

## BITCOIN STOCK-TO-FLOW MODEL: WHY IT IS BAD

Bitcoin has gained evident attention from mainstream industrial participants looking out to enter into the industry after the economic downturn caused by the COVID-19 pandemic. Some parties such as gold expert Peter Schiff, however, remain absolutely against bitcoin. Stock-to-Flow (SF or S2F) model is a way to estimate the quantity of a particular resource. Stock-to-Flow ratio is the amount of a particular resource that is in quantity divided by the amount it is produced yearly.

The Stock-to-Flow model is majorly applied to natural resources, and it is simply the estimated amount of the resource produced yearly. The estimate always varies but a particular value can be taken as the flow. However, Stock-to-Flow ratio is how much supply of a particular resource flows into the market each year with respect to the total supply of it. The higher the Stock-to-Flow ratio, the less new supply of the resource enters into the market with respect to its total supply. This implies that a resource with a higher Stock-to-Flow ratio should retain its value over a long period.

Some people argue that the Stock-to-Flow model can be applied to Bitcoin also, since the model regards Bitcoin as a scarce commodity, like Silver or Gold. Gold and Silver are expected to retain their values due to their scarcity and low flow, though scarcity alone does not determine how valuable a resource is. According to the proponents of the Stock-to-Flow model, Bitcoin is like Gold and Silver, such that it is scarce, and costly to produce. The flow is also unpredictable due to the supply level.

While Stock-to-Flow might be an intriguing model for estimating scarcity of a resource, it doesn't totally account for all parts. Models are as strong as their assumptions, of which the Stock-to-Flow model is one. It is based on the assumption that scarcity should imply value. So, if Bitcoin has no other usefulness other than supply scarcity, then the model has failed. The model also says that Bitcoin's volatility should reduce with time. And the volatility of any asset determines on its value also. Bitcoin is known for its large price moves over time, so its volatility cannot be predicted.

The price of Bitcoin is most times self regulated since it has always been priced in the free market right from the start. Combined with low liquidity, and Bitcoin is more likely to be exposed to sudden increase of irregularities than other assets, the Stock to Flow model will not be able to account for this. Francis Tanpon, the author of "The Unseen Africa", and the "The Hidden Europe" argues strongly about the Stock-to-Flow model and explained some of its flaws.

One major flaw he pointed out was that the model defies physics. He says "some critics say that the stock-to-flow model will break in 2140, which is when we cannot mine new bitcoins. At that

point, the S2F model predicts that the price of bitcoin will go to infinity." He says this is a problem because the model is likely to break years before that estimated date.