BITCOIN STOCK TO FLOW MODEL

With so many problems and profiteering by notable financial institutions and government, in the modern banking system. Bitcoin was created to reduce external influence and make a currency that is people oriented. “A coin” supposed to have properties like ancient coins, but can be transferred through communication network. But how will it be valued? The Bitcoin stock to flow model was designed to give a hypothetical solution to this problem, using scarcity as its premise. Scarcity is a natural driver of value, Aluminum used to be more valuable than Gold, but when it was discovered to be one of the most common metal on earth, its value dropped. However, does this work for crypto currencies?

The Stock to Flow (SF or S2F) model is a way to measure the abundance of a particular resource. The amount of a resource held in reserves divided by the amount produced annually, is the Stock to Flow ratio. The ratio shows the difficulty or ease of getting new supply, as opposed to what is available. Which means the higher the ratio, the scarcer and more valuable the resource is.

The current stock of Bitcoin is approximately 18 million bitcoins, while the new supply is approximately 0.7 million per year, making Bitcoin’s Stock to Flow ratio about 25, placing bitcoin in the monetary goods category, like Silver and Gold. To prove that there is a statistically significant relationship between SF and market value, a statistical plot between the logarithmic values of SF against logarithmic monetary value of the market shows a linear progression. To further prove the validity of the model according to Plan B’s paper, a plot of Bitcoin model Price (according to SF) against the actual bitcoin price was also shown to be of good fit.

The model seems to be perfect on the surface, but the very foundation on which the model is based upon isn’t solid enough. The pricing model first fails to acknowledge the uncertainty in price, volatility of price – a big problem of bitcoin, isn’t taken into account in the model, which could seriously undermine it. Bitcoin Is notorious for its large price moves, it is priced in a free market, meaning the price is regulated by users, traders, and speculators. Combined with low liquidity, Bitcoin is vulnerable to sudden spikes in volatility than any other asset. The model doesn’t account for this either.

An ever Increasing value of Bitcoin concluded by the model also means that, in some time in the future, 1 bitcoin would be worth more 200 million dollars – definitely not possible. Historical data also shows that Gold’s price isn’t determined solely by SF value, Gold as had a fairly constant SF value of 60 but very spurious changes in prices. Gold’s price itself is determined by other factors. Dollar itself with which bitcoin price is valued, experiences value changes which as a direct impact on it. An increase in value of the dollars would lead to a decrease in the value of the bitcoin, regardless of its position.

Every model is as strong as its assumptions; the model may not be able to account for all aspects of Bitcoin valuation, valuation models like the stock to flow needs a larger data set for more reliable accuracy. The quest for a reliable pricing model continues.