Scenario Planning

# Inflation Protection in Portfolio Allocation

Growing numbers of investors have steadily increased their real asset allocations. Many investors have discovered the benefits of real assets in potentially providing long-term total returns, inflation protection and the difference in historical correlation with equity and fixed-income investments. We believe investors are looking for what real assets can offer: the potential for income, diversification and assets linked to inflation in an unclear global environment.

At the same time, investors continue to benefit from innovation within a variety of investment vehicles that focus on real assets. Furthermore, strong demand for real assets is being met with an unprecedented supply of opportunities for investment, and we believe trends indicate that it will continue to grow. The Real Assets classification (e.g., timber, water, infrastructure, natural resources, etc.) is continually evolving, influenced not only by new asset types, but also regulatory and issuance changes.

## DEFINING THE ASSET CLASS AND ITS BENEFIT POTENTIAL

Real assets—which we define as real estate, infrastructure and natural resources—form the pillars of the global economy. As such, these classifications are inherently tied to global developments, inflation and other macroeconomic trends. Notably, the cash flows that historically have been produced by real assets can be valuable in times of both economic expansion and contraction. Real assets represent physical assets that are often linked to inflation—a favorable characteristic as potential demand rises in periods of economic expansion. At the same time, the increasing demand for the goods and services that real assets provide may be relatively predictable and inelastic (insensitive to changes in price or income), which can be helpful in periods of economic uncertainty.

While cash-flow stability has historically been characteristic of real asset investments, the fundamentals that drive the cash flows are distinct. As such, real assets can provide an effective way to enhance portfolio diversification beyond traditional stock and bond allocations. The chart below highlights potential benefits such as income, capital appreciation, higher risk-adjusted returns and inflation protection.

| POTENTIAL BENEFITS OF REAL ASSETS | |
|---|---|
| Diversification | Certain types of real estate have been shown to be less resistant to interest rates in a rising rate environment. As the costs of steel, sheetrock and glass rise, the intrinsic value of existing structures increase. Replacement costs also rise, reducing supply. Residential real estate, specifically those with yearly lease renewals, may be particularly strong in protecting against inflation. |
| Income | Potentially stable cash flow may be derived from long-term projects that deliver essential products or services. Infrastructure may be defensive in the face of economic contraction. |
| Capital Appreciation | Potentially participate in the benefits of rising prices of raw input materials. These investments offer the additional potential advantage of offsetting some of the longer-term inflationary effects of economic expansion in emerging and established regions. |
| Potentially Higher Risk-Adjusted Returns | Historically, the volatility of many real asset classes has been lower than that of equities, leading to higher risk-adjusted returns. |

*Real assets tend to have low correlations with traditional stock and bond allocations. Correlations are also low among the sectors comprising individual real asset categories.*

## PORTFOLIO DIVERSIFICATION

Real asset returns have historically had low correlations to traditional equity and fixed-income investments, which our findings suggest they can provide an effective way to enhance the diversification of a traditional stock and bond portfolio. Individual real asset categories have historically displayed correlations with each other that may provide investors with an opportunity to diversify their holdings into more than one real asset class in order to enhance overall diversification within their portfolio.

As highlighted in the chart below, the correlations of real estate with infrastructure and natural resources are 0.91 and 0.74, respectively. The return streams of two assets having a correlation of 1.00 would be perfectly correlated. These measures are relatively moderate because the drivers behind the returns of these categories are distinct. Consider natural resource pricing, which for some assets like timber are highly dependent on short-term factors such as climate, temperature and water supply. In contrast, the cash flows from some infrastructure assets, such as toll roads, tend to rise with an expanding economy, while those derived from more essential services, such as utilities, tend to be more highly regulated, and consequently during times of economic weakness tend to have more locked in levels of usage pricing.

## LOW CORRELATIONS AMONG REAL ASSET CONSTITUENTS (2011 - 3Q2021)

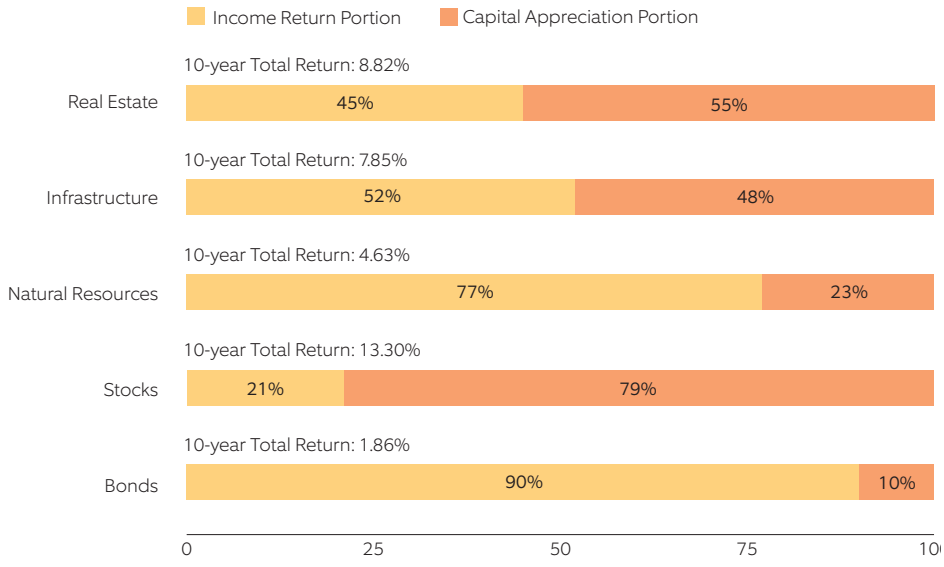
| | REAL ESTATE | INFRASTRUCTURE | NATURAL RESOURCES | STOCKS | BONDS |
|---|---|---|---|---|---|
| Real Estate | 1.00 | 0.91 | 0.74 | 0.86 | 0.58 |
| Infrastructure | 0.91 | 1.00 | 0.86 | 0.93 | 0.56 |
| Natural Resources | 0.74 | 0.86 | 1.00 | 0.88 | 0.45 |
| Stocks | 0.86 | 0.93 | 0.88 | 1.00 | 0.52 |
| Bonds | 0.58 | 0.56 | 0.45 | 0.52 | 1.00 |

Source: Bloomberg and Northern Trust Investment Strategy, Index data for the various correlation calculations above are as follows: Real Estate: FTSE EPRA Nareit Global Real Estate Index; Infrastructure: S&P Global Infrastructure Index; Natural Resources: S&P Global Natural Resources Index; Stocks: MSCI World Index; Bonds: Bloomberg Global Aggregate Bond Index. Indexes are gross of fees and indexes cannot be invested in directly. Calculations where applicable are as of Jan 1, 2011 to Sep 30, 2021. **Past performance is not indicative or a guarantee of future results.** Index performance returns do not reflect any management fees, transaction costs or expenses. It is not possible to invest directly in any index.

## CAPITAL APPRECIATION POTENTIAL

Our research has shown that both income return and capital appreciation represented a meaningful amount of the historical total returns generated by real assets below. Historically, many of these hard assets tend to be long term and increase in value over time, as replacement costs may rise and operational efficiencies can be achieved. For many investors, this scenario may be visualized within their own daily experience as they see leasing of vacant space, steady climb of toll road fees, rising usage of energy or climbing wood prices. We believe that income from real-asset-related investments may help protect value on the downside, while operational efficiencies may enhance value on the upside.

## 10-YEAR CAPITAL APPRECIATION AND INCOME TOTAL RETURNS OF REAL ASSETS VS. STOCKS & BONDS (2011 - 3Q2021)

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*Risk-adjusted return refines an investment's return by measuring how much risk is involved in producing that return.*

## POTENTIALLY HIGHER RISK-ADJUSTED RETURNS

Adding real assets may also enhance the risk-adjusted returns of a mixed-asset portfolio. The chart below shows the various historical Sharpe Ratios of the three real asset categories in comparison to equities and bonds. The Sharpe Ratio is a measure of return per unit of risk, which indicates whether an investment's return sufficiently rewarded investors for the level of risk assumed (the higher the Sharpe Ratio, the greater the level of risk-adjusted performance). For example, the 10-year Sharpe Ratio for Infrastructure as defined in the chart below is .570 which means that an investor should have a greater risk-adjusted return in comparison to an investment in a Treasury bond which has a Sharpe Ratio of zero. Only when an investor compares one investment's Sharpe Ratio with that of another investment can the investor get a feel for the return versus the relative amount of risk they can expect to take to achieve that return.

### 10-YEAR SHARPE RATIOS OF REAL ASSETS VS STOCKS AND BONDS (2011 - 3Q2021)

| CATEGORY | SHARPE RATIO |
|---|---|
| Real Estate | 0.600 |
| Infrastructure | 0.570 |
| Natural Resources | 0.300 |
| Stocks | 0.950 |
| Bonds | 0.300 |

Source: Bloomberg and Northern Trust Investment Strategy, Index data for the various correlation calculations above are as follows: Real Estate: FTSE EPRA Nareit Global Real Estate Index; Infrastructure: S&P Global Infrastructure Index; Natural Resources: S&P Global Natural Resources Index; Stocks: MSCI World Index; Bonds: Bloomberg Global Aggregate Bond Index. Indexes are gross of fees and indexes cannot be invested in directly. Calculations are as of Jan 1, 2011 to Sep 30, 2021. **Past performance is not indicative or a guarantee of future results.** Index performance returns do not reflect any management fees, transaction costs or expenses. It is not possible to invest directly in any index.

While real assets tend to retain value during economic downturns and contribute to value creation during economic upturns, performance generally lacks drastic movements in either direction. This potential performance stability may provide investors with portfolio benefits in a variety of market environments.

### AVERAGE ANNUAL RETURNS & YTD RETURNS OF REAL ASSETS (2011 - 3Q2021)

| | NATURAL RESOURCES | GLOBAL REAL ESTATE | GLOBAL LISTED INFRASTRUCTURE |
|---|---|---|---|
| YTD | 16.79% | 16.02% | 4.92% |
| 1 Year | 42.23% | 27.14% | 23.04% |
| 3 Year | 14.55% | 20.45% | 21.46% |
| 5 Year | 57.51% | 29.50% | 33.52% |
| 10 Year | 4.63% | 8.82% | 7.85% |

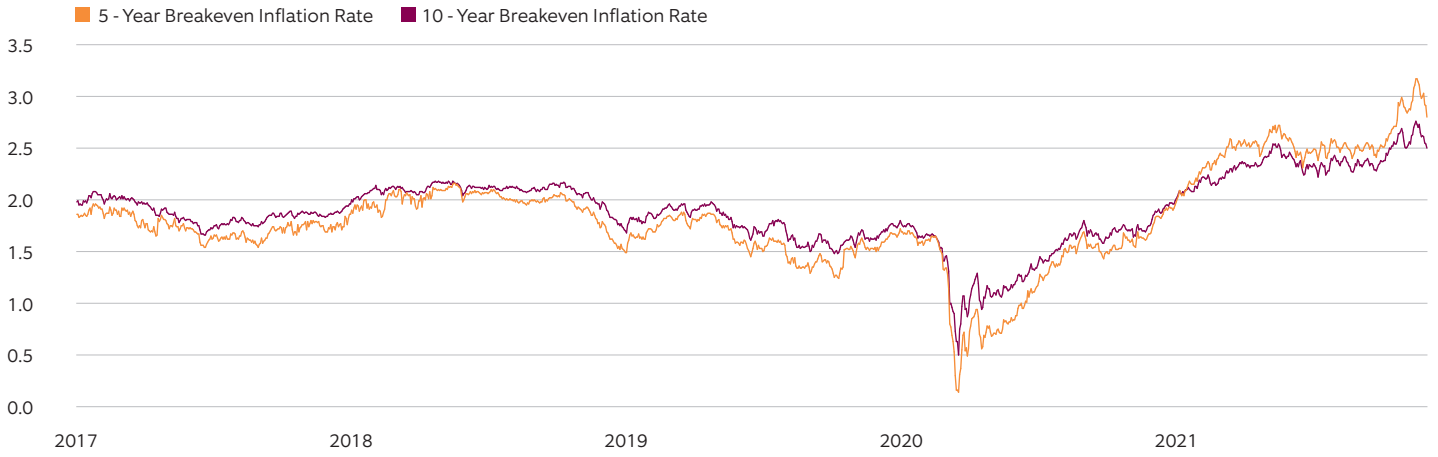
Source: Bloomberg and Northern Trust Investment Strategy, Index data for the various correlation calculations above are as follows: Natural Resources: S&P Global Natural Resources Index; Global Real Estate: FTSE EPRA Nareit Global Real Estate Index; Global Infrastructure: S&P Global Infrastructure Index. Indexes are gross of fees and indexes cannot be invested in directly. Calculations where applicable are as of the last trading day of December 2010 to Sep 30, 2021; except for year to date which is January 4, 2021 to Sep 30, 2021. **Past performance is not indicative or a guarantee of future results.** Index performance returns do not reflect any management fees, transaction costs or expenses. It is not possible to invest directly in any index.

## INFLATION PROTECTION

Against a backdrop of increasing levels of U.S. indebtedness, declining U.S. dollar, and higher overall prices as measured by the Consumer Price Index (CPI), Treasury Inflation-Protected Securities (TIPS) breakeven spreads (BES) have been on the rise since mid-March 2020, reversing the trend seen through most of 2019.[1] BES measure the difference in yield between similar maturity Treasury yields and the current yields on comparable TIPS.

## BREAKEVEN INFLATION EXPECTATIONS

Historical Comparison Jan 3, 2017 - Nov 30, 2021



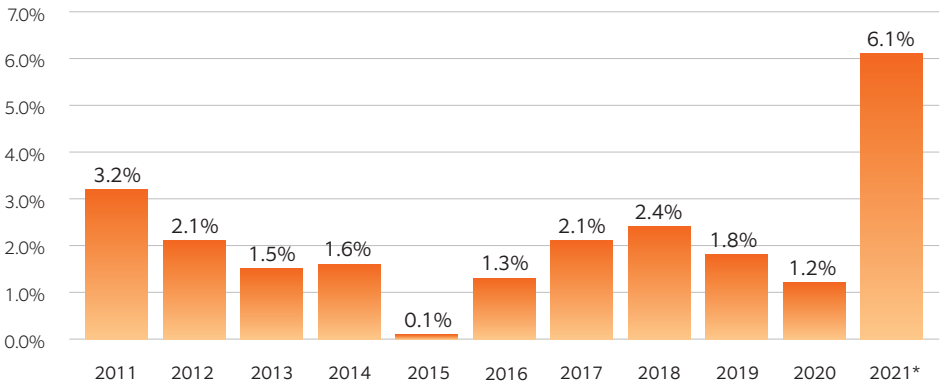

Source: Federal Reserve Bank of St. Louis, Nov 30, 2021. The breakeven inflation rates above represent a measure of expected inflation derived from the 5-year Treasury Constant Maturity Securities and 5-Year Treasury Inflation-Indexed Constant Maturity Securities and the 10-year Treasury Constant Maturity Securities and 10-Year Treasury Inflation-Indexed Constant Maturity Securities, respectively. The values at any given point on the chart implies what market participants expected inflation to be in the next 5 or 10 years, respectively, on average.

Rising BES is one indicator that investors have historically used to measure expectations for higher inflation. We believe that there are two drivers of inflation — demand-driven and supply-driven inflation. Many economists believe that demand-driven inflation can be labeled as "good inflation" because often times it reflects overall economic growth, such as an increase in average hourly earnings, and stimulates the supply of goods and services. Supply-driven inflation can be labeled as "bad inflation" because it may reflect non-economic drivers, such as the price of oil, which can have a negative impact on both the supply chain and labor markets and tends to cut demand.

As recently demonstrated in the Consumer Price Index (CPI), investors have recently begun to see increasing levels of annual inflation when the CPI rose 6.8 percent YOY (November 2020 to November 2021), the largest 12-month increase since the period ending June 1982. Energy prices rose 33.3 percent over the last year, and food prices increased 6.1 percent.

## INFLATIONS UPWARD TRACK

### Historical Comparison 2011 - 2021




Source: Bureau of Labor Statistics, U.S. Department of Labor, 2021 annual percentage rate is full year calculation based on November 2021 rate annualized.

Whether you believe that inflation is a threat to your investment portfolios will depend on many factors. As investors continue to expect higher inflation, reflected by either the BES or CPI, those who think inflation will trend even higher may benefit from considering an investment that offers potential inflation protection.

## FLEXSHARES THREE STEP APPROACH TO INFLATION

**Portfolio allocation considerations based on expectations for inflation:**

1-5 YEARS

### SHORT TERM

**U.S. Treasury Inflation Protected Securities**

- Potential for capturing of near term unexpected inflation
- Designed to be correlated to short-term CPI
- We believe captures "shelter" inflation


5-20 YEARS

### INTERMEDIATE TERM

**Global Natural Resources**

- Potential long-term correlation to CPI
- We believe liquid, transparent and tax efficient


20+ YEARS

### LONG TERM

**Real Estate and Infrastructure**

- We believe long lived including barriers to entry and contracted cash flows

**Private Ownership of Natural Resources/Commodities**

- Timberlands, Farmlands, Mineral Rights
  – Illiquid Allocations

Building a real asset portfolio is a process that requires multiple considerations in terms of reviewing your expectations for inflation. Real assets can play a fundamental role in a portfolio, depending on an investor's objectives and given the current low-yield environment along with the potential diversification that real assets have historically provided, we believe that investors should consider them in order to create a well-diversified portfolio.

## FIND OUT MORE

The FlexShares approach to index-based investing is, first and foremost, investor-centric and goal oriented. We pride ourselves on our commitment to developing products that are designed to meet real-world objectives for both institutional and individual investors. If you would like to discuss the attributes of any of our ETFs in greater depth or find out more about the index methodology behind them please don't hesitate to call us at 1-855-FlexETF (1-855-353-9383) or visit **www. FlexShares.com**.

## DEFINITIONS

**FTSE EPRA/Nareit Global Real Estate Index (FTSE EPRA/NAREIT Global Index)** is an index designed to track the performance of listed real estate companies in both developed and emerging countries worldwide.

**S&P Global Infrastructure Index (S&P Global Infrastructure Index)** is designed to track 75 companies from around the world chosen to represent the listed infrastructure industry while maintaining liquidity and tradability.

**Standard & Poor's Global Natural Resources Index (S&P Global Natural Resources Index)** includes 90 of the largest publicly-traded companies in natural resources and commodities businesses that meet specific investability requirements, offering investors diversified and investable equity exposure across 3 primary commodity-related sectors: agribusiness, energy, and metals & mining.

**MSCI World Index** a market cap weighted stock market index of companies throughout the world and is used as a common benchmark for 'world' or 'global' stock funds intended to represent a broad cross-section of global markets.

**Bloomberg US Aggregate Bond Index (Bloomberg Aggregate Index)** is a broad base, market capitalization-weighted bond market index representing intermediate term investment grade bonds traded in the United States.

**Cash flow** refers to the net balance of cash moving into and out of a business at a specific point in time. Cash flow can be positive or negative.

## FOOTNOTE

1 Federal Reserve Bank of St. Louis. In this analysis we are making a comparison between the differences between the 5-Year TIPS rates and the 5-Year nominal Treasury rates and the differences between the 10-Year TIPS rates and the 10-Year nominal Treasury rates in order to construct a U.S. Breakeven 5-Year rate and the U.S. Breakeven 10 Year rate using data available as of 11/30/2021.

## IMPORTANT INFORMATION

**Before investing, carefully consider the FlexShares investment objectives, risks, charges and expenses. This and other information is in the prospectus and a summary prospectus, copies of which may be obtained by visiting www.flexshares.com. Read the prospectus carefully before you invest.**

**Foreside Fund Services, LLC, distributor.**

An investment in FlexShares is subject to numerous risks, including possible loss of principal. Fund returns may not match the return of the respective indexes. A full description of risks is in the prospectus.