**SHARPE ratios Full Commentary (some content edited out of presentation deck)**

Given the volatility introduced by COVID-19, Harold wants to also know the inherent riskiness of each projected portfolio as well.

We calculated Sharpe ratios for each component of each portfolio and drew the following conclusions:

The post-COVID-19 Sharpe ratios are: Communications (1.42), Financials (1.34), Hedge (1.29), Food (0.70), Pharma (0.31). This suggests returns carry inherently less risk in the Communications, Financials and Hedge portfolio than Food and Pharma. As Food and Pharma are viewed as more defensive industries, this could mean that asymmetric risk/reward opportunities are relatively low in these industries compared to others.

Unsurprisingly, COVID-19 reduced portfolio Sharpe ratios by an average -0.44. Communication Services (-0.97) and Financials (-0.94) declined the most followed by Hedge (-0.48), Food (-0.32) and Pharma (-0.01).

It seems reasonable that a cyclical industry like Financials would drop materially and less than Food and that Pharma would barely change in the midst of a viral pandemic.

However, we were surprised by the decline experienced in the Communication and the Hedge portfolio. These results imply the Communication stocks riskiness was not mitigated by the increased home usage of cable and internet. This could be related to the very high debt levels held in the industry. Also, we would have expected the Hedge portfolio to increase its Sharpe ratio during a volatile period. This suggests precious metals and cryptocurrencies do not buffer against risk as well as may be commonly understood among the investing public.