<u>**FINANCE**</u>

**QUESTION 1**

The stock-to-flow is the number that we get when we divide the total stock by yearly production (flow). It tells us how many years are required, at the current production rate, in order to produce what's in the current stock.

SF = stock / flow

Now, let's see how this relates to Bitcoin. There are around 18 million bitcoins currently in circulation (September 2019) and 1.800 BTC are generated every day (657.000 per year). So, if we put those numbers in stock to flow formula:

 = 18.000.000 / 657.000 = 27

That means that we need 27 years of current Bitcoin production in order to produce the current stock. At the time of the next halving event, around may 2020, Bitcoins will be produced at a rate of 900 BTC / day and, by that time, there will be around 18.375.000 coins in circulation. The stock to flow will climb to 52.

<u>Bitcoin's Model</u>

Earlier this year (2019) there was an article written about Bitcoin stock to flow model with mathematical model used to calculate model price during the time:

Model price (USD) = exp (-1,84) * SF ^ 3,36

If we put current Bitcoin stock to flow value (27) into this formula we get value of 10.750 USD. This is the price which is indicated by the model.

Finally, with the above explanation. Bitcoin's Stock to Flow is an interesting model for measuring scarcity, it doesn't account for all parts of the picture. Models are only as strong as their assumptions. For one thing, bitcoin's Stock to Flow relies on the assumption that scarcity, as measured by the model, should drive value. According to critics of the Stock to Flow, this model fails if Bitcoin doesn't have any other useful qualities other than supply scarcity.

Gold's scarcity, predictable flow, and global liquidity have made it a relatively stable store of value compared to fiat currencies, which are prone to devaluation.

According to this model, Bitcoin's volatility should also decrease over time.

The valuation of an asset requires taking into account its volatility. If the volatility is predictable to some extent, the valuation model may be more reliable. However, Bitcoin is notorious for its large price moves.

While volatility might be decreasing on the macro level, Bitcoin has been priced in a free market from its inception. This means that the price is mostly self-regulated on the open market by users, traders, and speculators. Combine that with relatively low liquidity, and Bitcoin is likely to be more exposed to sudden spikes of volatility than other assets. So, the model may not be able to account for this either.