Submission Number: Group Work Project 1

Group Number: 06

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Statement of integrity: By typing the names of all group members in the text box below, you confirm that the assignment submitted is original work produced by the group (*excluding any non-contributing members identified with an "X" above*).

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Use the box below to explain any attempts to reach out to a non-contributing member. Type (N/A) if all members contributed.

N/A

** Note, you may be required to provide proof of your outreach to non-contributing members upon request.*

9.1 Gold ETF Portfolio Manager's Perspective:

For a portfolio primarily driven by Gold ETFs, we can understand the variation of gold prices with interest rates to generalize the understanding toward the overall portfolio.

As the rate of interest increases, it frees up the stocks and bonds to provide higher returns. Hence there is a competition with instruments providing comparable returns. Thus the favorability of investment in gold declines, thereby causing a drop in the prices. As a gold fund manager, this will put other investments at par with gold, and thus there will be either a reduction in profits or even loss with respect to the returns promised to the investors. Therefore because of the increase in interest rates on 30th October 2019, the rates of gold indices saw a dip in the prices in November compared to the operating range of October.

Gold showed a growth of 200 points in October but dropped by 529 points in November. This drop means an overall loss of 129 (200+(200-529) points). Thus this argument is supported by the numbers.

While there is a logical correlation between the interest rates and gold prices, historically, however gold prices increased irrespective of the increase or decrease of interest rates. For example, in the US, the gold prices increased when the interest rate rose in the 1970s. But they also rose when the interest rates dropped in the 1980s. This is due to the fact that gold being a commodity, is also dependent on the supply and demand of the industry in addition to just investors. Thus, this drop may or may not correlate to the interest rates, and the fund manager might have to understand other factors such as regulations, supply/demand, and consumer markets to make a call. In this period, there were no special news events relating to gold on either of these aspects. Hence, the manager can safely assume the blip, expect a bullish turn soon, and be optimistic about his fund. This stance is also supported by the increase in yield over time shown in the NSS analysis.

However, in the short term, the gold funds will be undergoing losses, and the manager will have to counter the position with an investment in either gold-based bonds or parallel markets where the interest rates are stable or more favorable.

9.2 Equity ETF Portfolio Manager's Perspective:

For equity-driven funds, an interest rate is highly linked to their returns. An increase in the interest rates implies banks borrow at a higher interest rate from the Federal reserves. This means the banks will have to charge higher interest rates to maintain their profits. Therefore the yield of bonds and debts will be increased.

Equity is the difference between the present value of the company and the debts owed by a company. Thus, we would need the value of the companies to grow higher than the debts for the equity investments to be profitable.

In the time after the increase, the SPEU shows overall returns of 109 basis points as compared to a rise of 25 basis points in the interest rates. Thus as long as the banks do not raise their debt rates exorbitantly, the funds will have profits.

Another observation is that October showed close to 455 basis points in the growth of SPEU as compared to 109 in November. This goes to show that the equity funds will be much severely affected by this change and can lose up to 3.46% of their profits if the interest rate is increased, assuming banks' debts go up only by 25 points.

An Equity ETF manager will have to diversify into different markets and geographies to cover the losses. For example, in regions where the government charges lesser interest rates or the indices are trading higher, the fund can allocate some of its investments to hedge the losses in this market.

9.3 Gold & Equity ETF Portfolio Manager's Perspective:

For a portfolio with both Gold and Equity, the condition will be much better than pure gold but will still be under stress.

Gold has taken a more significant percentage hit than the equity funds based on the average indices for each of the two. As a result, the fund manager will have to check for the distribution of gold to equity ETFs in his portfolio. It may even have to be tweaked to be able to mitigate the losses in this time-period for short-term losses.

Gold showed a growth of 200 points in October but dropped by 529 points in November. And SPEU showed an increase of 455 basis points in October but dropped by 346 points in November. This increase means that the ratio of rates of return for gold to equity ETFs is -329 to 109. Hence the minimum ratio of the sum allocated to gold vs. equity should be 109/329 = 0.33 to not make a loss. To make profit on the investment, the ratio must be made much lesser after 30th October to achieve the required earnings in November.

Based on the NSS models, gold shows a sharp rise in future returns over time after the increase in interest rates is declared. This dip in the gold prices can be assumed to be a minor hit in the long run. If the fund has commitments for short term however, the ratio of gold to equity should be reduced to make sure the losses can be covered within time.

Thus, the Gold and Equity ETF portfolio manager will be tasked with redistributing the portfolio, even if it means selling of some gold ETFs at a lower rate to hope for covering up the lost sum by investing in an equity ETF.

9.4 Distribution:

The work was organized in the following structure:

1. Code part
    a. Saverio did the code from 0 to 8
    b. Harshil did another version of the from 0 to 8
    c. Manas revised both version of the code
    d. Comments were written after discussion in wqu forum and zoom call
2. Writing reports part was made
    a. Manas did the draft for the three reports
    b. Harshil did a first revision of the three reports
    c. Saverio did a second revision of the three reports
3. Distribution of the workload part
    a. Saverio wrote this section about distribution
    b. Harshil and Manas were in verification
4. Folder for submission preparation and submission
    a. Saverio prepared and splitted the codes
    b. Harshil and Manas were in verification after parts were written