HEALTH WEALTH CAREER

THE ROLE OF LISTED REAL ASSETS

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INTRODUCTION

We believe real assets are a valuable part of a diversified growth portfolio. A defining characteristic of real assets is that they are “hard” or “tangible” investments that provide ownership of an asset that serves as a store of value. They tend to have a significant income component that is often linked directly or indirectly to inflation, which should provide some inflation sensitivity in the return profile (although this varies significantly across asset categories). Real assets should also serve as a diversifier within a growth portfolio as a result of exhibiting different return and risk drivers than equities.

Investors can access real assets in both listed and unlisted formats. We generally prefer unlisted strategies because of greater potential alpha and for better diversification benefits. Ultimately, an investor’s objectives and tolerance for illiquidity should drive the decision of how much capital to allocate to unlisted assets over the long term. A combination of the two formats may be appropriate in certain situations. A listed portfolio could be used as a placeholder or funding source for clients in the process of building an unlisted real assets portfolio. It can also complement an unlisted portfolio by providing global exposure to a domestically oriented portfolio as an interim measure pending the opportunity to build out the unlisted portfolio more fully or to facilitate cash flows and rebalancing.

Listed real assets tend to trade in similar patterns to public equity markets, particularly over the short term, arguably lessening the diversification benefit. However, investors should own similar underlying assets as illiquid real asset strategies, which should be reflected in intermediate- to long-term performance.

In this paper, we focus on global real estate securities/REITs, listed infrastructure, commodity futures and natural resource stocks and discuss their potential role in a portfolio. We begin by giving an overview of major strategy types and then address their inflation sensitivity and diversification benefits. Finally, we comment on constructing a portfolio of these assets.

This paper focuses primarily on listed real assets. Please also see our recent paper entitled ‘Allocating to Real Assets’.

GLOBAL REAL ESTATE SECURITIES/REITS

Global real estate securities, predominantly real estate investment trusts (REITs), are probably the most widely used listed real asset strategy. REITs typically use pooled capital to purchase income-generating properties. Other types of real estate securities include developers and management companies. The asset profile for REITs is similar to leveraged core real estate.[1]

Investors can generally expect some degree of longer-term inflation protection from REITs, as rents and property prices should track inflation over the long term. However, the diversification benefits of REITs may be limited over the short term, as they tend to trade in sympathy with public equity markets. Moreover, they are sensitive to the economy and interest rates, as is the case for unlisted real estate.

Finally, the leverage employed by REITs also makes them susceptible to financial conditions, which was painfully evident in 2008 as global REITs (measured by the FTSE EPRA NAREIT Developed Index) fell by 48 percentage points, whereas global stocks (MSCI World) fell by 41 percentage points.[2]

A criticism of a distinct allocation to REITs within a real assets portfolio is that they are already contained in public equity indices. However, REIT allocations within equity indices tend to be small, since most commercial real estate is unlisted. The MSCI World Index has only a 3% allocation to the real estate sector, making real estate underrepresented in public markets relative to the investable universe and its importance in the global economy. This gives liquidity-constrained investors a reason to consider a distinct allocation to REITs as a proxy for the vast unlisted market.

[1] This is driven in part by REIT regulations around the world, which typically give tax breaks as long as REITs are low-geared, distribute most of their income and have low levels of development exposure.

[2] REIT leverage has generally fallen since the financial crisis.

LISTED INFRASTRUCTURE

Infrastructure equities can operate in a wide range of businesses. Although the opportunity set varies by region, it includes firms that specialize in power generation, transportation (toll roads, airports and railroads), communication (cell towers), energy transportation and other utilities. These industries tend to have relatively steady demand that is less sensitive than other risky assets to economic conditions. They are also characterized by monopolistic attributes derived from high barriers to entry (or exclusive government concessions) and economies of scale. The revenues of these companies are often highly regulated or contractual, based on volume. Revenue is often tied to inflation.

Listed infrastructure offers a return profile similar to low-volatility or defensive equities.[3] As with REITs, listed infrastructure tends to exhibit relatively high correlations to public equity markets.

Infrastructure makes up a relatively small part of public equity markets, since most infrastructure assets are currently either government-owned or privately held. This supports the case for a distinct allocation for liquidity-constrained investors.

[3] Since 1995, listed infrastructure has shown a 0.84 correlation to the MSCI World Min Vol Index versus a 0.75 correlation to the MSCI World Index.

COMMODITY FUTURES

Commodities impact the costs of goods and services, providing a direct link to inflation. Commodity prices are also the mechanism by which extreme events, such as weather-related and geopolitically caused supply disruptions, drive increases in the price level of goods and services.

Although it is not possible to invest directly in commodity prices, commodity futures offer derivative exposure to commodity prices, with the caveat that the performance of commodity spot prices and futures can differ substantially over the long term.[4] As a derivative exposure, they fail the test of a "tangible asset," so they do not necessarily meet the definition of a real asset. Nevertheless, they still exhibit strong inflation sensitivity and should act as a hedge against a short-term inflation surprise, particularly one caused by a supply shock.

The downside to investing in commodity futures comes from the expected risk and return characteristics of these strategies. Although commodity futures strategies will generally have high expected volatility (similar to equities), there is not a compelling case to expect a positive risk premium, so the long-term expected return is near cash.[5]

4 Futures prices differ from spot prices for a variety of reasons, including seasonal factors, storage costs, inventory levels, hedging demand and investor/speculative demand.

5 Futures contracts are zero sum — for every winner, there must be a loser. For a long commodity futures investor to expect a risk premium, there must be an imbalance of short hedgers (producers) willing to pay a risk premium to lock in a selling price. Before the early 2000s, this was probably the case, because commodity futures generally traded at a discount to spot prices, so futures tended to outperform spot. However, the rise of long-only commodity futures investing beginning in the early 2000s appears to have altered the balance. Over the last 15 years, commodity futures have underperformed spot prices, as futures have tended to trade at a premium to spot.

NATURAL RESOURCE STOCKS

Natural resource stocks represent the equity of companies involved in the extraction and production of commodities. These companies typically include energy producers, mining companies and agriculture-related businesses. The cash flows and the value of reserves for these firms are closely linked to commodity prices. In contrast to commodity futures, ownership in natural resource stocks represents ownership of underlying commodity reserves. Natural resource stocks can also serve as a hedge against extreme events that often cause commodity supply disruptions, such as geopolitical conflict or weather events.

A key factor in considering a distinct allocation to natural resource stocks is their relatively high weighting in public equity markets. Natural resource stocks (energy and basic materials) represent approximately 12% of the global equity market. Nevertheless, even that level of representation may understate the importance of natural resources for global growth and inflation. Investors desiring a greater level of inflation protection could consider overweighting this sector through a distinct allocation.

From a longer-term perspective, climate change is a risk for natural resource stocks. Policies enacted by global governments to control carbon output could result in “stranded assets” — reserves that are uneconomic to extract because of carbon taxes. This is a particular risk for energy companies. They also face the risk of further disruption from the expected increase in the use of renewable energy and the declining energy intensity of the global economy.

CONSIDERATIONS FOR INVESTING IN LISTED REAL ASSETS

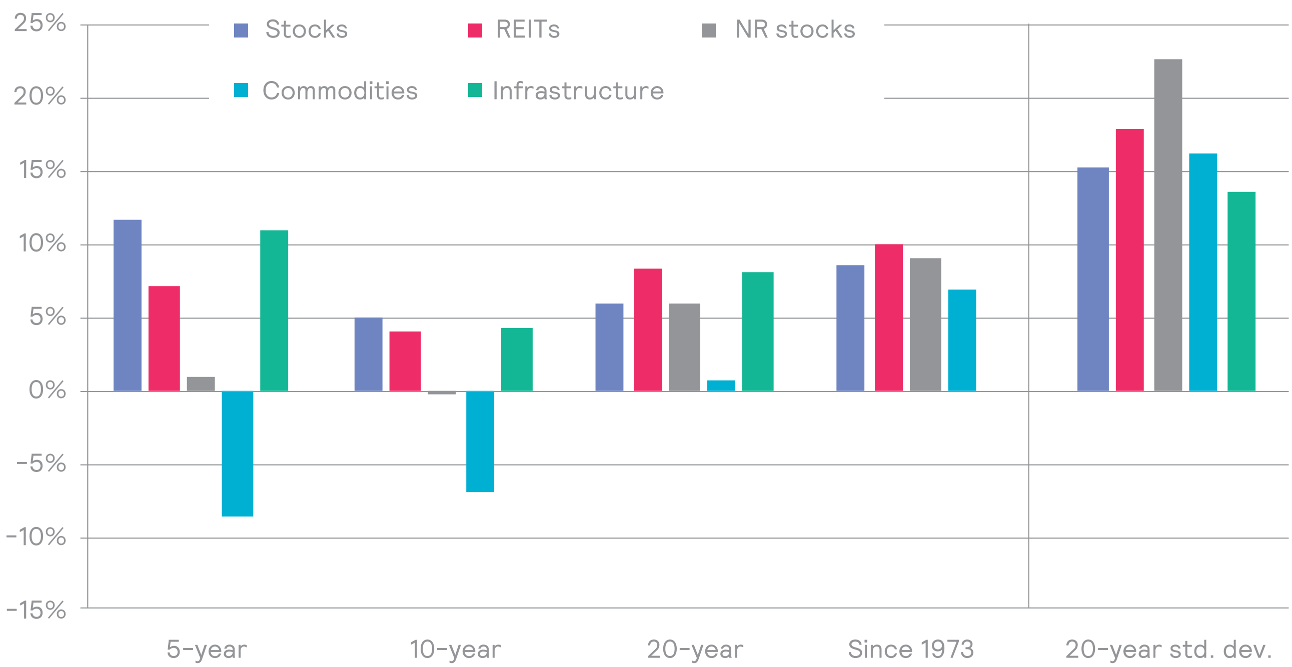
Investors should consider several characteristics when contemplating a real assets portfolio. These include the expected return and risk profile, inflation sensitivity and diversification benefits of listed real assets. Taken together, these factors suggest that listed real assets can have meaningful benefits to portfolios.

RETURN AND RISK PROFILE

Over the long term, we expect the performance of REITs, listed infrastructure and natural resource equities to be comparable with broader equity markets, which is consistent with historical performance, as shown in Figure 1, below.

In contrast, we expect commodity futures to underperform equity markets over the long term, because we do not expect a meaningful premium over cash.

FIGURE 1. TRAILING PERFORMANCE (THROUGH 12/31/17)



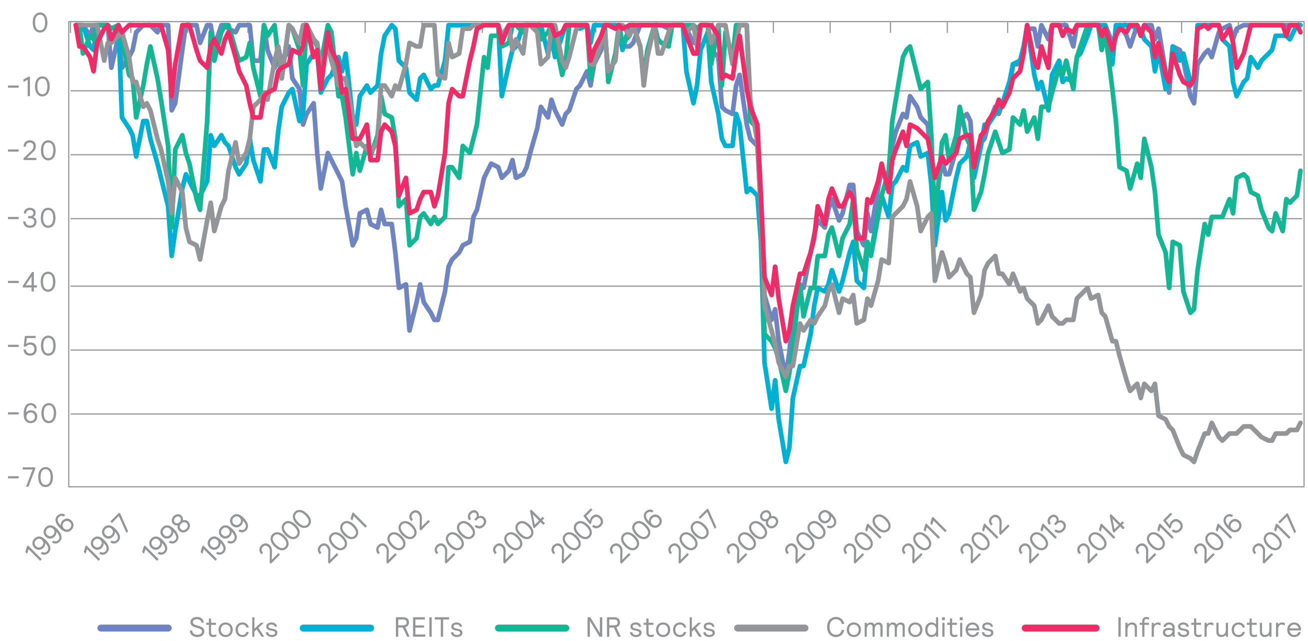
Source: Bloomberg

Stocks = MSCI World; REITs = FTSE NAREIT All Equity REITs (US REITs prior to 1990, Global REITs 1990–present); NR stocks = Goldman Sachs Natural Resources Index prior to 1996, S&P NA NR Index 1996–present; commodities = S&P GSCI prior to 1991, DJ Commodity Index 1991–present; infrastructure = UBS Global Infrastructure and Utilities 50/50 Index 1996–04/2015, FTSE Russell Global Infrastructure and Utilities 50/50 Index 04/2015–present.

Figure 1 illustrates the broadly comparable level of returns achieved by listed equities, REITs, listed infrastructure and natural resource equities over the long term (since 1973 and over the last 20 years). It also shows that, although commodity futures delivered relatively strong returns over the period from 1973, returns over the last 5, 10 and 20 years have been drastically different than for the other asset classes shown. It is also worth noting that natural resource stocks have delivered much lower returns than the other equity categories over the last 5 and 10 years. Turning to volatility, natural resource stocks, REITs and commodities have exhibited higher volatility than stocks, whereas infrastructure has been lower. The higher volatility of natural resource stocks isn't surprising given their cyclical nature. The volatility of REITs reflects leverage levels and a contribution from broader equity market volatility.

Figure 2 shows a drawdown analysis. The performance during the two major bear markets of the past two decades is informative. All four of the real asset strategies held up much better than stocks during the 2000–2002 bear market, with REITs and commodities performing particularly well. The real asset strategies provided little protection during the financial crisis. REITs, in particular, struggled as high levels of debt weighed during the collapse in commercial property prices.

FIGURE 2. DRAWDOWN ANALYSIS



Source: Bloomberg

Stocks = MSCI World; treasuries = Bloomberg Barclays US Treasury Index; TIPS = Barclays US Treasury Inflation Notes; REITs = FTSE EPRA/NAREIT Developed; NR stocks = S&P NA NR Index; commodities = DJ Commodity Index; infrastructure = UBS Global Infrastructure and Utilities 50/50 Index 1996–04/2015, FTSE Russell Global Infrastructure and Utilities 50/50 Index 04/2015–present.

INFLATION SENSITIVITY

For investors seeking real returns, unexpected inflation is a risk that needs to be managed. As such, one reason for investing in real assets is the potential to improve the inflation sensitivity of a portfolio. Although the results may not materialize in all inflationary environments, listed real assets can provide a store of value and a stable source of real income in the event of a meaningful rise in inflation.

The need to protect against inflation depends on the economic/inflationary regime. There have been two distinct regimes over the last 50 years. From the late 1960s until the Asian financial crisis, inflation was a source of economic and market risk, highlighted by the stagflationary period starting in the 1970s and the central bankers' fight against inflation beginning in the late 1970s. During this period, inflation hurt both equities and bonds. Beginning around the Asian financial crisis in 1997, deflation became the bigger threat to global growth. Since then, equities have exhibited a low but positive correlation with inflation. Clearly, inflation protection is more valuable to portfolios in the former regime than the latter, although the inflation sensitivity of these assets is also harder to predict in a high-inflation regime.[6]

Conceptually, commodities have the most direct link to short-term inflation. Changes in commodity prices are often the driver of inflation surprises. Natural resource stocks have an indirect link to inflation, as changes in commodity prices will generally flow through to the income streams and reserve values of these companies. The link is looser with infrastructure and REITS. Infrastructure contracts often provide direct price indexation to inflation, allowing the cash flows generated to move with inflation. However, they are sensitive to overall economic conditions and levels of demand.

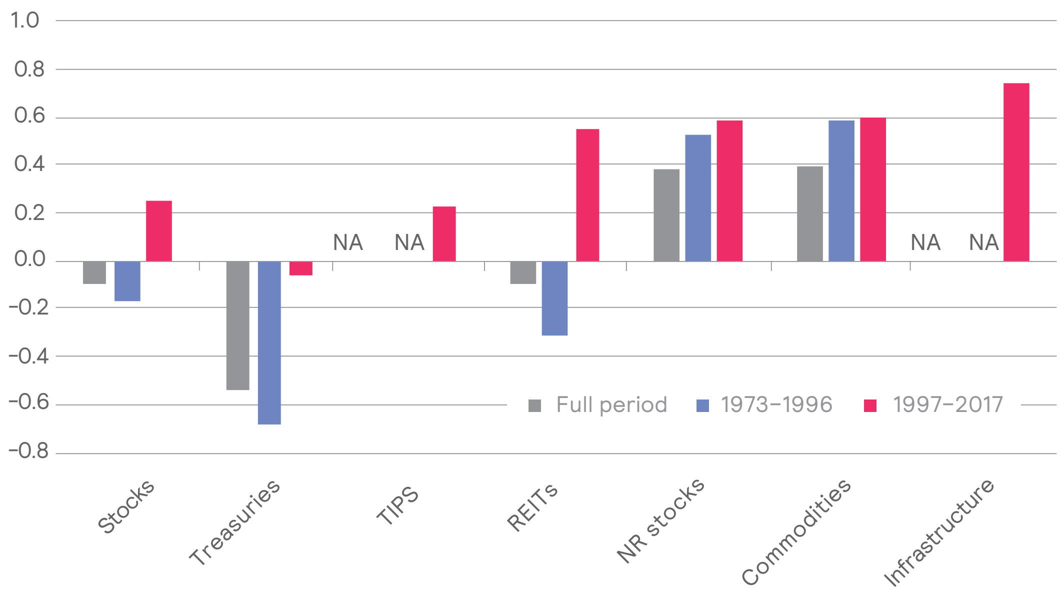
REITs offer a certain amount of direct exposure to inflation, but there are limits. Some rental agreements will allow lease payments to rise with inflation, but cyclical economic factors, such as vacancy rates, will also have a significant impact on the cash flows generated by REITs. Finally, any inflation protection embedded in the cash flows of listed real assets may be undermined by rising interest rates, which will tend to lift the discount rate on future cash flows. This is a particular concern for listed infrastructure and REITs.

We examined the correlation to the change in inflation (US Consumer Price Index) and the beta to the change in inflation over rolling three-year periods for each listed asset class, along with global stocks (MSCI World Index), US Treasuries and US-inflation-linked bonds.[7] We examined data from 1972 through 2017 and two subperiods — 1972 through 1996 and 1997 through 2017.

[6] Energy stocks performed well during the high-inflation regime, at least partially due to oil-price shocks, whereas infrastructure data does not extend back to this period.

[7] We examined the sensitivity to the change in inflation rather than absolute inflation to better represent inflation relative to expectations.

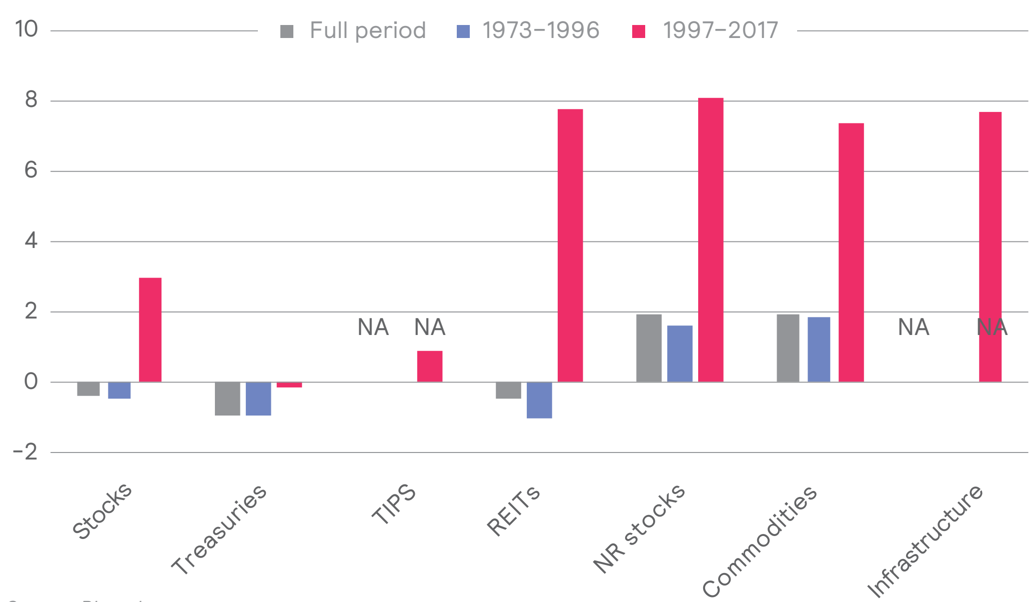
FIGURE 3. CORRELATION TO CHANGE IN CPI (ROLLING 36 MONTHS)



Source: Bloomberg

Stocks = MSCI World; treasuries = Bloomberg Barclays US Treasury Index; TIPS = Barclays US Treasury Inflation Notes; REITs = FTSE NAREIT All Equity REITs (US REITs prior to 1990, Global REITs 1990–present); NR stocks = Goldman Sachs Natural Resources Index prior to 1996, S&P NA NR Index 1996–present; commodities = S&P GSCI prior to 1991, DJ Commodity Index 1991–present; infrastructure = UBS Global Infrastructure and Utilities 50/50 Index 1996–04/2015, FTSE Russell Global Infrastructure and Utilities 50/50 Index 04/2015–present.

FIGURE 4. BETA TO CHANGE IN CPI (ROLLING 36 MONTHS)



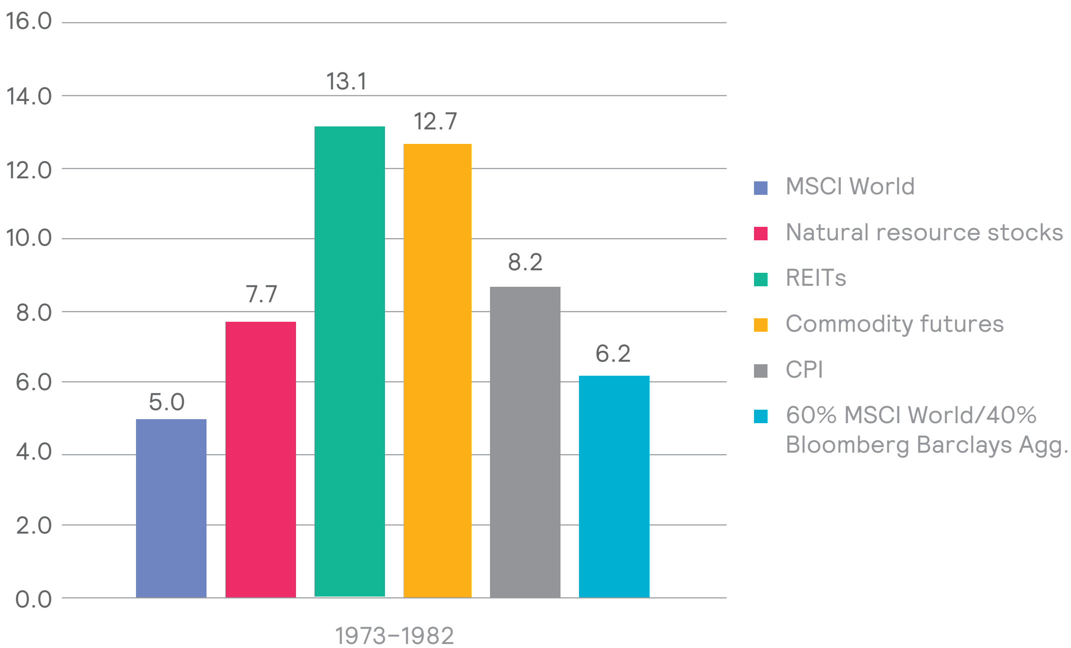
Source: Bloomberg

Data for US TIPS became available in 1997 and for infrastructure in 1996; therefore, performance is only shown for the second time period.

Over the full period, REITs have short-term inflation sensitivity at a similar level to the broader equity market, which is to say, very little sensitivity. (Infrastructure data is not available for the full period.) However, natural resource stocks and, in particular, commodity futures exhibited a meaningfully stronger link to inflation (with a positive sensitivity in both subperiods).

The differences between the two subperiods are instructive. In the first period, when inflationary concerns were a significant market driver, correlations across the listed real asset strategies and stocks were much lower than in the second period, when deflationary concerns dominated.[8] This shows that it is much harder to hedge inflation risk when it is needed the most. However, short-term (rolling three-year) sensitivity to inflation can obscure the benefits of listed real assets as a diversifier during a secular increase in inflation. The chart below shows the performance of listed real assets, stocks and bonds during the stagflationary period from 1973 to 1982. As expected, the listed real asset categories outperformed, particularly commodities and REITs.

FIGURE 5. PERFORMANCE DURING STAGFLATION



Source: Bloomberg

NR stocks = Goldman Sachs Natural Resources Index prior to 1996, S&P NA NR Index 1996–present; REITs = FTSE NAREIT All Equity REITs (US REITs prior to 1990, Global REITs 1990–present); commodities = S&P GSCI prior to 1991, DJ Commodity Index 1991–present; infrastructure = UBS Global Infrastructure and Utilities 50/50 Index 1996–04/2015, FTSE Russell Global Infrastructure and Utilities 50/50 Index 04/2015–present

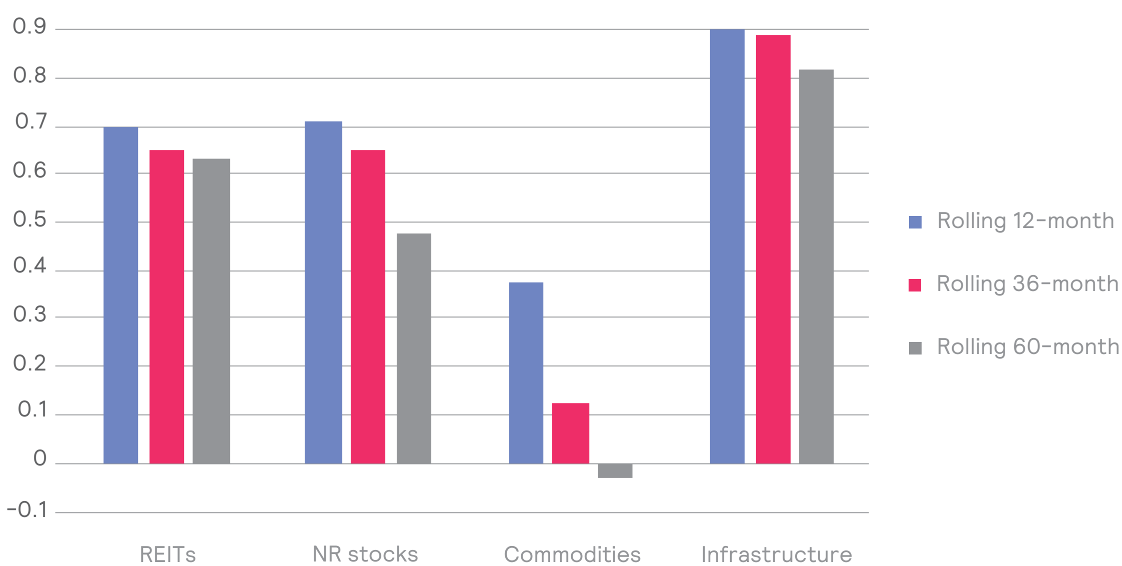
[8] The high betas to inflation in the 1997–2017 period were likely a function of the low volatility of inflation over this period.

DIVERSIFICATION

Beyond inflation sensitivity, listed real assets can also provide diversification benefits for portfolios by accessing differentiated return drivers from traditional stocks and bonds. Rents from real estate and cash flows from infrastructure are less sensitive to the business cycle than earnings from broader equity markets. Although commodity prices are sensitive to the business cycle, supply and demand dynamics for individual commodities are also important.

From a quantitative perspective, the degree of diversification can be evaluated by looking at the correlations between listed real assets and equities, although, as noted earlier, listed real assets tend to trade in sympathy with equites, particularly over the short term. Nevertheless, the correlation of listed real assets with equities suggests some diversification benefits, as shown in Figure 6, below. It is also worth noting that correlations tend to fall the longer the window. For instance, the correlation between REITs and equities falls from 0.78 to 0.65 by moving from rolling 12-month returns to annualized rolling 36-month returns, which we would expect, as fundamentals overtake sentiment-driven trading as the time horizon increases. The exception is with listed infrastructure, where the correlation is fairly high and stable across all three horizons.

FIGURE 6. CORRELATION TO MSCI WORLD (SINCE 12/31/1997)



Source: Bloomberg

REITs = FTSE NAREIT All Equity REITs (US REITs prior to 1990, Global REITs 1990–present); NR stocks = Goldman Sachs Natural Resources Index prior to 1996, S&P NA NR Index 1996–present; commodities = S&P GSCI prior to 1991, DJ Commodity Index 1991–present; infrastructure = UBS Global Infrastructure and Utilities 50/50 Index 1996–04/2015, FTSE Russell Global Infrastructure and Utilities 50/50 Index 04/2015–present.

POTENTIAL OBJECTIONS TO HOLDING LISTED REAL ASSETS

There are valid objections to holding distinct allocations to listed real asset strategies. Arguably, in a public-equity-market context, they simply represent sector bets, decisions that are better left to active equity managers. However, as noted earlier, REITs and infrastructure make up a very small part of the global public equity universe. With REITs in particular, we observe that some active strategies do not tend to own them or are underweight. This objection is more convincing for natural resource stocks, which make up a meaningful portion of the wider equity universe.

Another objection is that the diversification benefits and inflation sensitivity of listed real assets may not materialize when they are needed most. As shown earlier, these assets do tend to exhibit some inflation sensitivity, but this is just one factor that drives returns. They are also sensitive to economic conditions, which could dominate inflation sensitivity, particularly in a stagflationary environment.

One area of interest is likely to be the sensitivity of these strategies to interest rates, particularly for listed infrastructure and REITs. Although both have exhibited a modest negative correlation to bond returns over the last 20 years, their sensitivity to interest rates has been higher in recent years, likely because the high-income yield has attracted yield-seeking investors.[9]

Finally, it is reasonable to question whether listed real assets deserve a place in a portfolio during periods when deflationary risks dominate inflationary risks. However, even if inflationary concerns are not realized, listed real assets have a differentiated set of return drivers from broad equity markets and will not necessarily underperform in periods of low inflation. For example, during the period from 1983–2002, when inflation was falling, natural resource stocks performed in line with global equities (though it should be noted that supply/demand issues are and will likely continue to be the key driver of these assets), whereas REITs only lagged modestly. Moreover, it is difficult to predict when we might experience a regime shift in which inflationary risks dominate deflationary risks.

[9] We performed a multiple regression, with the equity risk premium (MSCI World) and the term premium (Bloomberg Barclays US Long Treasury) as independent variables. It showed that REITs and listed infrastructure have exhibited betas of 0.73 and 0.54, respectively, to the term premium for the five years ended 2017. The betas to the term premium for the preceding five-year period through 2012, which included the financial crisis, were only 0.12 for REITs and 0.22 for infrastructure.

PORTFOLIO CONSTRUCTION

As with any investment decision, investors should consider their specific objectives and constraints when contemplating a listed real assets allocation. A key question is whether unlisted assets will be included in the portfolio. We have a preference for unlisted real assets due to increased diversification benefits, a broader opportunity set and greater scope for manager alpha, but we acknowledge that there may be circumstances where unlisted investments are not appropriate.

We believe investors should consider listed property and infrastructure primarily as an alternative to unlisted real asset exposure. They will therefore be of most interest to investors who are unable or unwilling to invest in unlisted markets or in situations where an investor is looking to build an unlisted real asset portfolio over a period of time (say three to five years). There is also a case for holding a global listed portfolio to diversify an unlisted portfolio concentrated in the domestic market — ideally, once again, as a short-term proxy for a broadening of the unlisted portfolio over the longer term. Over short periods of time, the performance of listed real assets will be driven to a large extent by broad equity market movements, meaning there can be a significant divergence between listed and unlisted real asset returns.

Investors may also wish to consider listed real assets for their diversification and inflation characteristics. However, we note that REITs and listed infrastructure have historically tended to display similar inflation correlation with and beta characteristics to the broader equity market and a relatively high level of return correlation with equities. That said, REITs significantly outperformed the wider equity market during the stagflationary period of the 1970s and early 1980s. Consequently, REITs and listed infrastructure should not be relied upon to provide short-term inflation protection but may well exhibit a greater degree of inflation sensitivity over longer periods of time due to the inherent inflation linkage within the underlying cash flows.

Although we believe most investors are primarily concerned with long-term inflation, for investors that desire more sensitivity to short-term inflation, commodity futures and natural resource stocks are worthy of consideration. Of the two, we generally prefer natural resource stocks, because the expected return should be competitive with other growth assets even when commodity prices are flat, whereas commodity futures will likely need a strong upward trend in prices to produce long-term returns competitive with other growth assets. A reason to prefer commodity futures over natural resource stocks is that commodity futures offer the strongest link to short-term inflation surprises and exhibit less correlation to public equity markets, particularly in an inflationary regime. However, the additional inflation sensitivity is likely to come at the cost of lower long-term expected returns.

An alternative to building out and maintaining a listed real assets portfolio would be to delegate the full responsibility to a manager. Third-party “diversified inflation-hedging” strategies are common in the US, offering diversified exposure to real assets within a single vehicle. The benefits of such a solution are simplicity and the potential for managers to tactically rotate among real asset categories. The drawbacks to these strategies can include potentially higher fees and duplicate exposures. For example, many diversified inflation-hedging strategies include material allocations to inflation-protected bonds and foreign currencies, which investors may have exposure to elsewhere.

CONCLUSION

We believe real assets offer valuable diversification benefits and inflation sensitivity, with these characteristics varying significantly depending on the nature of the assets in question and the economic environment. Although we prefer unlisted real assets, listed real assets are also a viable option for liquidity-constrained investors or for use as a placeholder while building an unlisted program. Listed real assets may not offer the same level of diversification benefits and potential for alpha as an unlisted program; nevertheless, they hold similar underlying assets and have many common return drivers. In constructing a listed portfolio, we suggest that real estate securities and listed infrastructure should form the core, similar to unlisted programs.

Investors who desire more short-term inflation protection could also consider natural resource stocks or commodity futures as a satellite allocation. For investors who seek simplicity (from a governance perspective), diversified inflation strategies may be an appropriate vehicle to consider in markets where such strategies are available.

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