**1.** **FINANCE SECTION**

· **Bitcoin Stock-to-flow Model**

Simply, the Stock to Flow (SF or S2F) model is a way to measure the abundance of a particular resource, *the Stock to Flow ratio is the amount of a resource held in reserves divided by the amount produced annually*. The Stock to Flow model is generally applied to natural resources. However, the gold and silver market which is a different market are in line with the Bitcoin stock-to-flow model. Bitcoin which is estimated at 18,000,000 coins has been mined and it is referred to as the **stock** and about 700,000 mined annually referred to as the **flow**, essentially stock-to-flow model shows how much of an entrance supply makes into the market each year for a given resource relative to the total supply. The higher the Stock to Flow ratio, the lesser newer supply enters the market relative to the total supply. As such, an asset with a higher Stock to Flow ratio should, in theory, retain its value well over the long-term. ­Scarcity plays an important role in this model, precious metals such as gold have an unforgeable scarcity due to the costliness of their creation, it has the highest stock-to-flow ratio because of its scarce reserve.

Analysis of S2F model was carried on several commodities like gold, palladium, platinum and silver, etc. Furthermore, taking metrics (bitcoin model) into analysis, the model is defined by stock divided by the flow which approximately gives a value of 25 years i.e. it will take 25 years to produce the amount of bitcoin available in the world today, this entails that the supply rate of bitcoin is fixed. The Bitcoin halving process has helped in maintaining a steady supply of these coins, whereby it reduces the rate at which Bitcoin is generated i.e. the block subsidy will be halved every 210,000 blocks. (block records some or all of the most recent Bitcoin transactions that have not yet entered any prior blocks), the model predicts that in the nearest future Bitcoin will be at a 100 trillion market capital and a unit will be around $55,000 at a S2F of 50.

These properties combined create a scarce digital resource with profoundly compelling characteristics to retain value over the long-term. Also, they assume that there’s a statistically significant relationship between Stock to Flow and market value (scarcity, as measured by S2F, directly drives value.). According to the model’s projections, Bitcoin’s price should see a significant increase over time due to its continually reduced Stock to Flow ratio. It’s important to note that scarcity alone doesn’t necessarily mean that a resource should be valuable. Gold, for example, isn’t all that rare there are 190,000 tons available. The Stock to Flow ratio suggests that it’s valuable because *annual production compared to the existing stock* is relatively small ­­

Lastly, the Bitcoin stock-to-flow model has a statistically significant relationship between stock-to-flow and market value (they drive each other), and the likelihood that the relationship between stock-to-flow and market value is caused by chance is close to zero.

· **Limitations (Reasons why it’s a bad model)**

The Model limits itself in comparison done with metals like gold, which does not have a fixed stock-to-flow ratio. Gold from history has a constantly fluctuating stock-to-flow ratio which has been at a 90 and 45 (currently at 65) and the model predicts that the supply remains fixed, Bitcoin's mining flow gets cut in half every four years, Bitcoin's stock-to-flow ratio leaps every 4 years. These halving events boost Bitcoin's stock-to-flow ratio dramatically. It's reasonable to assume that the contracting supply is fueling Bitcoin's dramatic rise in value.

Another Limitation the model has is its importance to scarcity. Several metals with extremely low stock-to-flow metals are worth more than gold. This makes it even more scarce and more costly than gold i.e. there's clearly a disconnection between stock-to-flow and price in the world of precious metals.

The model is limited to a cryptocurrency (Bitcoin) and not applicable to others.

The model fails to explain the value of other cryptocurrencies, also Bitcoin is presently at a market cap of $100 billion to a market cap of about 100x i.e. $10 trillion will require a greater magnitude, mining Bitcoin consumes a lot of energy which will make the energy usage in mining bitcoin 100x than its energy consumption presently.

Lastly, governments, agencies, and regulatory bodies are bound to restrain the growth of Bitcoin. If there be any kind of threats by slowing down Bitcoin’s adoption this will impede Bitcoin’s ability to continue rising to the next transition phase