INVESTMENT INSIGHTS

# The infrastructure moment

## Core infrastructure's growing role in institutional portfolios

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### IN BRIEF

- As a new asset class, infrastructure has proved itself over the last decade, establishing a strong track record that highlights its potential to enhance returns and mitigate risk as part of a broader portfolio.
- Furthermore, the expected total return for private infrastructure is now greater than the expected total return of a 60/40 portfolio, with income also representing a substantial component of the return from infrastructure.[1]
- In this paper we explore how private core infrastructure provides investors with the D-I-Y benefits of diversification, inflation protection and yield along with a strong focus on environmental, social and governance (ESG) principles.
- We also examine recent trends in valuations, discuss options for accessing infrastructure investments, and explain why—with institutional investors' average allocations still below target—the expansion of the asset class continues to provide opportunities for early movers.



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### THE APPEAL OF CORE INFRASTRUCTURE

Institutional investors have been allocating a growing share of their portfolios to infrastructure assets—including regulated utilities, transportation and contracted power. The focus has been on core investment strategies, which can produce stable, forecastable cash flows through the use of prudent leverage and some combination of transparent and consistent regulatory environments, long-term contracts with credible counterparties, and mature demand profiles.

Most core infrastructure assets have monopolistic positions in the markets they serve, so prices and usage are relatively insensitive to periods of economic weakness. Instead, core infrastructure investments are driven by a different—and uncorrelated—set of factors, including political and regulatory risk, development risk, operational risk and leverage. Also, each core infrastructure sector has unique risk factors, so core strategies include investments from multiple sectors to reduce volatility within the asset class.

[1] J.P. Morgan Asset Management, 2017 Long-Term Capital Market Assumptions, 21st Annual Edition.

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In today's challenging "everything is expensive" investment environment, with Barclays Aggregate yields well below their long-term averages and the S&P 500's price-to-earnings ratio above 20 (as of 7 December 2016), investors are increasingly turning to private core infrastructure for its "D-I-Y" benefits:

- (D) = diversification and low correlation to other asset classes
- (I) = inflation protection
- (Y) = yield with high and stable cash flows

## DIVERSIFICATION: INFRASTRUCTURE CAN HELP TO REDUCE PORTFOLIO VOLATILITY

A key benefit of core infrastructure investments is their ability to provide relatively high total returns with low correlations to traditional asset classes, such as equities, fixed income and real estate. Consequently, an allocation to core infrastructure may reduce the volatility of an institutional portfolio and can potentially limit the maximum drawdown during times of market stress.

Many core infrastructure assets are natural monopolies by design. For some assets, such as regulated utilities, alternative providers are forbidden by the government. For others, such as transportation assets, alternative routes are often distant and time-consuming. The monopolistic position of these assets makes the demand for their services resilient to economic downturns and fluctuating prices.

Core infrastructure assets also utilise long-term contracts. Power generation assets can protect themselves from volatile power markets through long-term contracts with utilities, corporates or governments. The contracts, which can last as long as 30 years, establish very stable cash flows in return for the asset's availability and generation. Since core infrastructure investments have reduced exposure to market demand, their risk-return drivers are relatively uncorrelated with other asset classes (see **Exhibit 1**).

## INFLATION: INFRASTRUCTURE CAN HELP TO PROTECT AGAINST RISING PRICES

An unexpected rise in inflation can be very costly to investors, so portfolios with a long-term focus should protect against rising prices even in low-inflation environments. This is particularly relevant today, as expectations for fiscal stimulus in the US, the post-Brexit depreciation of sterling, and a partial recovery in the price of oil have increased the likelihood that inflation could overshoot central banks' target levels.

Infrastructure investments—especially utilities and transport assets—can provide investors with protection when inflation unexpectedly rises. In many jurisdictions, particularly in Europe, end-user rates for regulated utilities are indexed to inflation. Where automatic adjustment does not exist, utilities can typically file new rate cases when their costs rise. Regulators have also allowed utilities to earn a greater return when inflation has been higher. **Exhibit 2** illustrates the positive correlation between inflation and the allowed return on equity (RoE) of US electric utilities, with a two-year lag to account for regulatory adjustment periods.

### Core infrastructure return drivers differ from those of other asset classes

EXHIBIT 1: ASSET CLASS CORRELATIONS

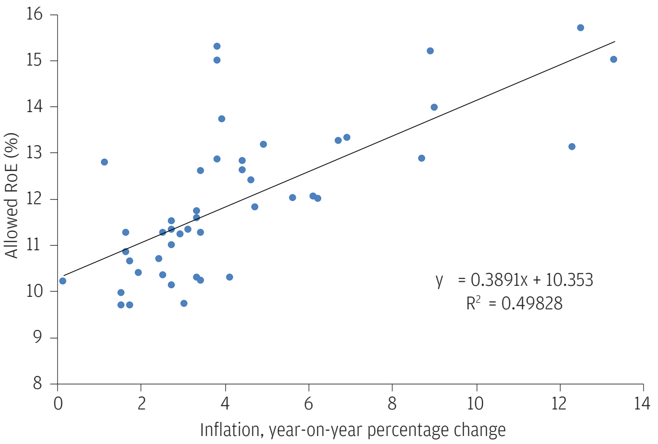
| 2008-2015 | Global equities | Global bonds | US core private real estate | Private equity | Hedge funds | Global listed infrastructure | Global core private infrastructure |
|---|---|---|---|---|---|---|---|
| Global equities | 1.0 | | | | | | |
| Global bonds | -0.2 | 1.0 | | | | | |
| US core private real estate | 0.2 | -0.2 | 1.0 | | | | |
| Private equity | 0.9 | -0.3 | 0.4 | 1.0 | | | |
| Hedge funds | 0.9 | -0.3 | 0.1 | 0.9 | 1.0 | | |
| Global listed infrastructure | 0.9 | 0.0 | 0.2 | 0.9 | 0.8 | 1.0 | |
| Global core private infrastructure | -0.1 | -0.2 | 0.5 | 0.1 | 0.0 | 0.0 | 1.0 |

Source: Bloomberg, MSCI World Index for global equities, Barclays Global Aggregate Bond Index for global fixed income, NFI-ODCE for U.S. core private real estate; Burgiss for private equity, HFRI for hedge funds, S&P Global Infrastructure Index for global listed infrastructure, and MSCI Global Quarterly Infrastructure Asset Index for global core private infrastructure.[2] Data are quarterly from Q2-2008 through Q4-2015 (the full available range for the MSCI Infrastructure Index), and are denominated in local currency. Data as of December 2016.

[2] The MSCI Quarterly Infrastructure Asset Index is the first third-party return index in the private infrastructure space. It has a relatively small sample and a bias towards Australian assets, but it continues to evolve and is a good indicator of infrastructure performance.

### Allowed RoE for US electric utilities has had a positive correlation to inflation over time

EXHIBIT 2: INFLATION VS. ALLOWED ROE FOR US ELECTRIC UTILITIES




Source: Bloomberg, SNL.com, America's Electric Utilities, J.P. Morgan Asset Management. Inflation=US consumer price index data from 1968 to 2013. Electric utility RoE data from 1970 to 2015. Data as of September 2016.

Revenues derived from transportation assets also tend to have strong inflation sensitivities. This is because revenues in the sector largely come from bilateral contracts with third parties, such as airlines and shipping lines, and these contracts typically include some form of inflation indexation. While inflation tracking is also common in power contracts across the developed world, the US is a prominent exception.

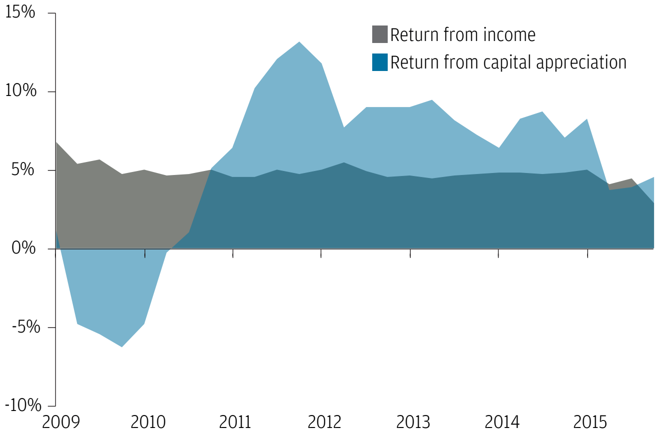
## YIELD: INFRASTRUCTURE CAN PROVIDE HIGH AND STABLE CASH FLOWS

Core infrastructure's strong yield potential is a major reason why institutional investors are attracted to the asset class in today's low-yield environment. Yields on core infrastructure investments have been remarkably resilient, as forecastable cash flows, long economic lives and creditworthy counterparties have bolstered asset-level cash flows.

**Exhibit 3** shows how infrastructure's stable yield has mitigated the fluctuations in value from capital appreciation. This was especially true during the global financial crisis of 2008/2009, when steady income helped insulate infrastructure investments from the stress in capital markets. Infrastructure's year-over-year total return was negative for only a single quarter, and the asset class' cumulative decline never topped 2%.

### A stable yield has helped to mitigate fluctuations in capital value through changing markets

EXHIBIT 3: UNLISTED INFRASTRUCTURE RETURN FROM INCOME AND CAPITAL APPRECIATION



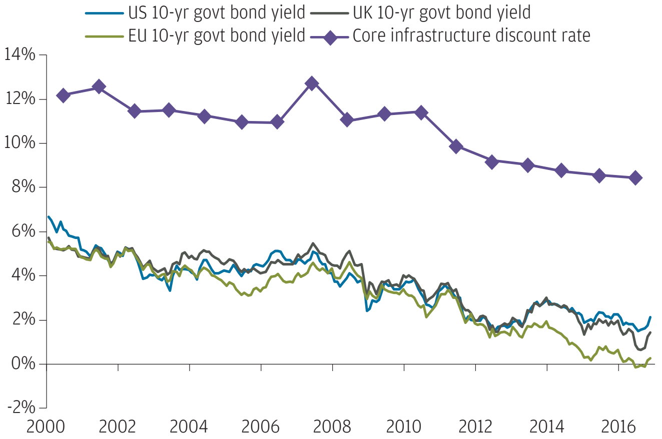

Source: MSCI Global Quarterly Infrastructure Asset Index, J.P. Morgan Asset Management. Data show rolling one-year returns from income and represent the index's full available timeline, from Q1-2009 onwards. Data as of December 2016.

## INFRASTRUCTURE VALUES ARE INCREASING

Since the recovery from the financial crisis took hold in 2009/2010, valuation discount rates for core infrastructure assets have generally trended downwards. This is due, in part, to the broader decline in interest rates, which has caused all asset classes to look more attractive on a relative basis. **Exhibit 4** shows how the estimated discount rate for core infrastructure assets has decreased alongside government bond yields, keeping the equity risk premium relatively stable.

**Infrastructure valuations have generally become more attractive as interest rates have fallen**

EXHIBIT 4: ESTIMATES FOR CORE INFRASTRUCTURE DISCOUNT RATES VS. RISK-FREE PROXIES




Source: Bloomberg, J.P. Morgan Asset Management. Data as of December 2016.

Going forward, however, we expect the equity risk premium for core infrastructure investments to fall, regardless of changes in the cost of debt. Whereas equities are vulnerable to a slump in economic growth, and fixed income is vulnerable to rising rates, infrastructure has the ability to perform well in a wide range of economic environments.

Infrastructure, as an asset class, is slowly being institutionalised, and investors have been increasing their allocations accordingly. Valuation multiples should continue to benefit from new entrants to the market, as institutional investors remain focused on high yields and diversification. In Preqin's most recent survey, six times as many investors said they planned to increase their infrastructure exposure as planned to reduce it.[3] There also remains a tremendous need for infrastructure investment globally, and regulators and end users will need to offer incentives to attract and retain new capital.

Of course, individual infrastructure sectors and assets will perform differently over the coming years. Prudent due diligence and careful asset management are essential for strong financial performance, especially given the relatively inefficient investment environment. One important consideration is that large funds have more dry powder than ever before, and many of the biggest deals are now pricing at significantly lower discount rates than smaller, mid-market transactions. Return compression for these larger assets means that, while they may continue to perform well, there is less room for valuation multiples to increase further.

## A STRONG COMMITMENT TO ESG

Infrastructure investing is inseparable from ESG principles, as infrastructure investors necessarily take a long-term view and so focus heavily on prudent and sustainable business practices. First and foremost, running a business and executing on a strategic vision require competent management, abetted by an independent and experienced board of directors. Successful infrastructure businesses tend to have a philosophy of continuous business improvements, reinforced through active asset management by a company's owners.

Infrastructure shareholders are responsible for implementing the structural changes needed to promote a company's long-term growth, rather than relying on discount rate fluctuations to paper over weak internal controls. That means infrastructure investors must promote board-level engagement and oversight, management accountability, transparency of performance, and ethical employee conduct.

Infrastructure investments are critical for the transition to an environmentally sustainable economy. The retirement of fossil fuel-based power plants is contingent on tremendous new investment in renewable energy. Significant up-front capital is also necessary to provide electricity networks with smart grid technology, to reduce water leakage, and to upgrade ports to promote energy efficiency and intermodal transport. As long-term owners, infrastructure investors cannot be blind to the future impact of climate change on individual assets and government policies.

Finally, infrastructure investments are in physical assets, and so have an inherently local component. Utilities have defined service areas, while power plants and transportation assets have tangible footprints. As a result, infrastructure investments depend on investors' relationships with local regulators, customers and communities. Through close attention to ESG principles, infrastructure investors not only encourage sustainable development, but can also bolster their own financial performance.

[3] "Preqin Investor Outlook Alternative Asset H2-2016," August 2016. Data as of June 2016.

## OPEN-ENDED COMMINGLED FUNDS ARE MORE APPROPRIATE FOR CORE INFRASTRUCTURE

Commingled funds are the most common vehicle through which institutions invest in private infrastructure.[4] By pooling capital from many investors, commingled funds can provide greater diversification than a single institution might be able to create with its own capital. In addition, such funds obviate the need to build an internal team with the in-depth sector-specific knowledge necessary to acquire and manage infrastructure assets.

Commingled funds can be either closed-end or open-ended, with the two fund structures offering very different strategies, fee structures and investment horizons. In general, open-ended funds focus on the D-I-Y aspects of core and core-plus investments with longer investment horizons and somewhat lower fees. Ownership by long-term investors may accrue benefits for external stakeholders, and encourage favourable regulatory treatment. Open-ended funds also facilitate an ongoing relationship between investors and managers, and may present co-investment and direct investment opportunities to investors who are interested in focusing more on specific sectors and geographies. Closed-end funds, by contrast, tend to focus more on capital appreciation and asset development, with core-plus and opportunistic investments, shorter time horizons and higher fees (**Exhibit 5**).

**Closed-end and open-ended options can offer very different strategies, fee structures and investment horizons**

EXHIBIT 5: OPEN-ENDED VS. CLOSED-END INFRASTRUCTURE FUND COMPARISON

| | Open-ended structures | Closed-end structures |
|---|---|---|
| Focus | Long-term structure better suited for core infrastructure investments | Shorter term structure better suited for development and turn-around transactions |
| Source of value | Emphasis on growing cash flows and yield | Emphasis on capital appreciation |
| Risk profile | Core to core-plus | Core-plus to opportunistic |
| Liquidity | Liquidity through redemption process with pre-determined frequency | Liquidity at the end of fund term via asset sales |
| Fees | Lower proportion linked to performance | Greater proportion linked to performance |
| Transparency | Known portfolio of assets with immediate yield profile | Blind pool of assets with exposure to the demand ramp-up phase |
| Discretion | Discretion on when to invest and divest assets | Capital deployed into new assets within pre-defined term periods |
| Diversification | Access to well-diversified, established portfolios | Diversification within fund-size and vintage-year investment opportunities |

Source: J.P. Morgan Asset Management.

### INVESTMENT IMPLICATIONS: RISING VALUATIONS COULD FAVOUR EARLY MOVERS

Core infrastructure is highly attractive to institutional investors, as it can provide diversification, inflation protection and yield through long-life assets, as well as relatively high expected total returns. As part of a broader portfolio, core infrastructure assets can also help to reduce volatility and mitigate losses during market downturns. However, investors should consider diversifying their infrastructure allocation in order to achieve a more stable yield and return.

In addition, increasing allocations to the asset class create a window of opportunity for early movers to benefit from rising valuations and enjoy additional capital appreciation potential. This is especially true for mid-market assets, which are still relatively inefficient with less competition. When accessing the mid-market, it is important for investors to select experienced managers with the ability to acquire and actively manage the assets prudently with the appropriate governance and incentives in place.

[4] While listed infrastructure vehicles do exist, they are highly correlated with the equity market and do not provide the diversification benefits typically associated with the infrastructure asset class. As a result, listed funds are not a primary vehicle through which investors access the asset class.

## NEXT STEPS

For more information, contact your J.P. Morgan representative.

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