
White Paper

Multi-Asset Solutions

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Real Assets: Managing Through Inflation Uncertainty

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Executive Summary

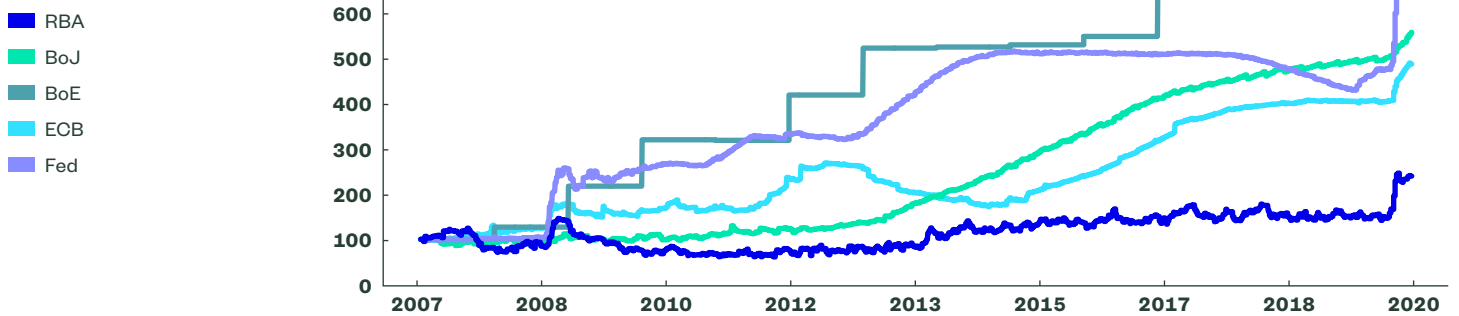
Planning for a scenario with an inflation surprise has come back on the table in response to the historic stimulus in the wake of COVID-19. An allocation to real assets could help mitigate the adverse investment outcomes due to unexpected inflation scenarios.

Introduction

Investors are faced with a quandary in the COVID-19 global economy as they navigate the concurrent threats of deflation and inflation. The economic backdrop allows for arguments supporting each outcome. The deflationary scenario results from debt-financed stimulus and persistently curtailed economic activity as the world tentatively recovers from lockdown measures, yielding some of the worse economic data on record. Not to mention that inflation expectations have stubbornly sat well below the central bank targets since the 2008 financial crisis.

However, inflation cannot be ruled out given the swift rise in M2 money supply, the globally coordinated policy response and challenges to existing supply chains. Central bank balance sheets have ballooned to record levels and policy makers have already tipped their hands toward delivering additional monetary support if necessary. This, plus the more than US\$10 trillion worth of negative yielding debt across the world and Federal Funds futures still pricing in the possibility of slightly negative US rates in mid-2021, has created a recipe for inflation.

Figure 1
**Balance Sheets of
Major Central Banks**



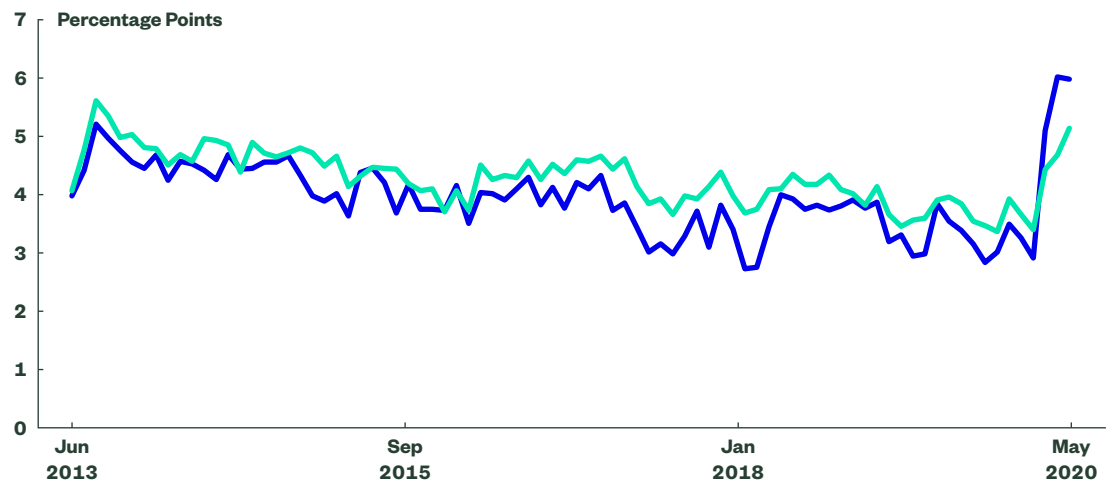
Source: Macrobond, ECB, BoE, BoJ, US Fed, RBA, as at 1 June 2020.

Market Signals of Rising Inflation Risk

An inflationary scenario is not hypothetical — several market trends point toward the increased investor awareness of potential inflation. First, inflation uncertainty as measured by the New York Fed consumer survey has certainly spiked.¹ If investors were fully confident in a deflationary scenario, inflation expectations would be converging lower, not higher.

Figure 2
**Inflation
Uncertainty Spikes**

- New York Fed, 3-Year Consumer Inflation Expectations, 75th Minus 25th Percentile
- New York Fed, 1-Year Consumer Inflation Expectations, 75th Minus 25th Percentile

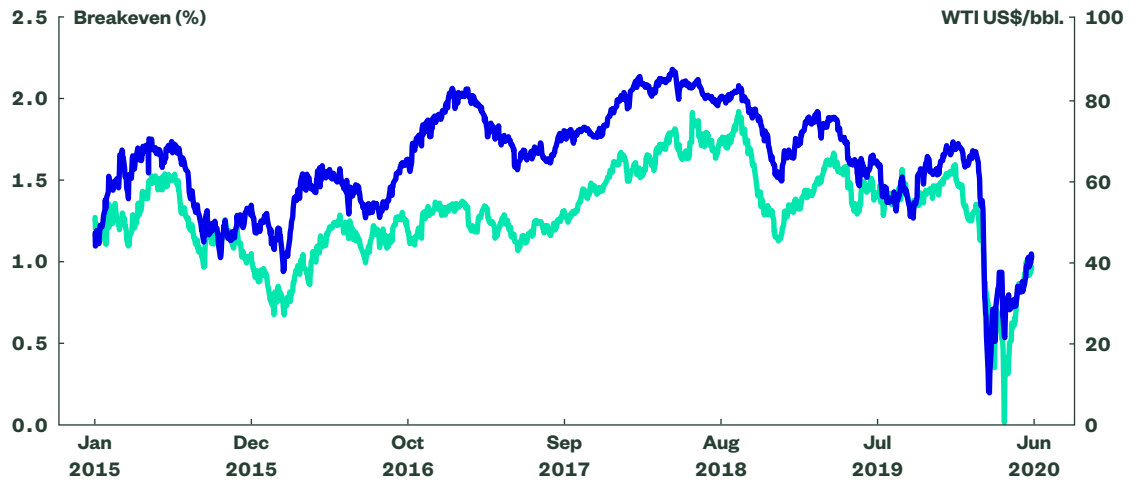


Source: The Federal Reserve Bank of New York, as at 1 May 2020.

Secondly, inflation expectations measured by 5-year breakeven rates between Treasury inflation-protected securities (TIPS) and nominal bonds have been volatile through the first half of 2020 and have closely followed oil prices (Figure 3). We expect this to continue as the OPEC+ supply cuts work their way into inventory numbers. As global economies reopen and demand for fuel increases, the result could be a sustained move higher in oil prices and inflation expectations.

Figure 3
Five-Year Breakeven Inflation vs. Price of WTI

■ US 5-Year Treasury Inflation Linked Breakevens (%)
 ■ West Texas Intermediate Oil Price (NYMEX Spot Price US\$/bbl)

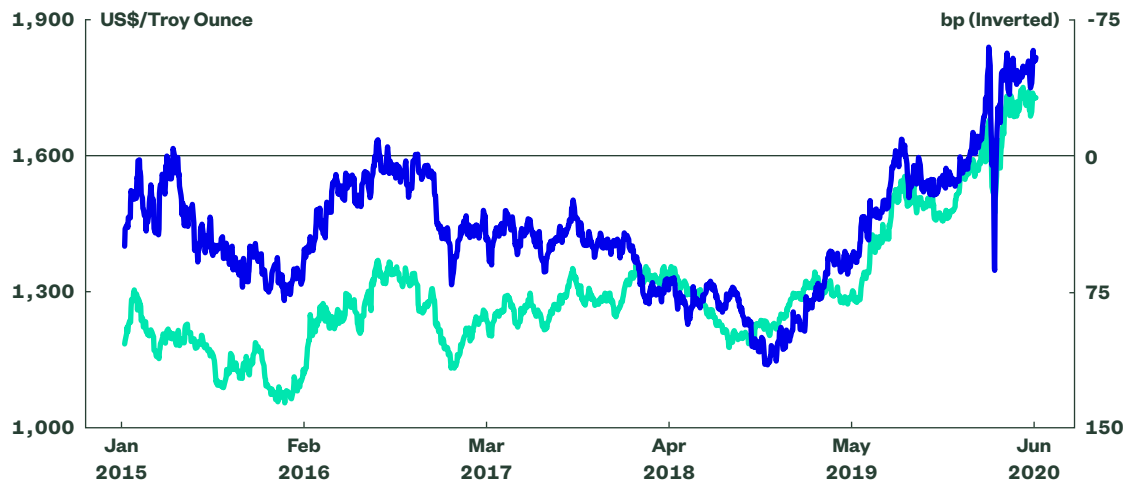


Source: Federal Reserve Bank of St. Louis, as at 17 June 2020.

Additionally, gold prices have risen far beyond their utility as a tail-risk hedge. Expectations for lower interest rates have bolstered the bullish outlook for gold since lower interest rates reduce the opportunity cost of holding the non-interest-bearing bullion. The inverse relationship between real interest rates and gold has been tighter than ever of late, as the pair has moved in near lockstep. Since March 2020, real interest rates have moved swiftly lower while gold prices have notched multi-year highs — a trend that can persist if central banks keep real rates drifting lower.

Figure 4
Gold vs. Real Yields

■ US 10-Year Real Rate bp (Inverted)
 ■ Gold US\$/Troy Ounce



Source: State Street Global Advisors, as at 17 June 2020.

Gold remains an attractive hedge in the current low rate environment, and we would expect investors to continue to keep the yellow metal well bid. But as economic activity resumes and the velocity of money picks up, this could pave the path for inflation levels to rise, or even worse for asset values, a spike in unexpected inflation.

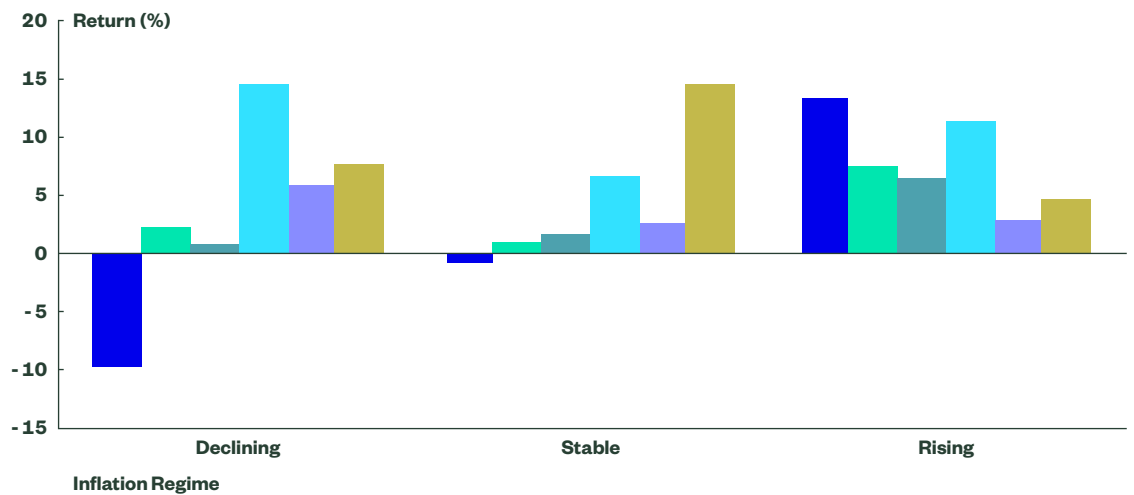
Asset Returns in Inflationary Scenarios

Aside from gold, how should investors seek to protect their portfolios in a rising inflationary environment, and more importantly, an environment ripe for unexpected inflation?

Looking at the performance of asset classes that have historically been thought of as inflation hedges in different inflation regimes, one can see that there isn't a single asset class that performs best in each environment or a one-size-fits-all solution (Figure 5).

Figure 5
Average Real Return vs. Inflation Regime (1991–2019)

- Commodities
- Gold
- TIPS
- US REITs
- US Aggregate Bonds
- US Equities



Source: State Street Global Advisors, as at 31 December 2019.

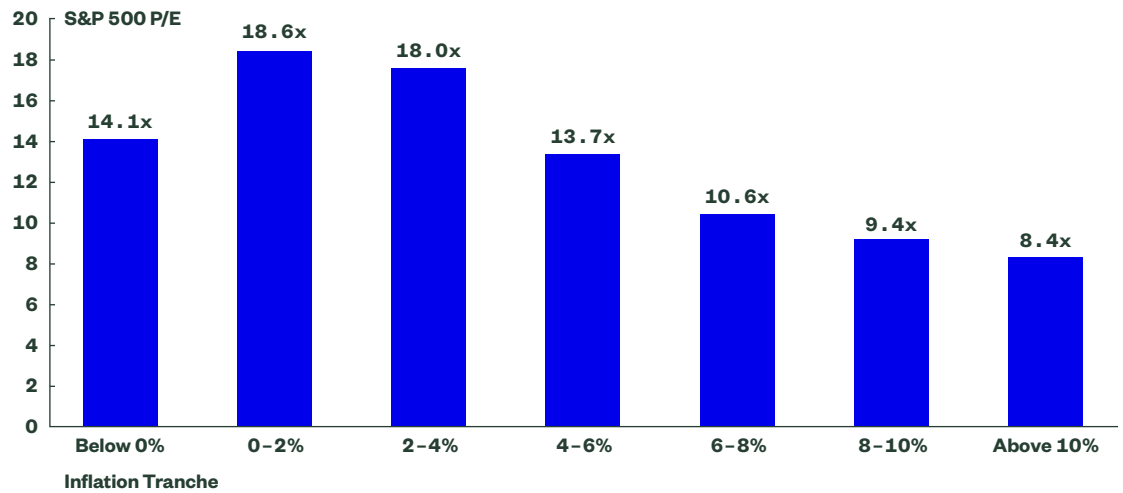
Note 1: Declining regime is an annual decrease in headline CPI of greater than 50 bp. Rising regime is an annual increase in headline CPI of greater than 50 bp. Stable regime is everything else in between. Historical annual index returns from 1991–2019.

Note 2: Commodities = Bloomberg Commodity Index.

In times of declining inflation, reliable income streams from cash flows become increasingly important as challenges to economic growth develop. Historically, this environment has been kind to fixed income, especially for bonds of longer duration, while commodities have typically repriced lower as the costs of goods and services decline. While broad commodities have performed poorly in deflationary periods, gold has performed better than expected in this regime. A deflationary environment is symptomatic of constrained economic growth, dovish central banks and a low carry environment, which benefits gold.

Moderate to slightly rising inflation is typically seen as a sign of positive economic growth, especially when inflation is realized in line with, or close to, market expectations. Accordingly, traditional asset classes (such as equities and bonds and even real estate investment trusts (REITs)) have historically performed well as price stability boosts confidence that businesses will be able to pass along higher costs. Furthermore, when inflation has stayed between 2% and 3% and come in line or close to expectations, equities have acted as a reasonably good inflation hedge and performed quite well as corporate earnings grow faster when inflation is higher. This relationship holds true until inflation enters 3%–4% range and beyond, since high inflation expectations generally result in higher interest rates, which reduce the present value of future corporate profits and erode the value of nominal bonds (Figure 6).

Figure 6
**Average S&P
 500 LTM P/E by
 CPI Tranche**
 (1970 to Current)



Source: State Street Global Advisors, as of 31 May 2020.
Note: LTM = Last Twelve Months.

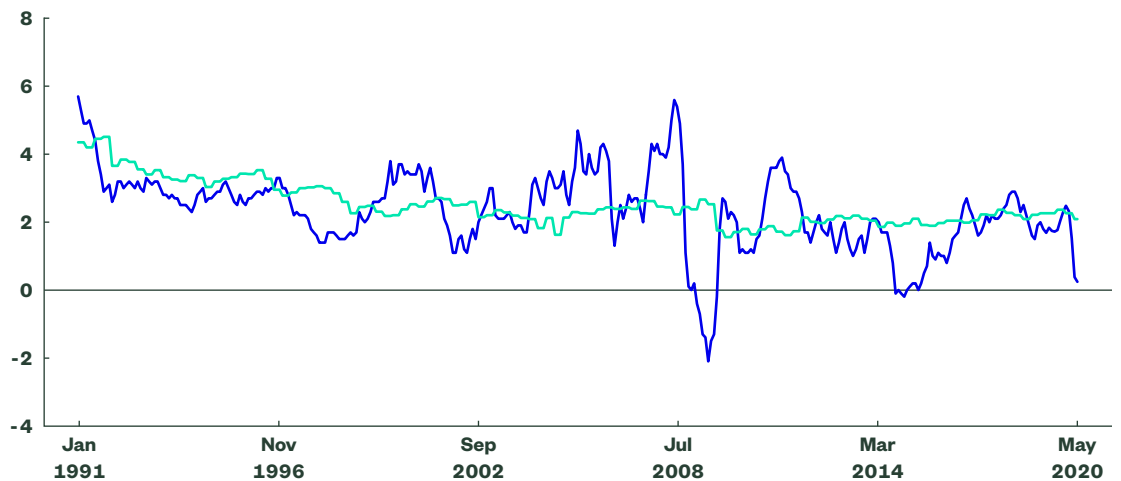
In rising inflationary environments, the diversification benefits of commodities shine as these assets are likely to reprice higher to reflect the higher future prices of materials. Equally, in rising inflation regimes, bonds have historically offered poor relative performance to real assets and equities as inflation erodes the purchasing power of a bond's future cash flows. In fact, inflation is the largest risk that bond investors face. It is important to note that TIPS are not exposed to this risk since their principal and interest are adjusted higher along with actual inflation, making TIPS an excellent pure inflation hedge.

Forecasting Inflation Remains a Difficult Task

But what happens when realized inflation strays from consensus expectations? Even as overall inflation levels have been subdued since the double-digit CPI readings in the 1970s and 80s, forecasting inflation remains a difficult task. Actual inflation sometimes dramatically differs from expectations. These bouts of unexpected inflation have had a more significant impact on asset returns than anticipated rising inflation (Figures 7 and 8).

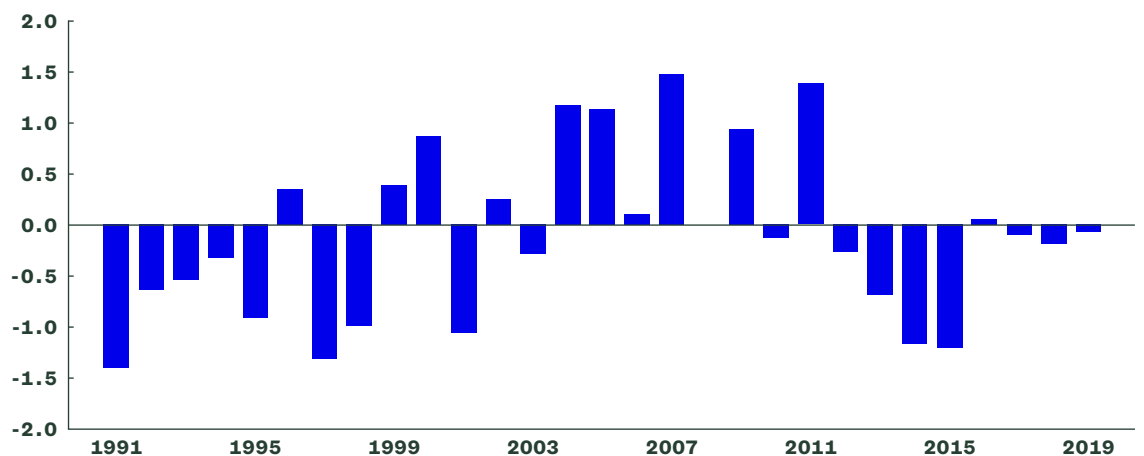
Figure 7
Actual vs. Expected Inflation
(Monthly Values: 1991-Current)

■ US Headline CPI
■ Philadelphia Fed Survey of Professional Forecasters Median 1-Year CPI Estimate



Source: The Federal Reserve Bank of Philadelphia, State Street Global Advisors, as at 31 May 2020.

Figure 8
Magnitude of Unexpected Inflation
(Annual Values: 1991-2019)



Source: The Federal Reserve Bank of Philadelphia, State Street Global Advisors, as at 31 December 2019.

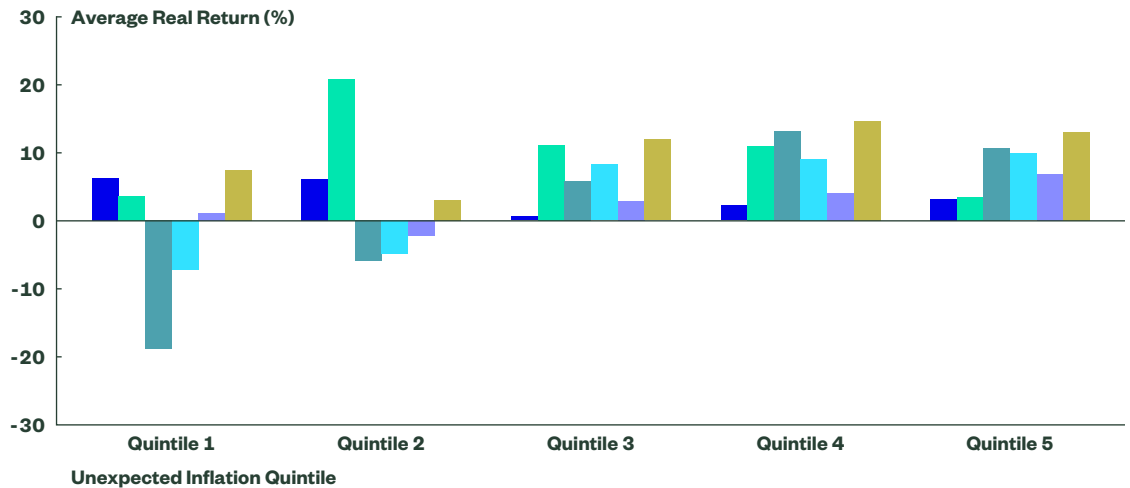
Investment Implications

Typically, portfolios with healthy allocations to global equities and bonds are underexposed to assets that tend to perform best during periods of unexpectedly high inflation. A portfolio becomes very vulnerable when inflation surprises to the upside since higher-than-expected inflation can erode a portfolio's purchasing power and cause equity and bond prices to underperform. The best way for investors to protect their portfolio from the risk of unexpected inflation would be to increase their exposure to asset classes that have historically provided a positive return when inflation tops expectations.

Going back to 1991 — the inception date for the Bloomberg Commodities Index (BCOM) — commodities and other real return assets have historically served as the best hedge against inflation surprises. They outperformed traditional asset classes due to their nature of repricing quickly in response to economic growth. Figure 9 segments the historical inflation surprises from 1991 through 2019 into quintiles to gauge the impact inflation surprises have on different asset classes. The first three quintiles are all inflation surprises to the downside. When inflation undershoots expectations, traditional asset classes have performed very well. Conversely, when inflation exceeds expectations (quintiles 4 and 5), assets with inflation hedging potential are the best performers.²

Figure 9
Unexpected Inflation Impact — Average Real Returns (1991–2019)

- US Aggregate Bonds
- US Equities
- Commodities
- Gold
- TIPS
- US REITs



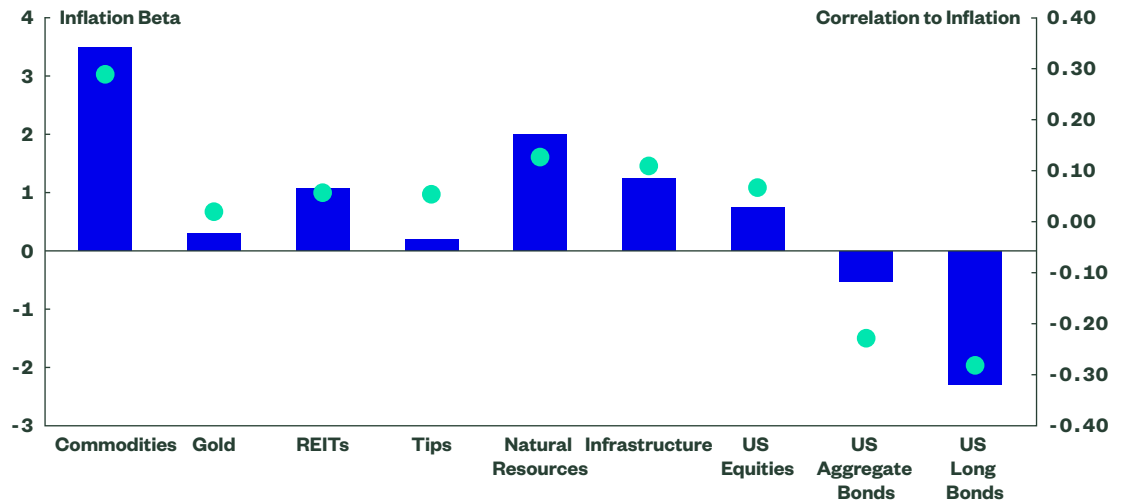
Source: Bloomberg, State Street Global Advisors.
Note: Commodities = Bloomberg Commodity Index.

It is not surprising to see inflation-sensitive assets such as commodities, gold, and TIPS perform well in times of unexpected inflation since these assets are positively correlated to unexpected inflation. Both equities and REITs have inflation hedging qualities; however, these assets need longer time horizons to pass on higher prices and rents to their consumers.

When evaluating inflation hedges, it is important to use inflation beta more than correlation. Correlations reveal the strength of a relationship but not the magnitude of an asset's move to inflation (Figure 10). The inflation beta shows the degree an asset class will move up or down per a 1% change in inflation. Real assets, particularly commodities, have exhibited positive, sizable inflation betas, and as such a small allocation can be used advantageously toward providing protection from inflation shocks.

Figure 10
**Inflation Beta
 and Correlation
 to Inflation**

■ Inflation Beta
 ● Correlation to Inflation



Source: Macrobond, Bloomberg, State Street Global Advisors, as at 31 May 2020.

Conclusion

The post COVID-19 investment terrain will present challenges for investors to traverse. Expectations for subdued global growth and moderately higher inflation may motivate global central banks to employ inflationary strategies to reduce their debt levels and rein in their swollen balance sheets. This expectation should prompt investors to re-examine their portfolio's sensitivity to inflation since few asset classes are expected to perform well when actual inflation exceeds expectations.

Investors seeking to protect their purchasing power may want to pursue real assets that have historically proven to provide positive performance relative to equities and bonds in environments when inflation surpasses expectations. Thus, it may be prudent for investors to include an allocation to real assets to increase the diversification of their portfolio and help mitigate unexpected inflation's unpredictable and potentially adverse outcomes for growth and asset values. While gold has performed well of late and commodities have demonstrated a strong correlation and beta to inflation, the best approach to hedge inflation remains a diversified portfolio of real assets that may include commodities, TIPS and REITs. Also, newer asset classes such as infrastructure and natural resource equities warrant inclusion as they offer attractive dividends in a low carry world and have also shown positive performance during times of unexpected inflation.

Endnotes

- 1 Data for developed markets across the world follow a similar pattern.
- 2 It is important to note that not all unexpected inflation is created equal and the inflation trend at the time of the surprise matters. The first quintile almost entirely comprises declining inflation regimes, while the second and third quintiles are mixed between declining and stable regimes. On the other hand, quintiles four and five are essentially made up of rising regimes, proving that the underlying inflation trend also plays an important role in asset returns.

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* This figure is presented as of March 31, 2020 and includes approximately \$51.62 billion of assets with respect to SPDR products for which State Street Global Advisors Funds Distributors, LLC (SSGA FD) acts solely as the marketing agent. SSGA FD and State Street Global Advisors are affiliated.

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