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IAS PORTFOLIO INSIGHTS

INSTITUTIONAL INVESTING IN GOLD

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What is the role of gold in an institutional portfolio? Inflation hedge? Growth hedge? Diversifier to stocks and bonds? What does the evidence show?

The evidence is inconsistent, complicating the CIO's decision-making. Consider gold's ability to hedge inflation. Some studies show that gold has little or no correlation to inflation, whereas other studies show a strong correlation with inflation. How can this be? These inconsistent findings are attributable to differences in the time period examined and the assumed investment horizon. Estimating relationships on a weekly basis may help a desk trader but not a CIO, whose investment horizon can be measured in years. Gold's correlation to realized inflation increases and becomes more positive as the length of the return horizon increases.

Using data from April 1973 to December 2021, we compare estimated sensitivity (aka "beta") of commodities and gold returns to different macroeconomic and market variables like realized inflation or economic activity. At a 3y horizon, a horizon that better matches that of a CIO, the sensitivity of realized inflation (CPI – Consumer Price Index) for gold is lower than for commodities (GSCI – Goldman Sachs Commodity Index) (beta values of 1.6 vs. 2.9, respectively). However, gold's sensitivity to 3y changes in survey-based 10y inflation expectation, as measured by Survey of Professional Forecasters (SPF), is greater than GSCI (betas of 16.8 and 12.7, respectively). In addition, gold's sensitivity to economic activity (Chicago Fed National Activity Index) is negative, whereas for commodities it is positive (betas of -0.22 and 0.08, respectively). Of the assets we considered, only gold had a negative relationship to economic activity.

Gold's negative relationship to economic activity implies that *gold is a low-growth protection asset* and would be expected to do well when the economy turns downward. Gold's positive relationship to both CPI and changes in SPF imply that *gold is also an inflation-protection asset*. What about environments of slow growth and high inflation – stagflation? Gold having a negative beta to economic activity and a positive beta to inflation suggests that *gold may do well during stagflation*. In contrast, commodities, due to their high inflation sensitivity as well as high economic growth sensitivity, are more suited in an overheating environment when both inflation and economic growth are high.

Higher inflation generally implies higher short-term interest rates. Unlike other assets, gold's sensitivity to change in the Fed funds rate is positive and significant at 1y horizons and beyond. A CIO considering an inflation hedge but worried about Fed tightening can still consider allocating to gold.

What is the evidence of gold as a diversifier of a stock and bond portfolio? At a 3y horizon, gold has negative correlations to both equities and bonds. *Gold is a diversifying asset* for a balanced portfolio.

Gold also has a useful role to play during spikes in equity volatility. A separate study of 15 volatility events from 1973 to 2020 also showed that gold had better cumulative returns than U.S. equities, on average, during a volatility event. Gold also outperformed equities, on average, over the 21m post-spike period. This event study indicates that *gold is a defensive asset and may offset financial market declines*.

So, a CIO may consider allocating to gold for several objectives: inflation and/or low-growth protection, diversification, and volatility spikes. But how can a CIO decide how much to allocate to gold? For a CIO rebalancing their portfolio to achieve a certain objective (say, inflation protection), the ideal gold allocation depends on gold's beta to the objective and the CIO's horizon. However, what is often overlooked is that sensitivity estimates are uncertain. When constructing a portfolio to target a certain sensitivity (*e.g.*, 3y CPI beta) to achieve specific investment objective (*e.g.*, inflation protection), this sensitivity uncertainty needs to be incorporated in portfolio construction. For example, a CIO constructing an inflation-protection portfolio may find an even higher allocation to gold-related assets at a longer horizon, separate from allocation to commodities, after accounting for this uncertainty.

Gold has a role to play in institutional portfolios separate from commodities, as both an inflation-protection and a low-growth protection asset

Institutional investors can not only invest in gold bullion but also in gold ETFs, gold futures, gold-miner equities and gold royalty and streaming agreements. Investors can also invest in more systematic strategies such as a strategy that invests in gold futures, but if gold futures are in deep contango the strategy invests in bullion-backed ETFs. Similarly, investors can invest in high-earnings-quality gold-miner equities such equities have historically have performed better than the gold-miner index. 13F filings show that some institutional investors have allocated to gold and gold-miner ETFs.

The recent high-inflation environment has put the spotlight back on institutional gold.

See H. Parikh, '*Institutional Gold!'* PGIM IAS, November 2019.
See J. Shen, '*Riders In The Storm: How Volatility Events Affect Private Asset Class Performance'*, PGIM IAS, June 2020.

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IAS 0310-100