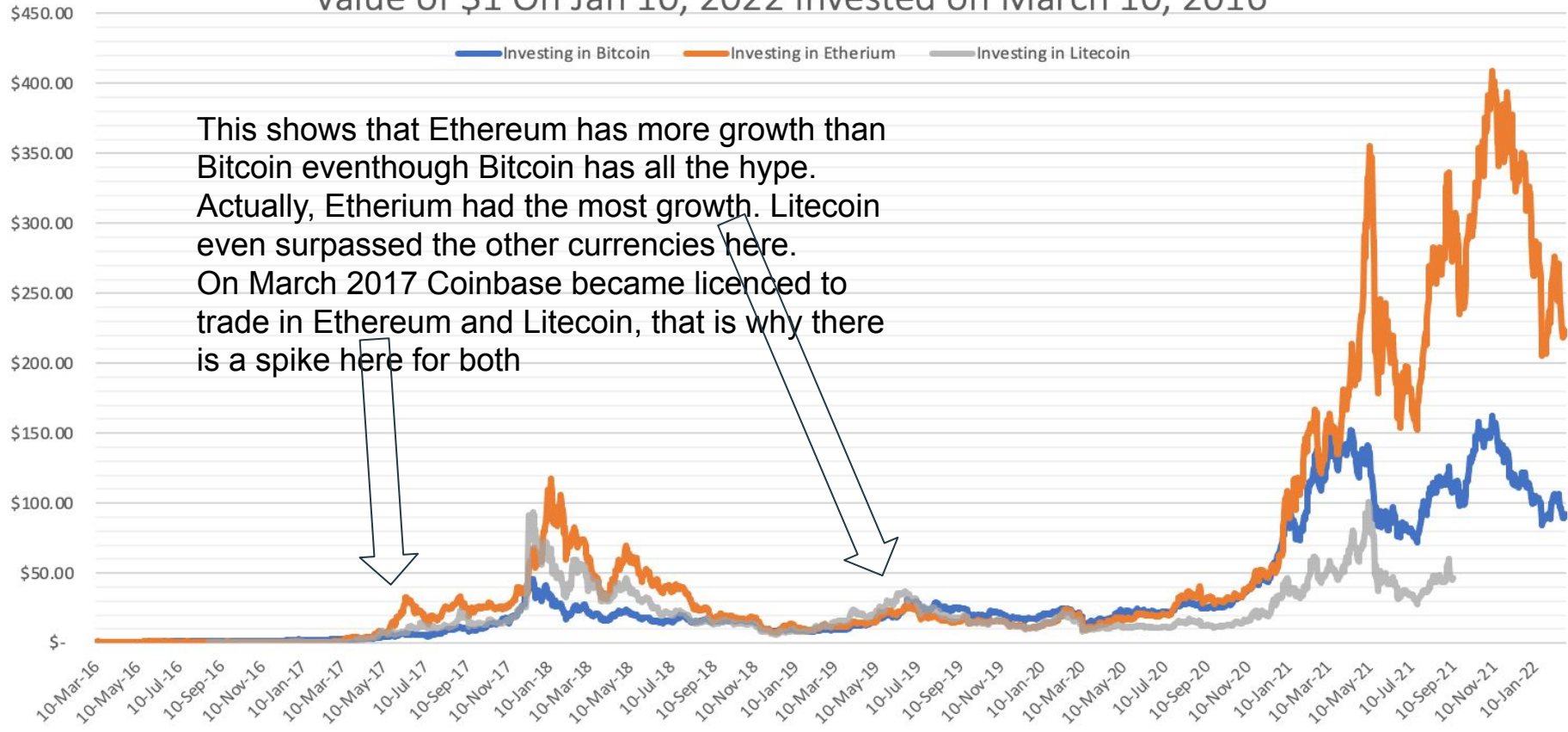


Bitcoin vs Ethereum vs Litecoin Growth



To have a better way to compare growth for each cryptocurrency, I will assume the investment of \$1 in each currency and compare the growth starting on March 10, 2016 until Jan 10, 2022.

Value of \$1 On Jan 10, 2022 Invested on March 10, 2016



This shows that Ethereum has more growth than Bitcoin even though Bitcoin has all the hype. Actually, Ethereum had the most growth. Litecoin even surpassed the other currencies here. On March 2017 Coinbase became licenced to trade in Ethereum and Litecoin, that is why there is a spike here for both

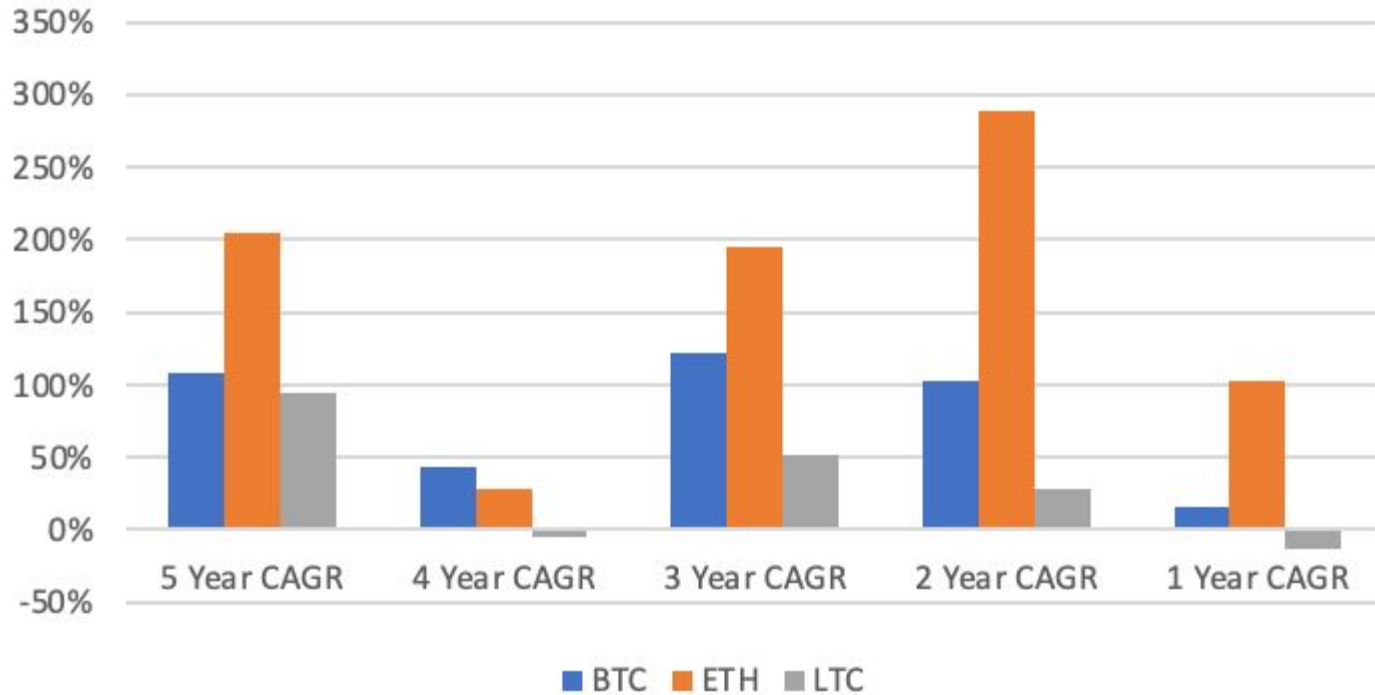
Value of \$1 On Jan 10, 2022 Invested on March 10, 2016



This is the CAGR (Compound Annual Growth) for the three currencies over 5 years

	BTC	ETH	LTC	Combined
5 Year CAGR	108%	204%	95%	\$ 41.70
4 Year CAGR	43%	28%	-5%	\$ 4.02
3 Year CAGR	122%	195%	52%	\$ 11.32
2 Year CAGR	103%	289%	28%	\$ 4.31
1 Year CAGR	15%	103%	-13%	\$ 1.19

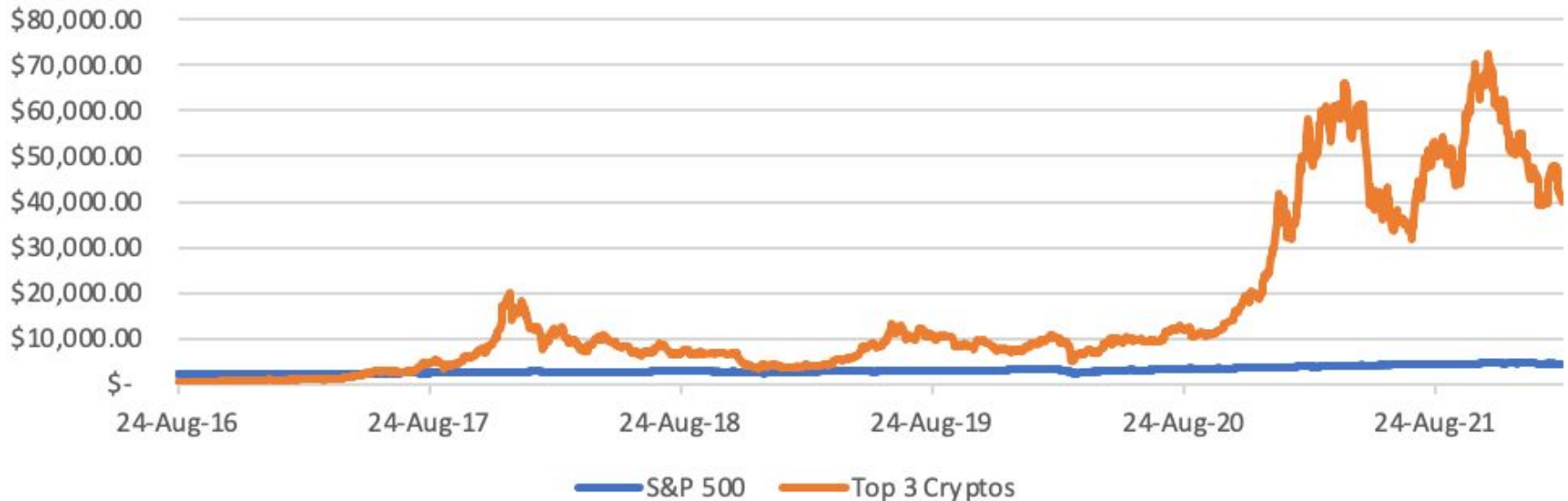
CAGR over 5 Years



So even though Bitcoin is more popular, in actuality Ethereum is a better investment because a dollar invested in 2016 will be worth more than if it was invested in Bitcoin. Also Investing in Litecoin is a good idea because it is less volatile and is steadily increasing in value.

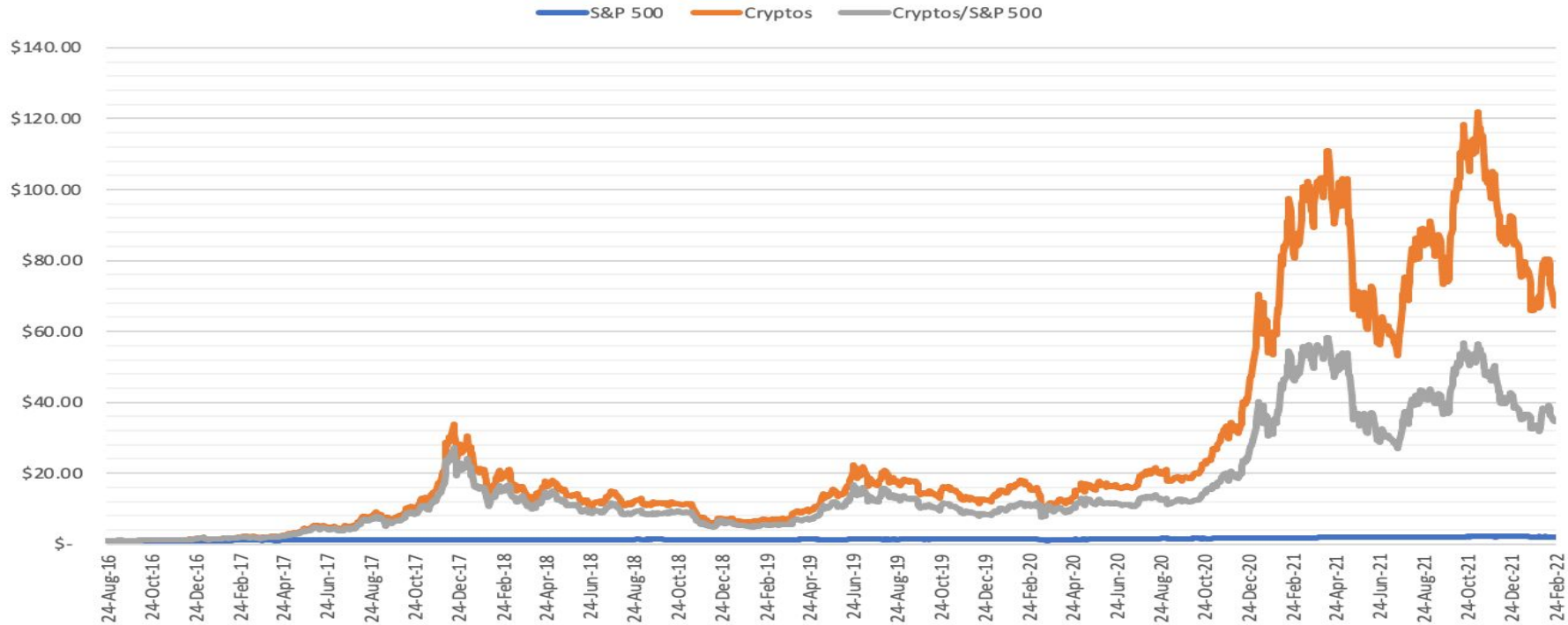
If we compare the stock market by looking at S&P 500 to the combined value of the top 3 cryptos this is how it looks like. Cryptos outperformed the stock market for the past four years.

S&P 500 vs. Top 3 Cryptos Market Value Aug 24 2016 until Feb 24 2022



To find out by how much the cryptos outperformed the S&P 500, assume that 1\$ was invested in each in 2016. This is how it looks like. By 2022 the cryptos have outperformed the market by almost 40 times

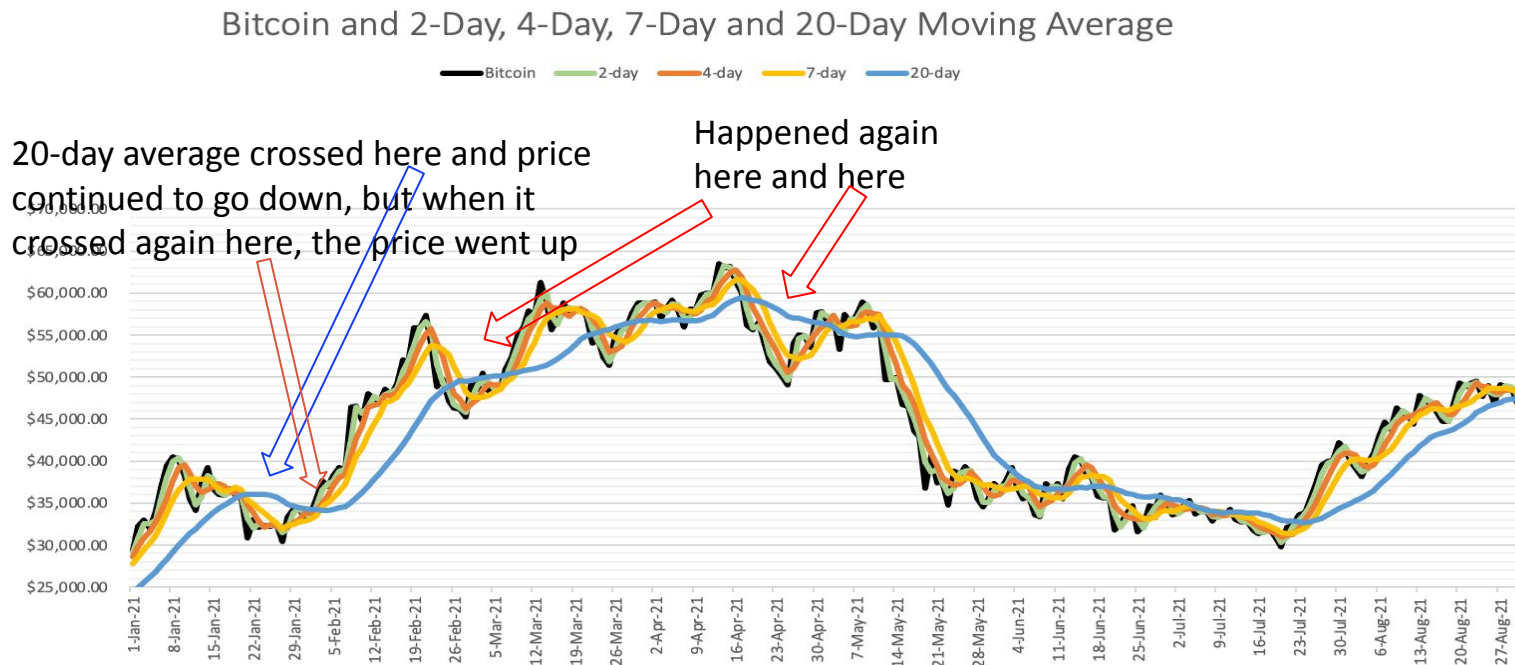
S&P 500 vs. Top 3 Cryptos if \$1 was invested in each



How soon can swings in price for Bitcoin be spotted.

To investigate this question, Bitcoin will be plotted with its 2, 4, 7 and 20 day moving average.

- The 2-day moving average follows the data too closely
- Every time the 4-day and the 7-day lines cross the data, there is a swing either up or down. So if the price was heading up when these lines cross it will swing down
- For the 20-day moving average, everytime this line crosses the data there is a swing.



Bitcoin and 7-Day and 20-Day Moving Average

