The role of liquid real assets in defined contribution (DC) plans

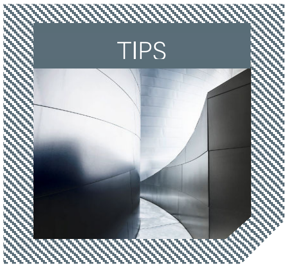
In a sea of standalone options, diversified liquid real assets funds may be a best fit

Real assets, real benefits

While there is not a clearly defined market definition or universally standard benchmark for liquid real assets, this investment class generally covers highly liquid companies whose business models are linked to assets that have a tangible, intrinsic worth. These include listed real estate, listed infrastructure, commodities, and TIPS. Throughout this paper, we will illustrate how liquid real assets can offer investors a competitive risk-return profile through various market environments, diversification potential, and stable and predictable return streams while helping investors maintain purchasing power. Further, we will show that given these unique attributes, liquid real assets can be well-suited for defined contribution (DC) plans.

Real assets can provide holistic exposure to an attractive opportunity set

Defined contribution (DC) plans are retirement plans funded by contributions from employees, employers, or a combination. DC plans typically offer a variety of investment options from which employees can choose, which are determined by the plan sponsor. Today, real assets remains curiously absent from many DC plan menus, though some may offer standalone options, such as real estate funds or TIPS. In order to simplify and diversify plan menus, fiduciaries might consider a holistic liquid real assets solution. A holistically-managed real assets investment strategy can seek to optimize a real assets allocation, providing access to an opportunity set that offers competitive total returns, lower volatility (relative to broader equities or standalone real assets classes), and a diverse set of value opportunities. Real assets funds invest in listed securities, which satisfy liquidity requirements, yet still exhibit relatively low correlation to equities and amongst each other. Further, real assets have historically performed well during inflationary periods, delivering strong returns throughout the full market cycle.



What makes a DC plan "successful"?

A 2023 study conducted by Callan analyzed attributes of "successful" DC plans. Investment-focused attributes, such as performance and diversification, consistently ranked among the most important considerations. Portfolio construction, performance, fees, and the usage of tactical asset allocation were also cited among the top 10 most important attributes in the evaluation process and selection of investment funds on a DC menu. The study also determined that "successful" plans were participant-focused, as evidenced by high utilization and contribution rates, as well as cost-focused (i.e. cost effective). Below, we frame real assets in the context of these categories and key attributes, to illustrate how real assets characteristics might contribute to DC plan "success."

Real assets can help position DC plans for success

Liquid real assets are uniquely placed to help DC plans meet strategic objectives. They can provide investors diversification potential to better withstand various economic regimes and capital market conditions, yet in a highly liquid wrapper so that the daily pricing and dealing requirements of DC schemes can be met. Real assets have historically acted as a natural inflation hedge, helping investors maintain purchasing power while ensuring adequate retirement income via stable and predictable income streams. Finally, a holistically-managed strategy can offer flexibility to shift exposure to better adapt to new market conditions.

	Enhance Performance	Generate Income	Hedge inflation risk	Bridge style gap(s)
Investment Focused	Strong, inflation linked returns over the long-term	Yields historically stable, in-line or above global equities	Helps mitigate purchasing power loss for entire portfolio	Low correlation to traditional asset classes
	Manages opportunity cost risk if traditional markets rally	Good utilization of tax-efficient DC plan structure	Enables capital efficiency in the hedge	Differentiated drivers or risk and potential return
Participant Focused	Investment concept is easily understood (contractual income from tangible assets) Opportunities to invest in socially positive outcomes (i.e. schools, hospitals)			
Cost Focused	Cost efficient versus private alternatives (no large upfront costs) with daily liquidity Reduce fees by offering holistic exposure to real assets classes in a single program			

Liquid real assets are aligned with how DC plans are evolving!

Liquid real assets are further equipped to adapt to a changing DC plan space. As sponsors look to reduce the number of DC plan options, real assets can offer exposure to multiple asset classes in a single wrapper. A single, cost-efficient structure should appeal to plan sponsors who are bearing a larger share of expenses versus plan participants, such as administrative and advisory fees. Finally, with an ever-increasing focus on compliance, we believe a single comprehensive liquid real assets solution represents an attractive opportunity to reduce the cost and complexity of compliance reviews. Liquid real assets remain a well-suited option for DC plans, and should warrant consideration by plan sponsors.

Sources: Callan 2023 Defined Contribution Trends Survey. DWS. As of 8/31/2023. Diversification does not ensure a profit or protect against a loss.

Liquid real assets are a good fit for target-date funds

Liquid real assets have also become a suitable consideration for target-date funds. In fact, standalone real assets options have been gaining traction in recent years. For example, based on surveys conducted by investment consultants such as Callan Associates and management consulting firms such as Casey Quirk, a vast majority of target-date funds used by defined contribution plans now feature a real estate allocation. While a limited number of target-date funds invest in real estate through "direct" or "private" investment vehicles, most of these asset allocation products provide real estate exposure exclusively through investments in stock exchange-listed equity Real Estate Investment Trusts (REITs) because of their daily market pricing, low cost, liquidity, and long-term record of performance. Liquid real assets solutions can offer investors these same benefits while enabling access to a wider, more diversified opportunity set that stands to benefit from changing global market dynamics.

Real Estate Exposure: Target-Date Products

Target date fund providers	Maximum real estate allocation*
BlackRock	21.5%
State Farm	16.7%
PIMCO	13.3%
AXA (1290 Retirement)	11.0%
GuideStone	10.2%
AB	9.3%
Great-West	9.1%
ClearTrack	9.0%
JPMorgan	8.9%
MFA	8.6%
Principal	8.5%
Prudential	8.5%
Schwab	8.4%
Columbia Retirement	7.9%
Nationwide	7.8%

Sources: NAREIT analysis of Morningstar Direct data. December 31, 2020 (latest available). Highlights target date funds providers with the most significantv REIT allocations. * The maximum real estate allocation represents the maximum each target date fund provider will hold in real estate. DWS has no affiliation with the firms mentioned in this table.

Benchmarking is often cited as a challenge for including real assets in a DC plan offering

Looking to the value proposition of real assets as an effective inflation hedge, it is thereby reasonable that inflation could be used as a benchmarking tool to assess the long-term effectiveness of a comprehensive strategy. Further, there are long-running metrics for inflation, namely the Consumer Price Index (CPI), which affords fiduciaries the ability to assess real assets performance and sensitivity to inflation throughout a wide array of historical macroeconomic regimes and capital market cycles. Please refer to page 6 for more information on the relationship between real assets and inflation.

Real assets: the whole is greater than the sum of its parts

An effective real assets program requires active adjustments as market conditions change. A holistic and comprehensive approach can optimize the benefits of a real assets allocation versus standalone exposure. Experienced investment managers have the opportunity to strategically diversify by asset class (or sub-asset class) and tactically shift among and within asset classes.

ATTRIBUTES OF A HOLISTIC REAL ASSETS PROGRAM

	Return potential	Diversification benefit	Higher beta to inflation	Attractive income
Attribute	_should be meaningful over the long-term _manages opportunity cost risk if "traditional" markets rally	_low correlation to rest of portfolio _differentiated drivers of risk and potential return[1]	_helps mitigate lost purchasing power for the entire portfolio[2] _enables capital efficiency in the hedge[2]	_historically offered yields in line or above global equities _historically stable and predictable in nature
Asset classes	_REITs, infrastructure, global natural resource equities	_TIPS, commodities	_commodities, global natural resources equities, REITs	_REITs, infrastructure, global natural resource equities

Source: DWS. Past performance is not a guarantee of future results. These are the attributes of an effective hypothetical program and do not directly represent any DWS product. Real return defined as percentage return on an investment that is adjusted for inflation. No assurance can be made that investment objective will be achieved.

Real assets have historically exhibited strong real return potential

We believe that a strong real assets foundation starts with allocations to both listed real estate and listed infrastructure. These asset classes have historically exhibited strong real returns, particularly versus their traditional global equity counterparts, over various market cycles.

Average Calendar Year Returns Since Asset Class Inception	
Since 1990	
Global Real Estate	9.1%
Global Equities	8.4%
Average excess return	+0.7%
Since 2003	
Global Infrastructure	12.0%
Global Equities	10.5%
Average excess return	+1.5%

Source: Bloomberg and DWS as of 12/31/22. Past performance is not a guarantee of future results. No assurance is made that investment objectives will be met. Asset class representation: global real estate, FTSE EPRA/NAREIT Developed Index; global infrastructure, Dow Jones Brookfield Global Infrastructure Index; global equities, MSCI World Index. Equity index returns include reinvestment of all distributions. Index returns do not reflect fees or expenses, and it is not possible to invest directly in an index

Diversification potential has been a key benefit of real assets investing

Diversification is of particular importance to DC plans, and real assets can offer a compelling means of achieving plan-level diversification goals. Where standalone real assets allocations might prove insufficient, a holistically-managed real assets allocation affords active managers the potential to enhance returns through diversification and reduce overall volatility.

For example, historically, global real estate has exhibited strong returns, but relatively high beta to global equities. Comprehensive real asset managers can seek to maximize the benefits of real assets allocation via strategic complements, such as commodity futures, which have historically offered lower beta to global equities, yet higher beta to inflation.

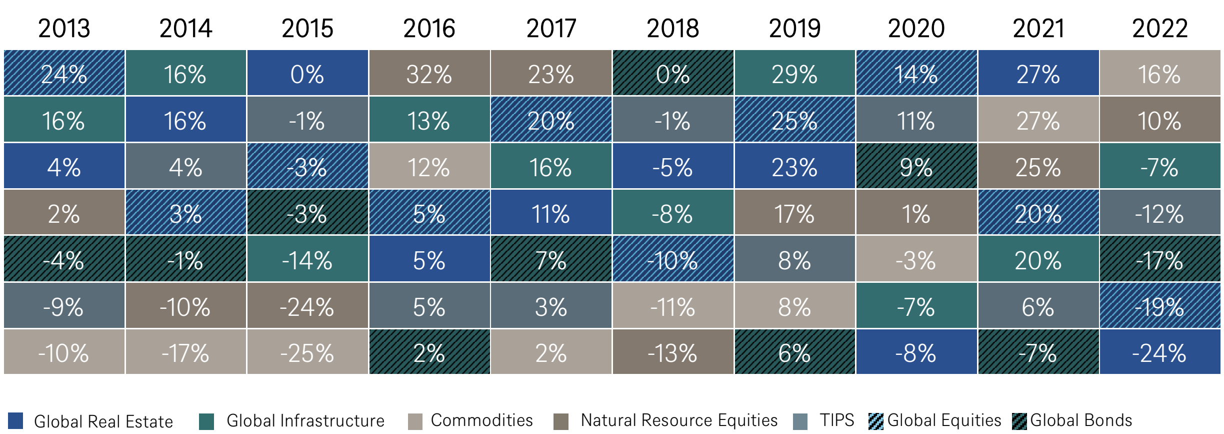
Historical Characteristics by Asset Class (12/31/2002–6/30/2023)

Asset Class	Return	Volatility	Sharpe Ratio	Beta – Global Equities	Beta – Inflation	Max Drawdown
Risk Free	1.3%	0.5%	-	0.00	0.01	0.0%
Real Assets Blend	**7.6%**	**13.7%**	**0.46**	**0.80**	**1.62**	**-48.4%**
Global Equities	8.7%	15.3%	0.48	1.00	0.74	-54.0%
Global Fixed Income	2.7%	6.0%	0.24	0.17	-0.64	-24.2%

Past performance may not be indicative of future results.
1) Index association: **Risk Free** = Bloomberg Barclays Short Treasury Total Return Index ; **Real Assets Blend** = 15% Bloomberg Commodity Index; 15% S&P Global Natural Resources Index; 30% Dow Jones Brookfield Global Infrastructure Index; 30% FTSE/EPRA NAREIT Developed Index; 10% Barclays U.S. TIPS Index; **Global Equities** = MSCI World Index; **Global Fixed Income** = Bloomberg Barclays Global-Aggregate Total Return Index Value Unhedged USD. Sources: Bloomberg and DWS. Equity index returns include reinvestment of all distributions. Index returns do not reflect fees or expenses, and it is not possible to invest directly in an index. For illustrative purposes only.
As of June 30, 2023. Represents characteristics from 12/31/2002–6/30/2023.

Commodities have the potential to reduce overall portfolio volatility given their unique drivers of risk and return, which have held firm through various investment cycles. On a rolling 5-year historical basis over the past 20 years, commodities have exhibited low average correlation to global real estate (0.28) and global infrastructure (0.50) since the inception of the Dow Jones Brookfield Global Infrastructure Index. They have also exhibited low historical correlation to global equities (0.41).

Calendar Year Performance



Diversification neither assures a profit nor guarantees against loss. Sources: Bloomberg and DWS as of 12/31/22. Past performance is not a guarantee of future results. Asset class representation: **global infrastructure**, Dow Jones Brookfield Global Infrastructure Index; **global real estate**, FTSE EPRA/NAREIT Developed Index; **commodities**, Bloomberg Commodity Index; **natural resource equities**, S&P Global Natural Resources Index; **TIPS**, Barclays U.S. TIPS Index; **global equities**, MSCI World Index; **global bonds**, Bloomberg Barclays Global Aggregate Index. Equity index returns include reinvestment of all distributions. Index returns do not reflect fees or expenses, and it is not possible to invest directly in an index.

Real assets can help preserve purchasing power

Across the asset class spectrum, real assets' ties to inflation are rather intuitive (as illustrated further below).

Global real estate securities usually have inflation hedging ability embedded in their rental agreement structures, which generally include inflation-linked adjustments or fixed percentage increases in rents. Similarly, revenues for "pureplay" infrastructure are typically stable and predictable given their long-dated underlying contracts and monopolistic assets. Typically, these companies have the ability to pass through higher costs often linked to inflation, resulting in real earnings growth in inflationary environments. Both commodity futures and natural resource equities have a strong, direct relationship to inflation given the nature of their businesses models (raw materials inputs). Even TIPS may help provide an inflation hedge and may also help to preserve capital by offsetting equity market beta in "risk-off" environments.

Global Real Estate

Inflationary pressures underscore the importance of pricing power (i.e. ability to raise rents)

Global Infrastructure

Built-in rent escalators for certain contracts offer a direct link to inflation (i.e. utilities)

Commodity-Futures

Inputs to production; high sensitivity

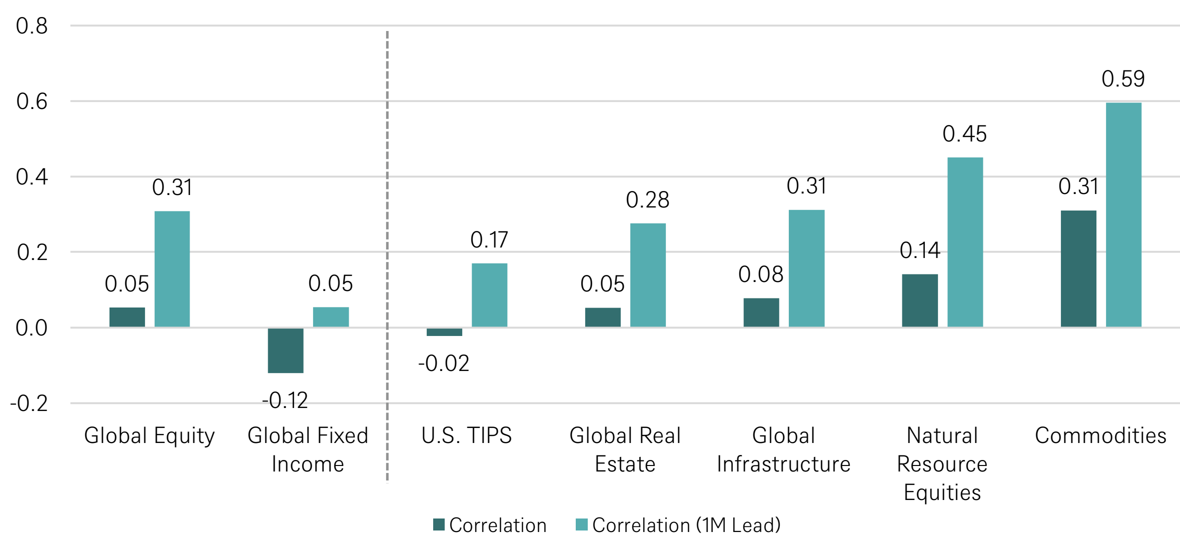
Driven by global supply/ demand dynamics

Natural Resources

Both equity beta and commodity price drive total return

Higher prices = higher profits

Liquid Real Assets Exhibit High Sensitivity to Inflation, Particularly on a Leading Basis

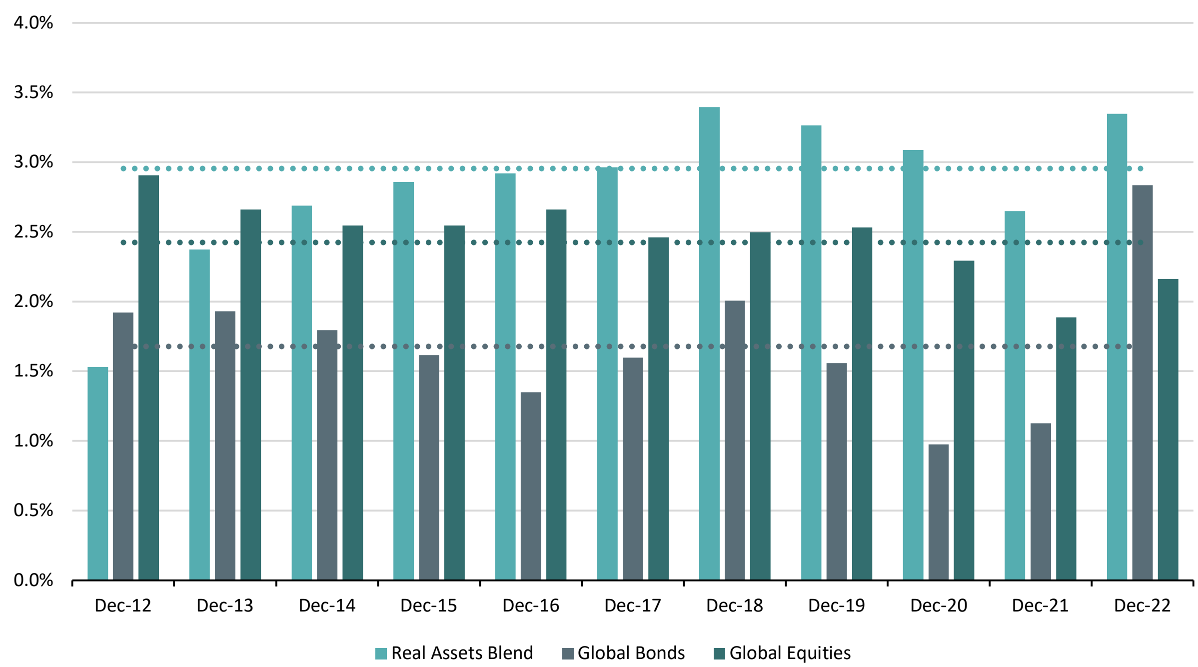


Sources: Bloomberg and DWS. Represents correlation figures from 12/31/90 or index inception to 6/30/23. **Past performance is not a guarantee of future results.** Asset class representation: **global infrastructure**, DJ Brookfield Global Infrastructure Index; **global real estate**, FTSE EPRA/NAREIT Developed Index; **commodities**, Bloomberg Commodity Index; **natural resource equities**, S&P Global Natural Resources Index; **TIPS**, Bloomberg Barclays U.S. TIPS Index; **global equities**, MSCI World Index; **global fixed income**, Bloomberg Barclays Global Aggregate Index. Equity index returns include reinvestment of all distributions. Index returns do not reflect fees or expenses, and it is not possible to invest directly in an index. The above chart is referring to the difference between coincident and leading indicators. A leading indicator represents correspondence with a future movement/change whereas a coincident indicator represents simultaneous correspondence. The reference to the one month (1M) lead in the above chart refers to the time period in which the indicator (in this case inflation) is leading (ahead of) the comparison data.

Preserve attractive income from real assets with DC plans

In addition, real assets have historically offered attractive returns, supported by stable and predictable income streams, with yields that have been historically in line with or higher than their global equity counterparts over the long-term. We mentioned earlier that we believe that a strong real assets foundation starts with allocations to both listed real estate and listed infrastructure. Both of these asset classes offer attractive and competitive yields. REITs own, invest in, or operate various types of physical properties. These properties are leased out to tenants, and rent is collected to generate income. Companies structured as REITs are required to pay out at least 90% of their taxable income to shareholders. As a result of this structure, REIT dividend yields have historically been relatively higher and more stable. Put another way, a larger share of REIT total returns is attributable to dividends compared to other traditional equity investments. Listed infrastructure companies have also historically offered competitive yields. Similarly, listed infrastructure companies own physical, tangible assets which are required for a society to function (i.e. toll roads, ports, bridges, water treatment plants etc.). Given the essential nature of these assets, their cash flows are less sensitive to economic forces, resulting in a stable and predictable income profile, particularly for “pure-play” infrastructure companies, which directly own and operate these essential real assets. Most importantly, DC plans are an excellent place to parkincome-generating assets such as these, since contributions and accumulating plan earnings are tax-deferred, offering invetors a tax-efficient way to save for retirement.

Historical Yields by Asset Class and Corresponding Historical Averages



Note: corresponding dashed lines indicate historical average yields.
Sources: Bloomberg and DWS; data from 12/31/12 to 12/31/22. Past performance is not a guarantee of future results. Asset class representation: global equities, MSCI World Index; global bonds, Barclays Global Aggregate Index; real assets, Real Assets Blended Benchmark, which is a proprietary DWS reference index comprised of the following blend of real assets indices:15% Bloomberg Commodity Index, 30% Dow Jones Brookfield Global Infrastructure Index, 30% FTSE EPRA/NAREIT Developed Index,10% Barclays U.S. TIPS Index, 15% S&P Global Natural Resources Index. Historical yields are not indicative of future yields.

Real assets can help DC plans...

Enrich investment options

Diversify menu with options that have attractive total return potential

Better serve participants

Offer participants access to a compelling set of value opportunities

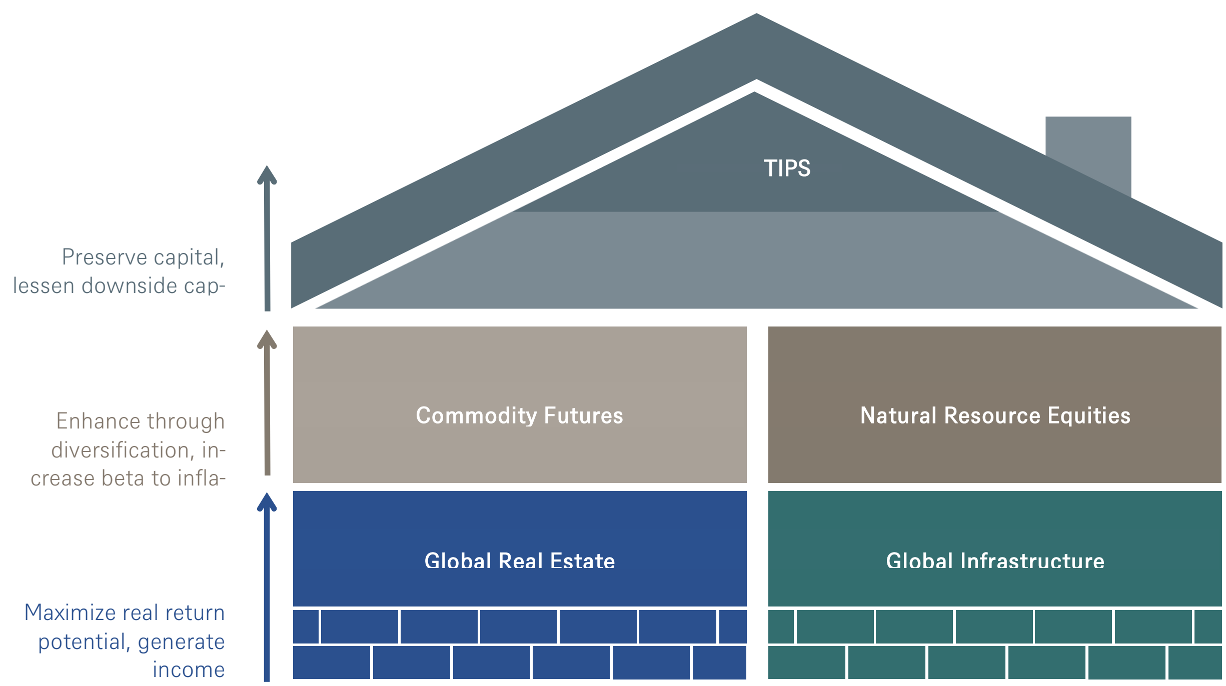
Manage costs

Enhance and simplify plan menu with a single, holistic real assets fund option

Liquid real assets solutions are a viable option on DC plan menus

Defined contribution plans can present unique challenges for portfolio managers. However, thanks to their long-term nature and the desire by many investors to shield their investments from inflation risks, real assets could be an intriguing addition to many plans. Our belief is that the best way to structure comprehensive real assets exposure is to think of an effective real assets portfolio like a house. A house requires a solid foundation, distinct rooms to add to the appeal and variety, and a roof to shield the overall structure from storms. In general, we believe a holistic real assets solution can help meet DC plan objectives in several ways: enhancing and simplifying plan menu options, and potentially providing the stability and yield necessary for long-term investors in DC plans to weather the wide variety of economic regimes and capital market conditions that can naturally occur during a full market cycle.

Potential benefits of a real assets program



Source: DWS. **Past performance is not a guarantee of future results.** No assurance is made that investment objectives will be met. TIPS, Treasury Inflation-Protected Securities.

[1] Diversification neither assures a profit nor guarantees against loss.
[2] Traditional portfolios of stocks and bonds are exposed to inflation risk. Commodities and TIPS have historically been the most effective inflation hedges in both the short-term and long-term; their relationship with inflation has been statistically strong. Commodity prices are a recognized driver of inflation and TIPS are inflation-linked bonds. Inflation beta measures the responsiveness of nominal returns to inflation. If an asset does not keep pace with rising inflation (exhibit inflation beta >=1), its purchasing power will fall if inflation rises. Therefore, adding assets that exhibit inflation beta to a portfolio may mitigate lost purchasing power in times of rising inflation. Reducing risk comes with a cost – commodities and TIPS are among the lowest expected-return assets.
[3] Index association: Risk Free = Bloomberg Barclays Short Treasury Total Return Index ; Real Assets Blend = 15% Bloomberg Commodity Index; 15% S&P Global Natural Resources Index; 30% Dow Jones Brookfield Global Infrastructure Index; 30% FTSE/EPRA NAREIT Developed Index; 10% Barclays U.S. TIPS Index; Global Equities = MSCI World Index; Global Fixed Income = Bloomberg Barclays Global-Aggregate Total Return Index Value Unhedged USD. Sources: Bloomberg and DWS. Equity index returns include reinvestment of all distributions. Index returns do not reflect fees or expenses, and it is not possible to invest directly in an index. For illustrative purposes only. As of June 30, 2023. Represents characteristics from 12/31/2002–6/30/2023

Index definitions

Bloomberg Barclays U.S. Treasury Inflation-Link Bond Index measures the performance of the U.S. Treasury Inflation Protected Securities (TIPS) market.

Bloomberg Barclays Global-Aggregate Total Return Index tracks the performance of the global investment-grade fixed-income market.

Bloomberg Barclays Short Treasury Total Return Index measures the performance of treasury bills issued by the U.S. government. U.S. Treasury bills are issued in fixed maturity terms of 4-, 13-, 26-, and 52-weeks. It is a market-value weighted index.

Bloomberg Commodity Index tracks the performance of futures contracts on physical commodities.

Dow Jones Brookfield Global Infrastructure Index tracks the performance of infrastructure companies.

FTSE EPRA/NAREIT Developed Index is designed to measure the stock performance of companies engaged in specific real estate activities of the North American, European and Asian real estate markets. Relevant real estate activities are defined as the ownership, trading and development of income-producing real estate.

MSCI World Index tracks the performance of stocks in select developed markets around the world, including the United States.

S&P Global Natural Resources Index includes 90 of the largest publicly-traded companies in natural resources and commodities businesses that meet specific invest ability requirements.

It is not possible to invest directly in an index.

Definitions

Beta is the measure of the volatility or systematic risk of a security or a portfolio in comparison to the market as a whole and is used in the capital asset pricing model (CAPM).

Beta-inflation measures the change in inflation from one period to the next against the return from the asset class over the same period.

A commodity is a natural resource or agricultural product that is traded in bulk. They are sold by the companies that produce them and bought by companies that use them.

Correlation is the way securities perform in relation to one another. A correlation of 1.0 indicates that two securities move in exactly the same direction, while a correlation of –1.0 indicates movements in exactly opposite directions. A zero correlation implies no relation in the movements of securities.

A drawdown is a peak-to-trough decline during a specific period for an investment,

A futures contract is a contract between two parties to buy or sell an asset for a price agreed upon today (the futures price) with delivery and payment occurring at a future point, the delivery date.

Inflation is the rate at which the general level of prices for goods and services is rising and, subsequently, purchasing power is falling.

Liquid Real Assets allow investors to gain access to exchange-traded real estate and infrastructure securities as well as to commodities in the form of commodity stocks and direct investments in commodities via futures.

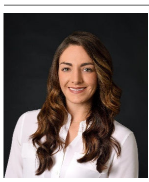
Purchasing power is the value of a currency expressed in terms of the number of goods or services that one unit of money can buy. Purchasing power is important because, all else being equal, inflation decreases the number of goods or services you would be able to purchase.

A Real Estate Investment Trust (REIT) is a company that owns, and in most cases, operates income-producing real estate. REITs sell like a stock on the major exchanges and invest in real estate directly, either through properties or mortgages.

The Sharpe ratio, developed by Nobel laureate William F. Sharpe, is the average return earned in excess of the risk-free rate per unit of volatility or total risk.

Treasury Inflation Protected Securities(TIPS) provide protection against inflation. The principal of a TIPS increases with inflation and decreases with deflation, as measured by the Consumer Price Index. When a TIPS matures, you are paid the adjusted principal or original principal, whichever is greater.

AUTHOR



Annie Del-Giudice
Senior Portfolio Management Specialist – Liquid Real Assets

Important information