Crypto Report – Jeremiah Seidman

This report is meant give a broad overview of crypto and decentralized finance (DeFi) markets.

As we entered 2020 and delt with the implications of loose monetary policy, loose fiscal policy and a manipulation of the money supply, the market searched for a solution where it could empower participants to control supply and demand in an unmanipulated manner. In financial markets, the final determining factor for the validity of an asset is capital flowing into that asset and an outperformance above other assets. The market creates its own narratives by allocating capital to assets that provide the solutions to dominate issues in the world. **The key differentiator for an asset's validity is capital flowing into it consistently over time. Capital is the signal and time is the true test.** If an asset truly solves a problem in the world then capital will flow into that asset as long as the problem exists and is being solved by that asset. The exact extent of the problem can be the factor that determines how long capital will flow to a solution and this is what brings us to the crypto and DeFi markets. Given the manipulation of the money supply, asset price inflation, and suppression of interest rates, the market has decided to allocate money toward cryptocurrencies and DeFi assets because they empower individuals to interact in a manner that is unmanipulated by a centralized entity.

Due to our unique position in financial history with the amount of debt the world carries and excessive central bank intervention, there is a need for a unmanipulated and decentralized financial system. The idea might seem absurd to the majority of society because it is still early on the adoption curve. However, cryptocurrencies and the DeFi markets provide a solution to these problems. If the market decides that these solutions are valid then it will allocate capital to them consistently overtime. We have already begun to see signals of this happening in the performance of Bitcoin and Ethereum during 2020. Regardless of the arguments against Bitcoin and Ethereum, the market has rewarded them with a very large and continual allocation of capital. The fundamentals of these allocations show retail and institutional adoption indicating the participants in this asset class are not simply a segregated minority. Furthermore, as we have moved through multiple market rotations in the stock market, Bitcoin and Ethereum have outperformed. This indicates how the market views Bitcoin and Ethereum on the risk curve.

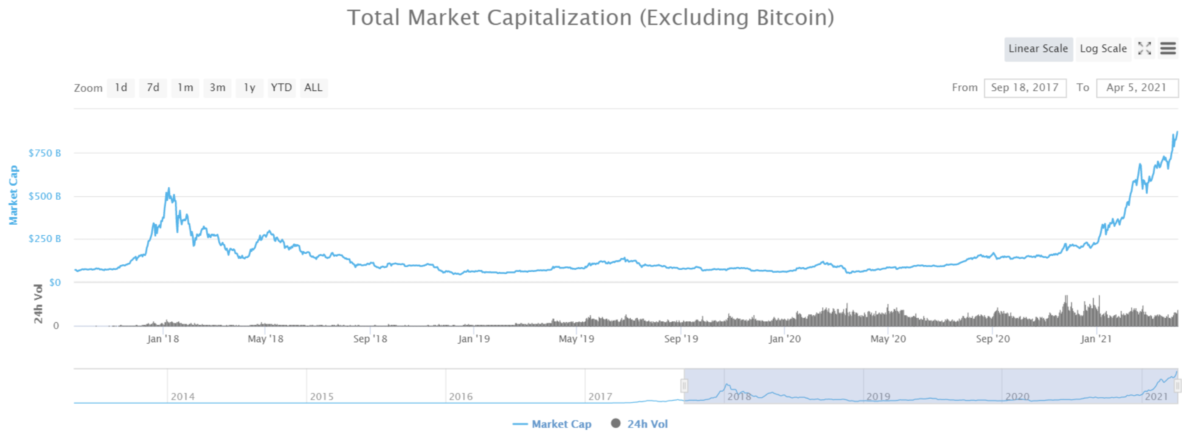
From the bottom of the March 2020 crash, Bitcoin and Ethereum outperformed in the low interest rates environment. Then in November when we began to see interest rates rise and capital flow to cyclicals and inflation sensitive sectors. Bitcoin and Ethereum continued to outperform during falling and rising interest rates.

Why is this outperformance significant? Because the market is sending a signal. The market is telling us where Bitcoin and Ethereum are on the risk curve of allocating capital. For example, consider how assets such as Tesla, ARKK, Solar (TAN) and Clean Energy (QCLN) performed. Each of these assets had an exceptional period of performance during 2020 in the low interest rate environment because investors went farther out on the risk curve to find returns. However, once interest rates began to increase, investors could move back on the risk curve as they searched for returns. The assets in the chart below indicate that these sectors were among the farthest on the risk curve, benefiting most in a low interest rate environment. However, once interest rates began to rise, they sold off very sharply and still have not recovered.

When you compare this to Bitcoin and Ethereum, you see that the market is signaling something very important. Bitcoin and Ethereum were not outperforming just because of the low interest rate environment or excessive speculation, they are solving a bigger problem. They are part of a bigger adoption cycle.

What we are actually seeing is an acceleration of a new risk paradigm in a new financial system and it is being rewarded by an inordinate amount of capital by the market. The chart below is long Bitcoin / Short Ethereum (in blue) with the 10-year interest rate (in orange). What we are seeing is actually a continued outperformance by Ethereum when we have interest rates rise.

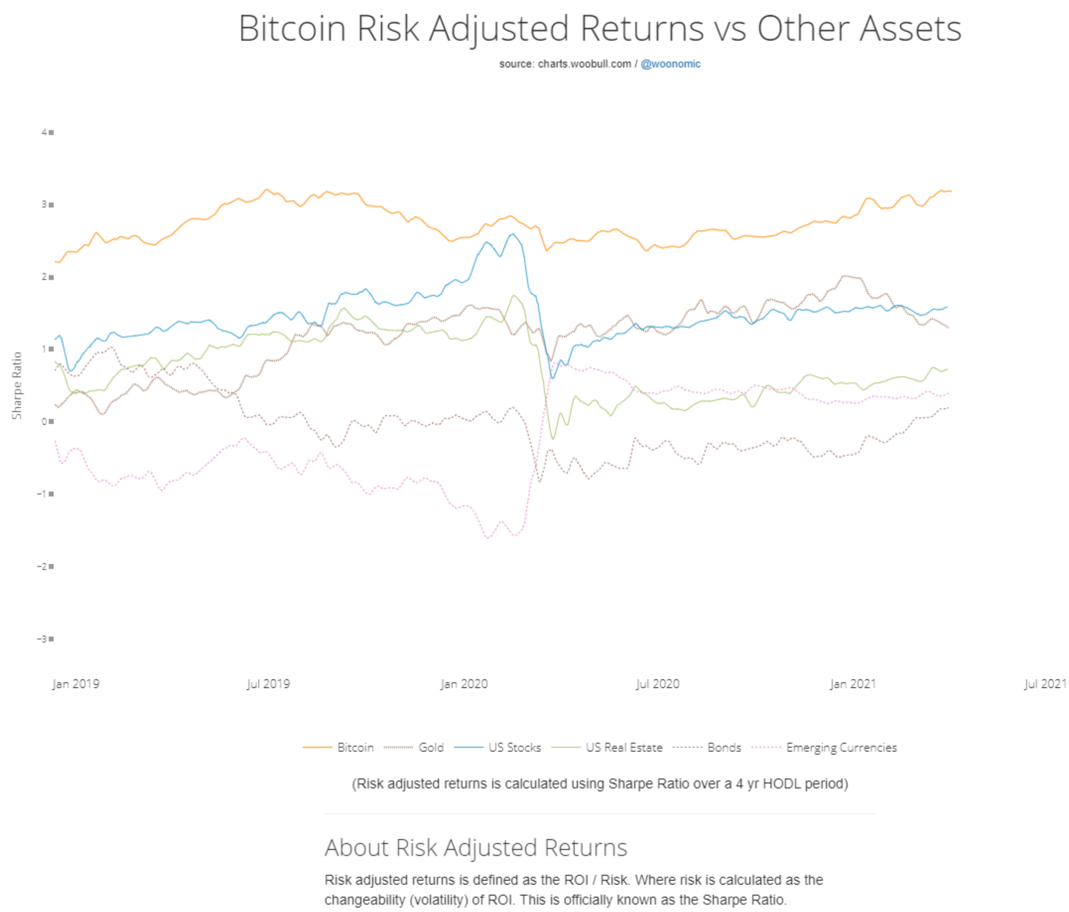
Why does this matter? Because there are two very important things happening. First, Bitcoin is not underperforming traditional assets such as stocks, bonds or gold during while Ethereum outperforms it. This means that the market doesn't simply view it as a speculative asset or else it would be the recipient of losing capital during this rotation. Second, we actually see that Ethereum and other DeFi assets continue to be rewarded with capital from the market during this rotation. Below is a chart of the total market capitalization of global cryptocurrencies excluding Bitcoin. It has begun to go parabolic as Ethereum outperforms Bitcoin. **Capital is flowing to an entire sector that solves a problem, not to a single speculative asset.**



There is actually a risk rotation taking place within the cryptocurrency and DeFi space. Assets in this space are actually outperforming Bitcoin and Ethereum. This is comparable to capital moving out of short-term treasuries into risk assets after risk off events. **In the crypto universe, Bitcoin and Ethereum are the "safe haven" assets on a relative basis.** Generally speaking, if there are market selloffs, Bitcoin and Ethereum sell off less on a relative basis compared to other cryptocurrencies and DeFi assets. Therefore, we can see that the crypto and DeFi markets are pricing in risk and adoption indicated by the relative performance between assets.

We are actually seeing the Bitcoin dominance index (Bitcoin as a % of cryptocurrencies) decrease significantly as interest rates rise while Bitcoin continues to outperform traditional financial assets. This means individual are taking more risk by moving out of the “safe asset” in the space:

All of this is happening while the risk adjusted returns of Bitcoin remain above other traditional assets:

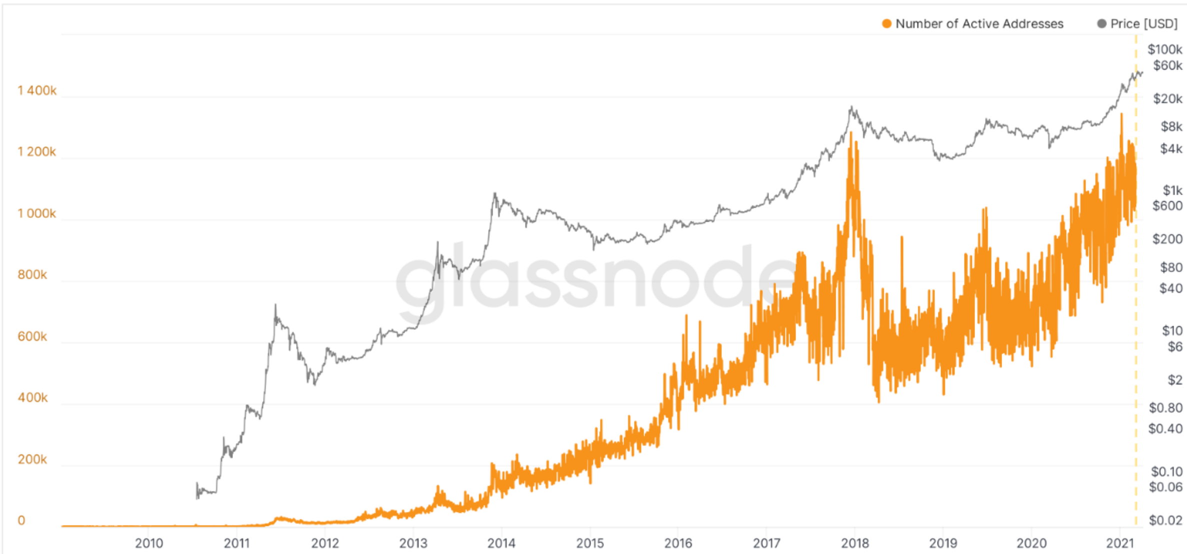


It is clear that capital is flowing into cryptocurrencies and DeFi assets. However, we need to know if this will continue to consistently happen over time. As I stated above, the test of an asset's validity is capital flowing into consistently over time. So how do we know if capital will continue to flow into these assets? We can look below the flows at the fundamental to see if these assets are actually solving the problems that exist in the system.

There are several ways we can look at the fundamentals of this industry.

First, we can look at the adoption of these assets by participants. Through 2020 and into 2021 we have seen a consistent increase in the number of active addresses for Bitcoin.

Bitcoin: Number of Active Addresses



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And the total number of addresses has only grown with even greater acceleration starting in 2018.

Bitcoin: Number of Addresses

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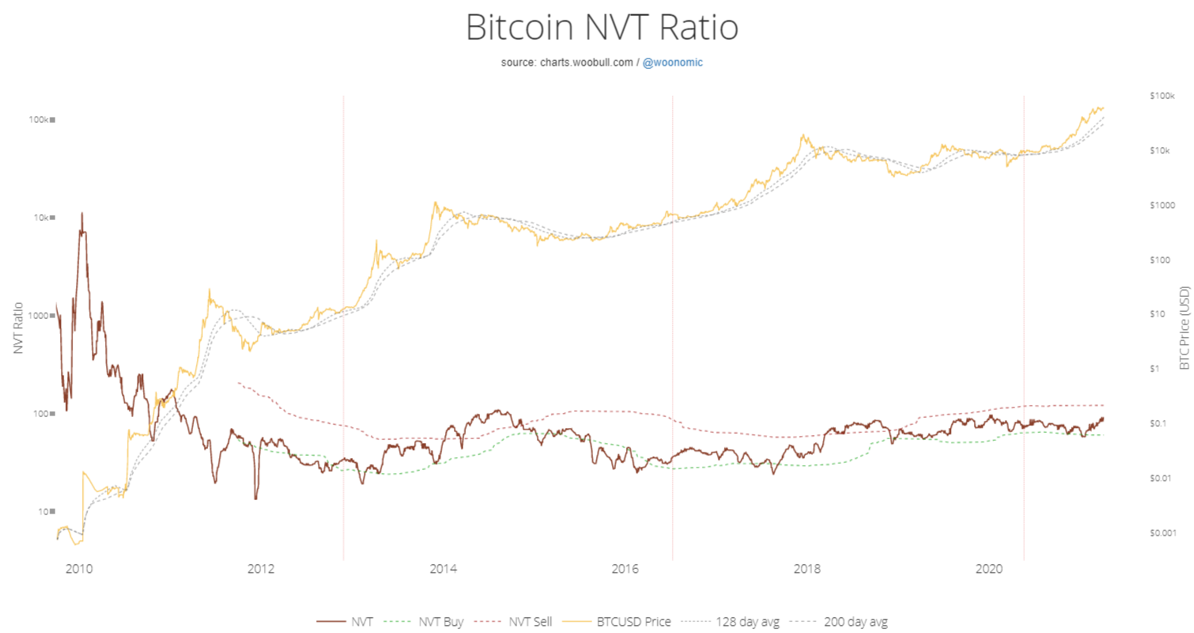
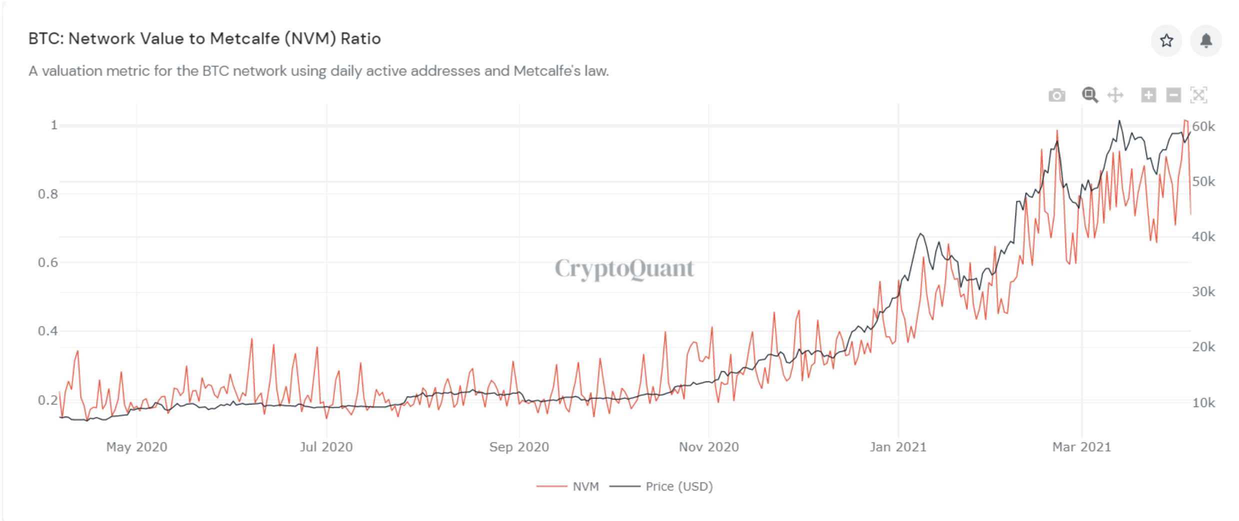
As we have seen greater adoption by individuals, the valuation of Bitcoin compared to its network remains sustainable: “NVT Ratio (Network Value to Transactions Ratio) is similar to the PE Ratio used in equity markets. When Bitcoin`s NVT is high, it indicates that its network valuation is outstripping the value being transmitted on its payment network, this can happen when the network is in high growth and investors are valuing it as a high return investment, or alternatively when the price is in an unsustainable bubble. Bitcoin`s NVT is calculated by dividing the Network Value (market cap) by the daily USD volume transmitted through the blockchain. Note that this is the equivalent of the bitcoin token supply divided by the daily BTC value transmitted through the blockchain. Thus it is technically an expression of inverse monetary velocity.” Chart and section from: http://charts.woobull.com/bitcoin-nvt-ratio/

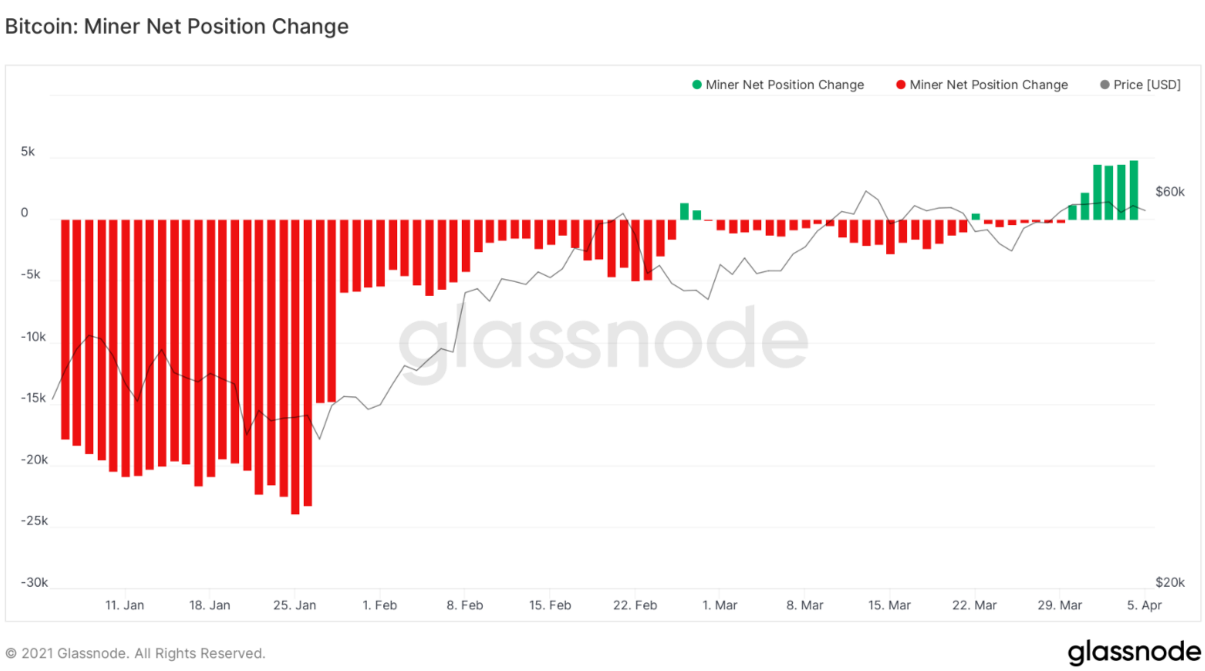


The adoption of Bitcoin appears to be following Metcalf's law which provides an explanation for the price action. This will become even more apparent as we look at DeFi:



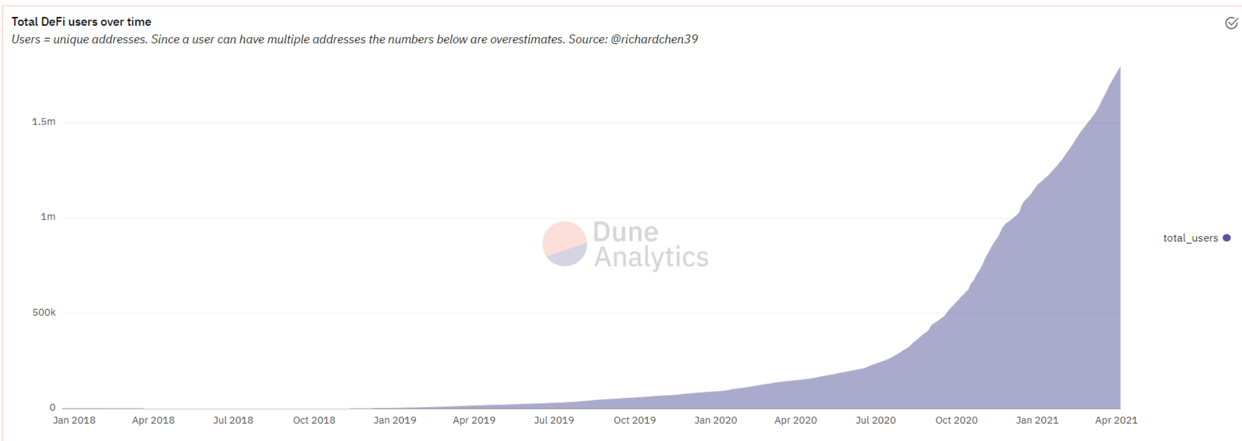
The majority of Bitcoin holders store their Bitcoin in an illiquid form which reduces the supply that is actively traded. This indicates the mindset of holders. It is not simply a speculative asset that is actively traded but actually has a utility that would incentivize individuals to hold it for the long term.

On top of this, the miners of Bitcoin are long. This shows miners taking risk as opposed to just hedging their exposure because they believe more capital will flow into Bitcoin.

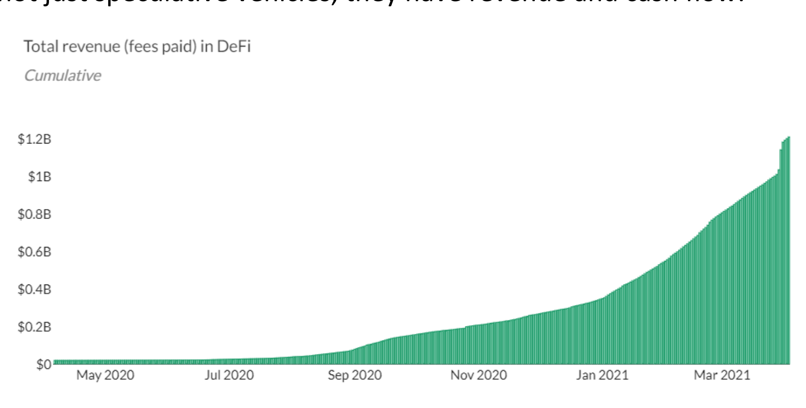


In summary, we have seen adoption of Bitcoin and Ethereum given the monetary problems that the world faces. However, it is clear that Bitcoin isn't functioning as consistent medium of exchange due to the amount that is held in illiquid form. In addition to this, the transaction costs and time disincentivize people from using Bitcoin as a dominate medium of exchange. However, as we are moving into a world of increasing complexity, assets can have greater and greater specificity in their utility. In the cryptocurrencies and blockchain industry, Bitcoin functions almost like a reserve asset or collateral relative to the other assets in the space. This brings us to the adoption of DeFi.

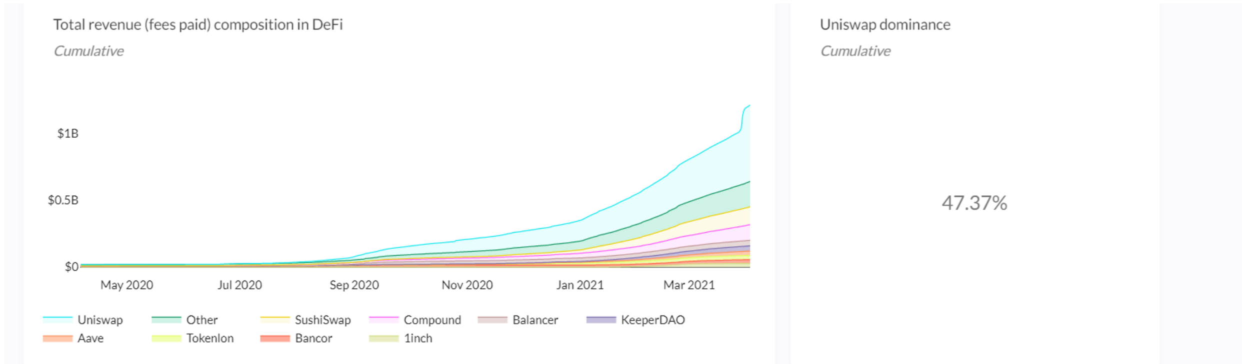
When we look at the number of people adopting DeFi, the chart is parabolic. Market participants are using DeFi because of the problems it solves and the market is rewarding DeFi assets with large amounts of capital.



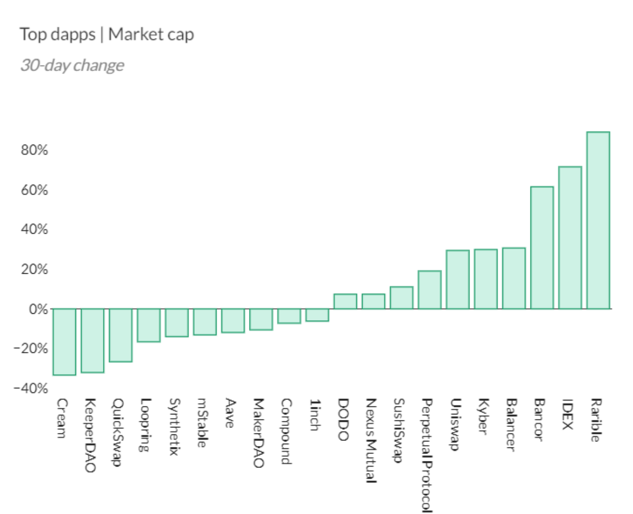
When we look at the revenue generated, it follows adoption of users. These major DeFi platforms are not just speculative vehicles, they have revenue and cash flow:



Here is a breakdown of the major players by revenue:



However, the DeFi market is pricing in distinctions between companies just like regular asset markets. While there is a macro headwind due to the adoption curve, creative destruction is still taking place in order to maintain efficiency in the system. Some assets do really well and some don't:

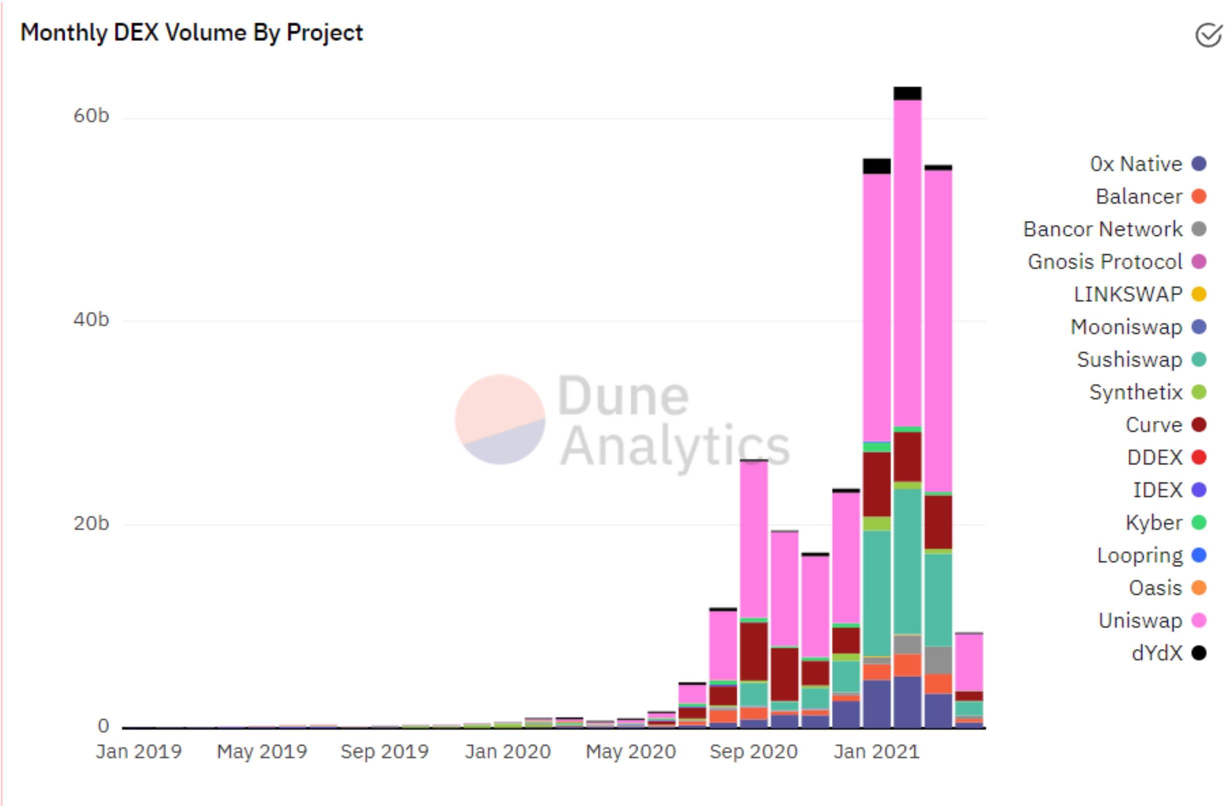


Top dapps | Market cap

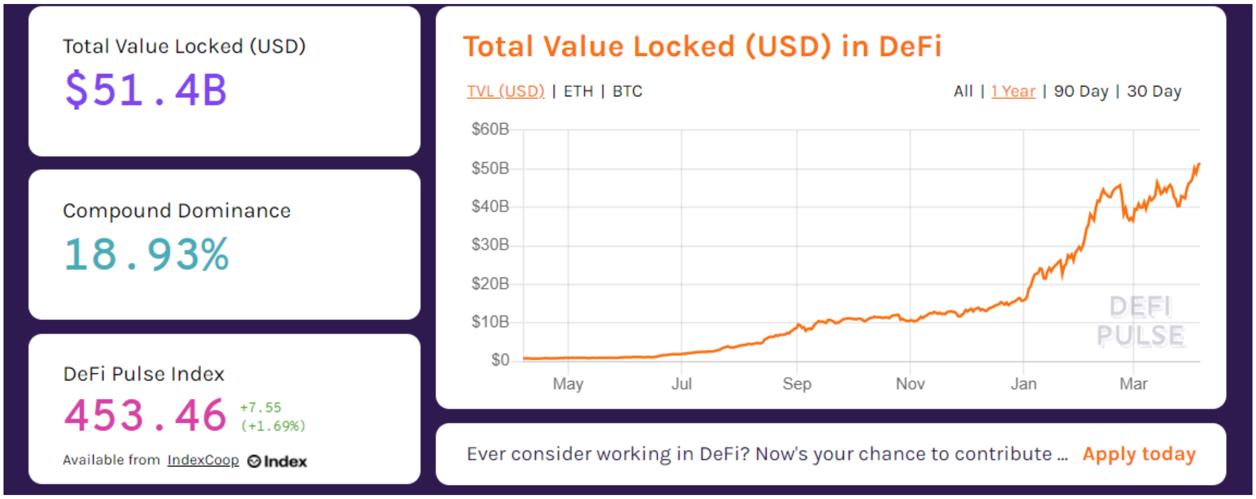
30-day change

1inch	-6.14%
DODO	7.38%
Nexus Mutual	7.40%
SushiSwap	11.04%
Perpetual Protocol	19.01%
Uniswap	29.35%
Kyber	29.83%
Balancer	30.58%
Bancor	61.34%
IDEX	71.39%
Rarible	88.82%

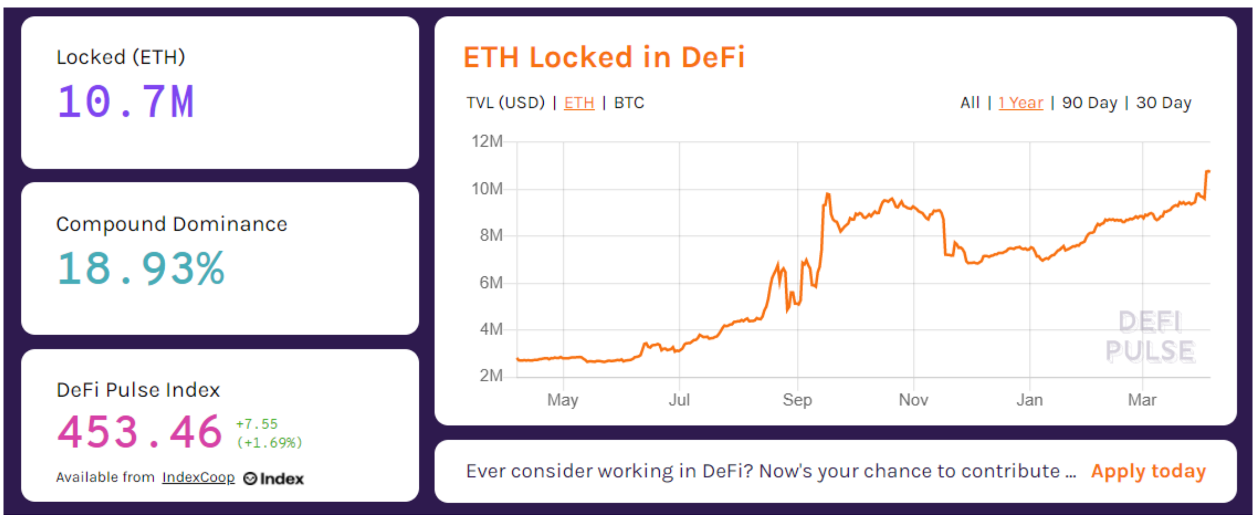
The volume in the space has exploded because individuals want to buy assets in the DeFi universe, and these exchanges facilitates those transactions. (the most recent bar on the chart is for April so it is still growing). The technological developments that are taking place will cause volume to increase even more as fees decrease and greater institutional adoption takes place.



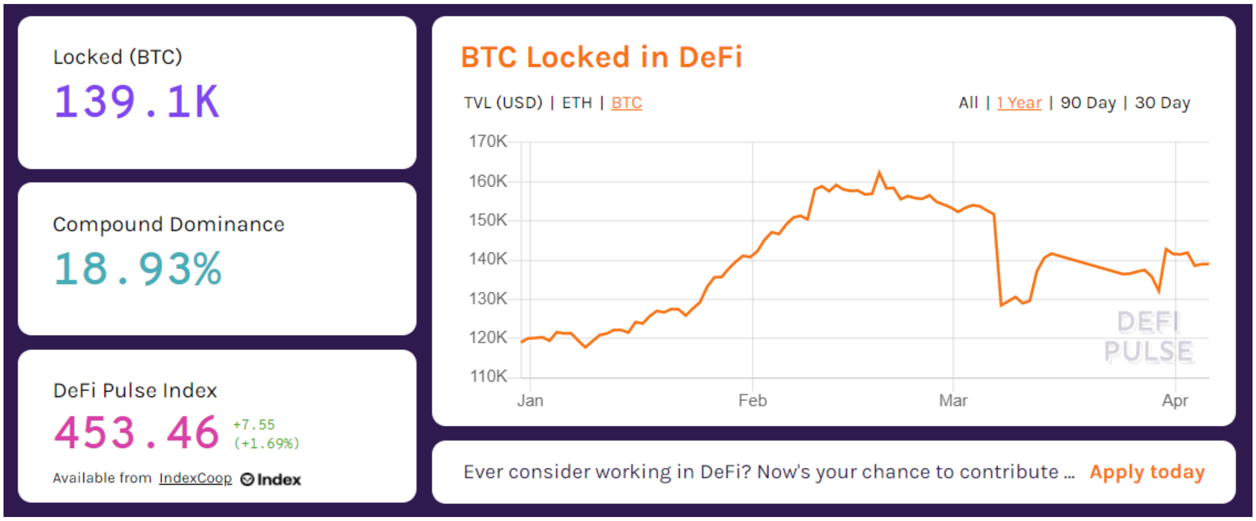
US dollars continue to flow into DeFi assets:



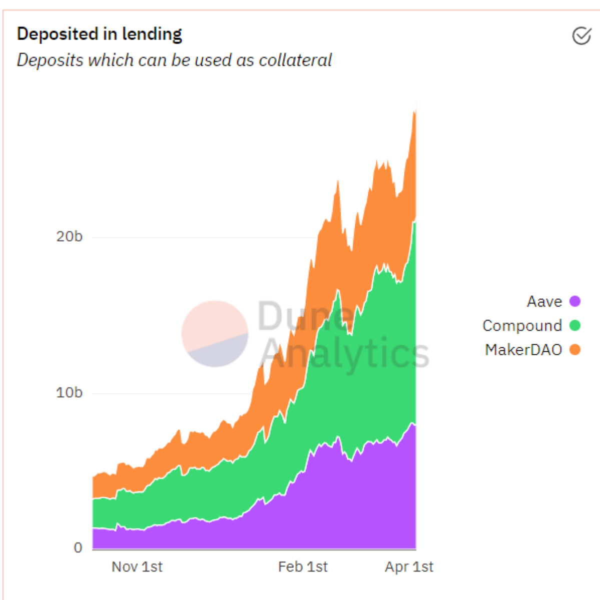
Ethereum continues to flow into DeFi as well:

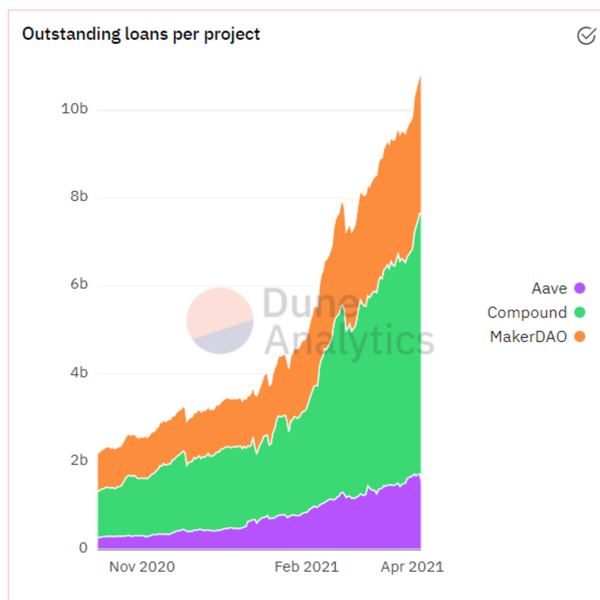


Less Bitcoin has gone into DeFi in comparison to Ethereum which is why Ethereum will likely outperform Bitcoin as the DeFi space grows. Bitcoin and Ethereum simply have different utilities, and we will probably see differences in risk characteristics as we move through more cycles in the crypto and DeFi space. On a practical level, DeFi is built on Ethereum which will cause the outperformance. However, Bitcoin could dramatically outperform Ethereum and DeFi assets during risk off events:

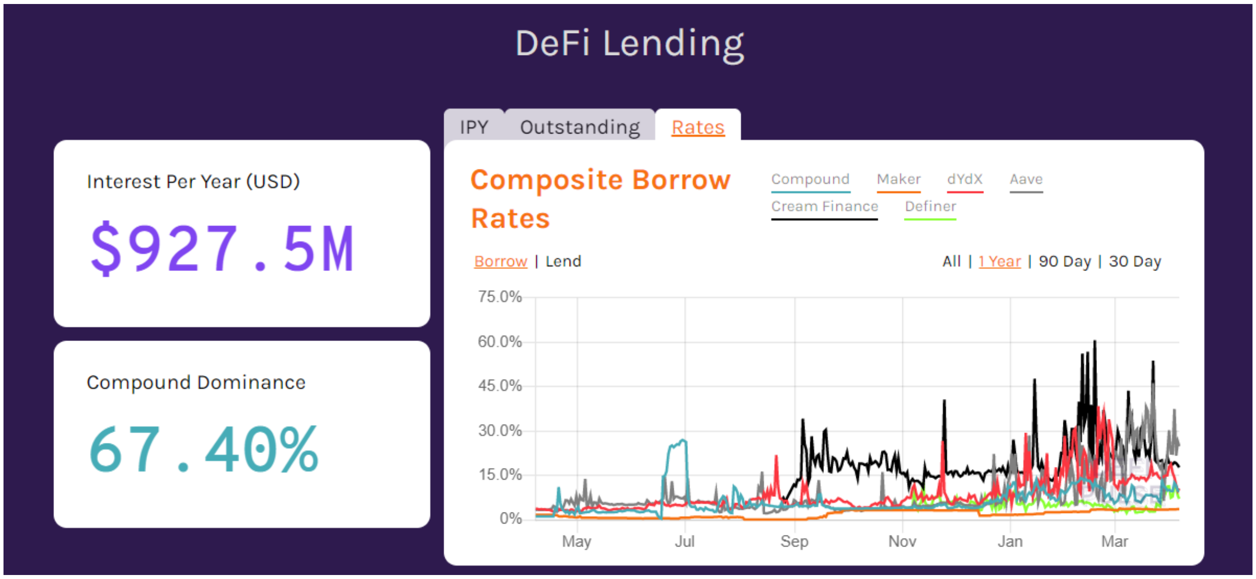


In this parallel financial system people are borrowing and lending based on the price that the free market sets. We are seeing an increase in deposits used as collateral for loans and the amount of outstanding loans increase on major DeFi platforms:

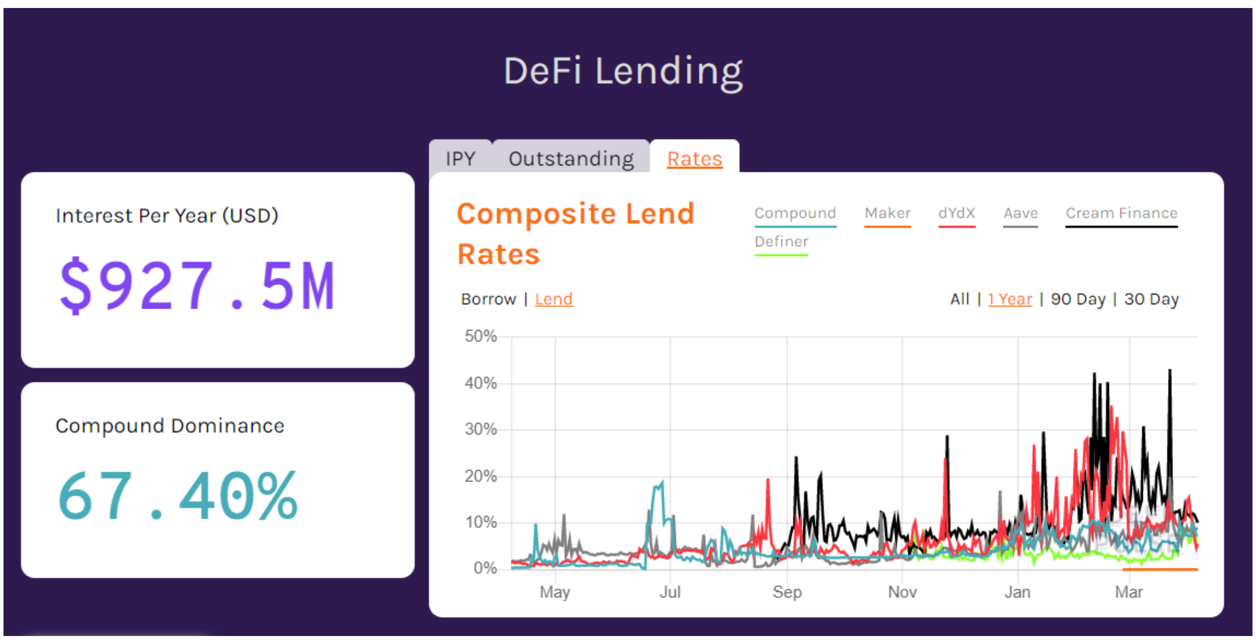




Interest rates for borrowing are fluctuating independently based on the specific asset and the DeFi market as a whole as opposed to a centralized entity determining interest rates:

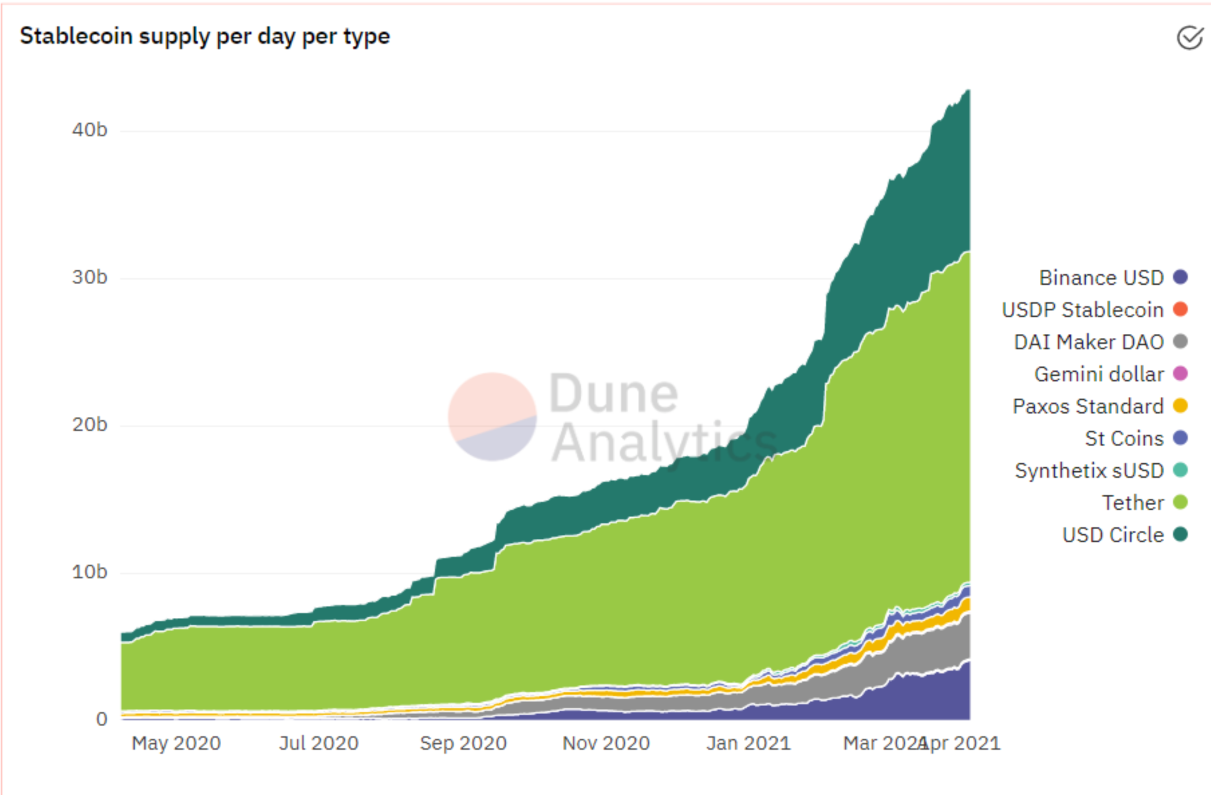


And the lending rates follow the borrowing rates:



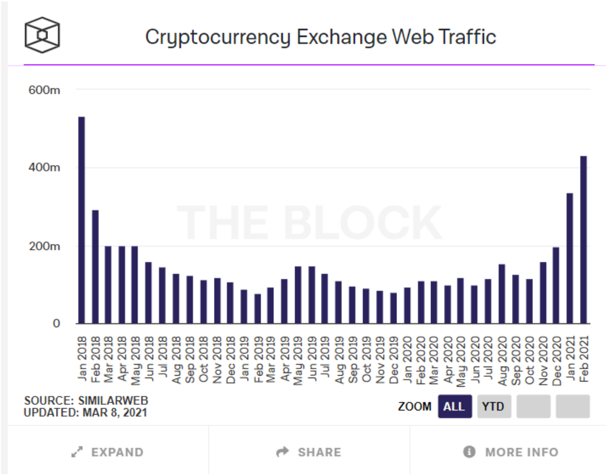
While these rates are high right now compared to the "risk free rate" in treasuries, supply and demand is setting these and the amount of outstanding loans is increasing which indicates individuals are paying these rates to borrow.

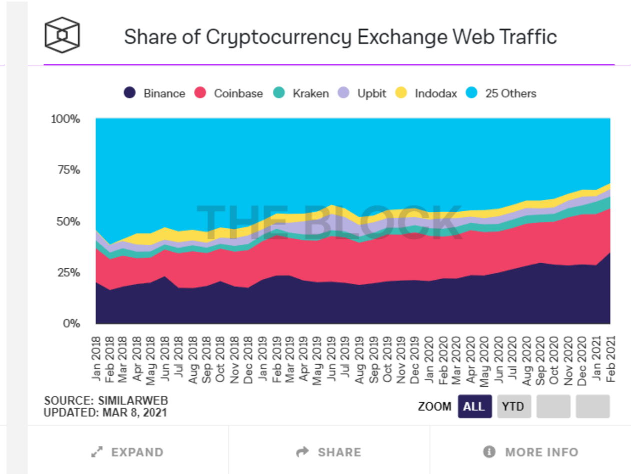
Furthermore, in this system, individuals have recognized the utility of having assets that don't have excessive volatility. There has been a continual increase in the supply of stablecoins to meet demand and it follows the adoption curve perfectly. There is also a multitude of stablecoins for individuals to use which shows that the market gets to chose how it allocates capital depending on the specific utility or risk of a stablecoin.



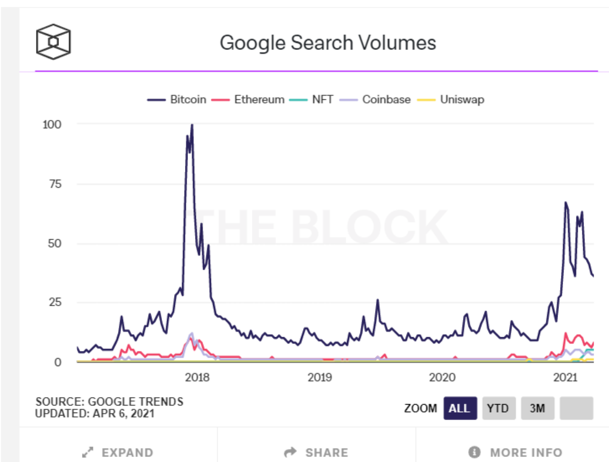
These fundamentals show a fully functioning financial system is developing, and capital is flowing into it. There will be cycles and creative destruction in order to maintain the efficiency of the system. But the adoption cycle appears that it will continue upward. The amount of money being transacted in this system of cryptocurrencies and DeFi is still very small compared to the current financial system. However, the rate of change that capital is flowing into these spaces is exponential. When compared to the current financial system, there appears to be significant upside for cryptocurrencies and DeFi. Furthermore, the rate of change in adoption is indicating that individuals are recognizing the solutions that this space offers.

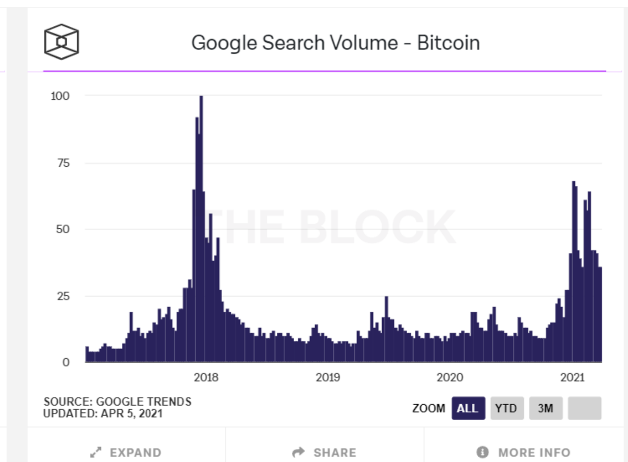
When we look at the sentiment surrounding this space, it follows the exponential trend as well:



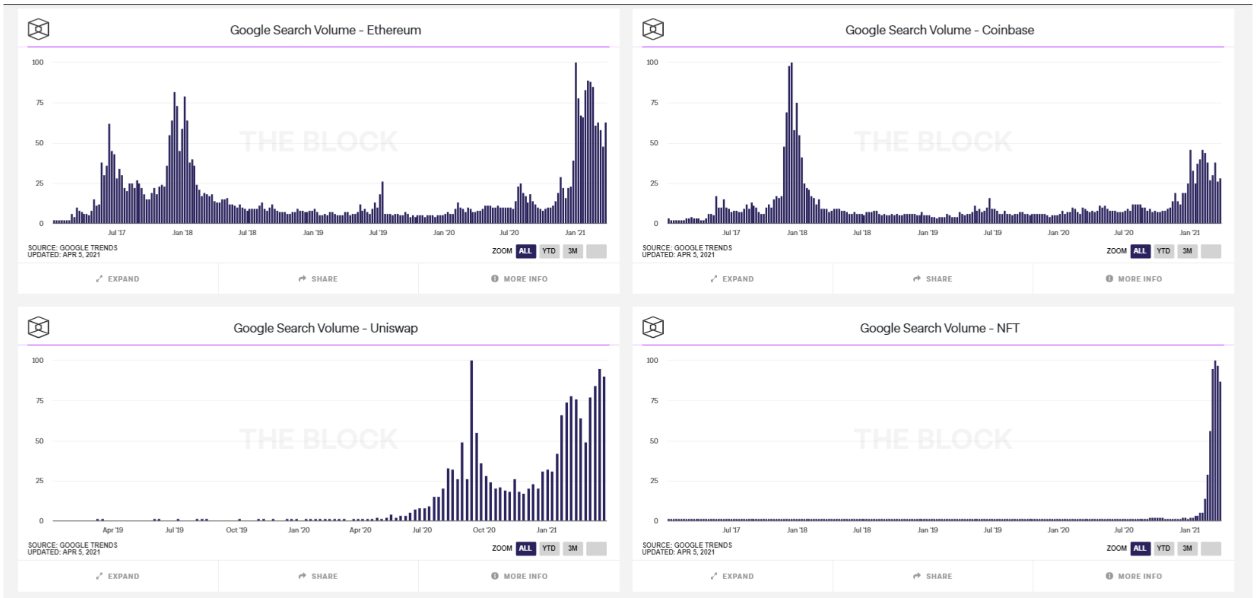


In comparison to 2018, this time the space actually has underlying fundamentals that will propel it up in the long term.





And it's not just Bitcoin. The largest exchange in the DeFi space (Uniswap) is getting a lot of attention as well:



In conclusion, there is a large amount of capital flowing into cryptocurrencies and DeFi assets. There is a fully functioning financial system that exists and will continue to develop. While capital is flowing in at an exponential rate, time will be the ultimate test for the validity of these assets. There is still uncertainty about how things will precisely develop. There will undoubtably be cyclical corrections that will test the underlying fundamentals and thesis. However, the trend appears to be significantly skewed to the upside.

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