# 2 Background

Stock market indices were created as a tool to be used by investors and other financial managers to describe a market. Using a standard tool allows the investor or financial manager to compare various funds, stocks and other investments to one another. The number itself is not important but this number of time is what is of interest to the investor.

These indices may be classified in different ways to reflect the desired market that an investor or financial manager is interested in. Grouping various stocks or funds together allows the public to gauge and track the performance of those investment tools. Cryptocurrency does not have an index to which the public can look to in order to understand the performance of this investment or compare it as an investment against others.

Current and past approaches to creating these indices include market value indices, price weighted and equal weighted indices. Each of these methods has their strengths and weaknesses.

The market value indices look at the capitalization of the various firms and use them to weight the value of each company’s stock into the final value of the index. This index has two methods of calculating this weight. The other method being used for the market value index is the free float index. This index will also use the total value of the company but it differs on which shares are used to calculate that value. The free float index does not use the shares that are in the hands of the member which is in control of the company. This method measures the liquidity of the shares of the company and the S&P 500 is an example of such an index. The capitalization method uses the total value of the company and one large company or industry can have a dramatic effect on the total value of the index. During the technology bubble of the late 90’s, the technology sector dominated the indices which used market capitalization and subsequently were also affected by the following tech bubble bursting.

A price-weighted index, such as the Dow Jones Industrial Average, is less common and uses the actual price of the stocks to determine the value of the index. This is a weighted average and is also modified to account for stock splits. The largest issue with this type of index is that a stock listed at $10 will count half as much as a stock valued at $20 toward the value of the index.

Equal weighted indices, such as the MSCI, are where each of the stocks contribute equally to the total value of the index.

Cryptocurrency is in its infancy when compared to the stock market indices already created. Seeing as it is not fully adopted there is not a lot of activity in the market index arena. TaiFu is an index, the world’s first cryptocurrency market, which uses market capitalization of thirty largest cryptocurrencies on any given day. The problem with this index is that because that the components can change from day to day. Therefore, a comparison of the index value from today against the index value as of one year prior does not mean as much when looking at the S&P 500 index value over time. This is where a new index can fill the need of investors and allow the public to track the performance of the index over time.