The Bitcoin stock to flow model

According to the accounting space, Stock refers to the value of an asset at a balanced date or point in time. Flow refers to the total value of transactions during an accounting period.

In a broader sense, Stock is some entity that is accumulated over time by inflows and/or depleted by outflows. Stocks can only be changed via flows.

Mathematically, Stock can be seen as an accumulation or integration of flows over time – with outflows subtracting from the stock. Stocks typically have a particular value at each moment – e.g. the quantity of water in a reservoir.

Flow changes a stock over time. Usually, we can clearly distinguish inflows (adding to the stock) and outflows (subtracting from the stock). Flows typically are measured over a certain interval of time e.g., the number of births over a day or month.

The Bitcoin Stock Flow model describes how long it will take for Bitcoin to reach its current production rate at the current supply rate and the formation of a metric known as the stock/flow rate. This model treats Bitcoin as being comparable to commodities such as gold, silver, or platinum. These are known as 'store of value' commodities because they retain value over long time frames due to their relative scarcity. It is difficult to significantly increase their supply.

Bitcoin is similar because it is also scarce. It is the first-ever scarce digital object to exist. There are a limited number of coins in existence and it will take a lot of electricity and computing effort to mine the 3 million outstanding coins still to be mined, therefore the supply rate is consistently low.

The Stock to Flow can be calculated by dividing the price estimated by the S2F model by the current price in Bitcoin and then subtracting it from that value. If this value is negative, a positive coefficient indicates that it is overvalued while the Bitcoin value can be considered a low value.

Why is the Stock to Flow model a bad model?

The basis of the entire model assumes that halvings create exponential price increases because miners lose half of their ability to depress the price. Bitcoin inflation year over year inflation rate is ALREADY less than 2%, so

whether that rate is 1% or 0.25%, miners have no tangible effect on price because it's already practically zero. The stock to flow ratio might matter when only 4,000,000/21,000,000 were mined, but with 19,000,000/21,000,000 mined, the introduction of those last two million coins over the span of a hundred years will mean nothing going forward.

For all intents and purposes, you are better off assuming bitcoin is already at 21 million and that there are no more coins left to mine.

From a theoretical foundation, the model is based on the rather strong assertion that the USD market capitalization of a monetary good (e.g. gold and silver) is derived directly from their rate of new supply. No evidence or research is provided to support this idea, other than the singular data points selected to chart gold and silver's market capitalization against Bitcoin's trajectory.