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

Over the years, the relative constancy of available global stock of assets like gold and silver makes them unique. The ratio between global stock to yearly supply flow (S2F) of these commodities is viewed as a key variable in determining the value placed on a commodity and it is relatable to “scarcity” as a concept. The S2F of gold is ≈ 62 years and that of silver 22 years; that means it would take 62 years and 22 years to amass the current global stock of gold and silver respectively.

Bitcoin as a digital asset is transacted over a Blockchain network which, in simple terms, is a distributed record network that ensures authenticity of transactions, making it extremely difficult and costly to forge or produce new units due to the vast amount of energy expended by specialized computers with powerful processors in hash algorithm calculations and verifying transactions to find new blocks, also known as overhead mining, that return rewards to the participant-miner. The stock-to-flow model of Bitcoin was postulated by a pseudonymous Dutch institutional investor who operates under the Twitter account “PlanB.” The individual theorizes that the ‘halving algorithm’ (a process which cuts in half the subsidy of new coins rewarded for every new block found by a miner) which occurs after every 210,000 blocks (about 4 years), directly impacts the stock to flow ratio, and hence the value of Bitcoin. When the S2F of Bitcoin was plotted against market value over ten years, from Bitcoin’s inception in the year 2009 till 2019, a significant linear regression statistical relationship of the order R2 was observed between the stock-to-flow ratio and the market value, and when compared with the graphs drawn for the S2F against market value for silver and gold, a similar trend appeared, which in turn solidifies PlanB’s confidence of his postulated Bitcoin S2F model. As at the time of his writing, he gave a predicted market cap of a $100trn for Bitcoin by May 2020 and a stock cap of 21 million Bitcoin.

The model’s seemingly solid explanation though persuasive at first glance, is however unsatisfactory at a closer look. The first challenge is with theorist’s view on the term “scarcity” and value. A high S2F is a figure which signifies that new supply is inconsequential relative to the available stock of the commodity. However, over the past century the market capitalization of gold has increased over a 150 times its value from $60 billion, while maintaining an S2F of approximately 62 years. This tremendous increase in the value of gold can however be traced to the decrease in the purchasing power of the US dollar which is the global standard unit of gold price - gold/USD. Most investors and traders understand the basic gold/USD dynamic and make investment decisions intuitively. The postulate also ignores the important factor of market participants in the valuation of a commodity. While the availability of a commodity could impact its valuation, the presence of alternative mediums would also affect the value placed by participants on the commodity. In addition, the idea that market capitalization of precious metals is a variable directly dependent on new supply of the commodities is a hypothesis that has no research to stand on. These amongst many other intricate factors punch holes in the stock-to-flow model of Bitcoin by ‘PlanB’. The value of the Bitcoin Cryptocurrency may well increase along with its market valuation, but it would have little or no relationship with the current stock-to-flow model.