**Write a 500-word explanation of Bitcoin stock-to-flow model and make an argument for why it is a bad model?**

The stock-to-flow model is a way to gauge the abundance of a resource. It measures the relationship between the total available stock of a resource to its yearly production rate. It is typically applied to precious metals (such as gold and silver) but some may argue that the stock-to-flow model applies to Bitcoins as well (Binance, 2020). The stock-to-flow ratio measures the rate of production of a resource relative to the total amount of that resource in circulation. The higher the stock-to-flow ratio of a commodity, the less its current circulation is relative to its total supply, and subsequently, the higher value of retention rate it has over a longer time frame. The stock-to-flow is a number that shows how many years, at the current production rate are required to achieve the current stock. The higher the number, the higher the price (Binance, 2020).

Applying this to bitcoin, as of September 2019, there were 18 million bitcoins in circulation and about 1.8 BTC were generated daily (657,000 annually) (Digitalik, 2020). Calculating the SF: SF = Stock/Flow = 18.000,000 / 657,000 = 27

This means we need 27 years of current bitcoin production to arrive at the current stock. This number was estimated to rise to about 50 as at the May 2020 halving event (Binance, 2020). While stock-to-flow is an interesting model for measuring scarcity, it does not account for all parts of the picture. This follows the premise that the stock-to-flow model relies on (but is not restricted to)the scarcity of resources.

Bitcoin is regarded as a resource that is relatively expensive to produce with a known maximum supply of about 21 million coins with a flow that is also completely predictable and subject to the halving event every four years; reducing its circulatory rate. These properties culminate in describing it as a scarce digital resource with compelling characteristics to retain value over a long period of time. In determining the value of a commodity (bitcoin), this model does not paint a complete picture as it relies on its scarcity to drive or increase value. According to stock-to-flow critics, this model fails if bitcoin does not have any other useful qualities other than supply scarcity.

Bitcoin has a relatively low liquidity rate. Also, its decentralized nature has let its market prices be self-regulated ever since its inception. This leaves room for this resource to be more susceptible to sudden spikes of volatility than other assets. This valuation model would be more credible if the volatility of the asset were more predictable (Binance, 2020). The fact that these qualities alongside the black swan effect are not extensively considered in the quantification of value of bitcoin by the stock-to-flow ratio, leave this method regarded as not the best method of asset valuation. Also, bitcoin was the first cryptocurrency announced in 2008 and launched in 2009 meaning that it has only been around for a little over a decade. This period arguably does not provide sufficient data for better accuracy in the prediction of long-term valuation models such as the stock-to-flow model.

**References**

Binance, A. (2020). Retrieved from <https://academy.binance.com/economics/bitcoin-and-the-stock-to-flow-model>

Digitalik, (2020). Retrieved from <https://digitalik.net/btc/#:~:text=At%20the%20time%20of%20the,is%20much%20closer%20to%20gold>.