

## STOCK TO FLOW MODEL

The stock to flow model otherwise known as SF or S2F is a financial model used to evaluate commodities it derived from the ratio between current supply and new supply of these commodities.

The bitcoin Stock to flow model treats bitcoin as a scarce commodity like gold and silver with an hypothesis that bitcoin derives value through scarcity, it establishes a relationship between the market value of Bitcoin and the scarcity of Bitcoin. Once this relationship is quantified, the price of Bitcoin can be inferred. The model also assumes a fixed demand of bitcoin.

The stock-to-flow model (SF), introduced by a pseudonymous Dutch institutional investor who operates under the Twitter account PlanB, has been widely praised and is the leading valuation model for bitcoin proponents.

In reality the stock to flow model is hinged on some assumptions that are hardly practical. In the research article by PlanB "Modeling Bitcoin Value with Scarcity" he depicts the stock to flow model of gold and silver as a single data point (62 and 22 respectively) while the stock to flow ratio for bitcoin kept rising, he assumed a constant value for the stock to flow ratio of gold and silver while the values are fluctuating. The research article infers that the stock to flow ratio of metals drives prices of these commodities, this is hardly correct as there are metals like Platinum, Palladium with lower stock to flow ratio but worth more than Gold and silver.

Another problem with the stock to flow model is the inability to generalize to other cryptocurrency, if the stock to flow model is efficient like a good estimator should be, it should be able to generalize to other cryptocurrency and if that was the case, new cryptocurrency with an higher stock to flow ratio than bitcoin.

The price of bitcoin by 2041 according to this model is expected to be infinite. which doesn't make any sense. The model assumes a constant increase in demand for bitcoin, without taking into consideration situations that can cause disinterest by the populace, example is a new commodity which can be a direct substitute for bitcoin or have a better use case and proposition. A decline in the demand of bitcoin will render the Stock to flow model useless.