

Bridging the Gap: Comparing Public and Private Infrastructure

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In their most simplistic definitions, private infrastructure represents private ownership of infrastructure assets, while public infrastructure represents ownership in an infrastructure company that is publicly traded. Both public and private infrastructure provide exposure to the infrastructure asset class, yet there are key differences between the two that investors should be aware of when considering an allocation. This research note aims to describe some of the most substantial and impactful differences from an institutional investor's perspective. Additionally, this paper reviews the historical performance of public and private infrastructure.

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Key takeaways

- Private infrastructure offers more “pure play” characteristics, as its performance is largely determined by operational performance and is less influenced by market trends and investor sentiment. Additionally, private infrastructure exhibits lower observed volatility, can result in a better alignment of interests between owners and management, and “control” ownership stakes can allow investors to exert substantial influence over strategic and management decisions.
- Public infrastructure typically requires fewer resources and capital in order to invest compared to private infrastructure. It has lower minimum commitment sizes, enabling smaller investors to participate. Public infrastructure funds tend to offer lower fees and provide daily liquidity, making them more suitable for investors with significant liquidity constraints.
- Private infrastructure has outperformed public infrastructure over both 10- and 20-year trailing periods. Moreover, private infrastructure has experienced a negative calendar year in only one of the last twenty years.
- Private infrastructure exhibits lower volatility than public infrastructure due to its pricing mechanism, which smooths out observed returns. Benchmarking private infrastructure performance is challenging due to the limited number of funds and data availability.

Private infrastructure benefits

Private infrastructure tends to represent a more direct means to achieve the desired characteristics that infrastructure offers, such as downside and inflation protection, compared to its public market counterparts. The investment performance of a private infrastructure asset is determined largely by its operational performance (e.g., the ability to produce a consistent level of cash flow). Like other private market assets, its valuation is not likely to be whipsawed with changes that occur in the equity markets. By contrast, the performance of public infrastructure stocks may be heavily influenced by the overall market environment, trends, and investor sentiment.

Like other private market asset classes, private infrastructure is not priced on a daily basis, and therefore tends to exhibit lower observed volatility than public infrastructure.¹ Private infrastructure is valued quarterly, and the managers who own the assets often have wide latitude in applying valuation methodologies (that arguably represent a more rational valuation process). Moreover, price changes tend to be reflected on a lagged basis in reporting, perhaps taking even two quarters to reflect equivalent changes in public securities. The result is a “smoothing” of the returns experienced by private infrastructure investors. The smoothed nature of private infrastructure’s returns may also contribute to its lower observed correlation to traditional stocks and bonds, compared to public infrastructure.² Public infrastructure is subject to much of the same volatility as the broad stock market, and thus exhibits higher correlations with the equity market and lower diversification benefits.

Private ownership can create a better alignment of interests between owners (i.e., investors) and management. The owners of private infrastructure tend to be more long-term focused, representing more “patient” capital. This often allows private infrastructure owners and management to focus more on enhancing the underlying assets, as opposed to improving short-term financials. There is an inherent agency challenge with many public companies where management and shareholders do not necessarily share identical interests.

Finally, and importantly, owners of private infrastructure can often improve the value of the asset by being a “control” investor. Most investors in public companies have minimal influence individually over how those companies are run. In contrast, most private infrastructure funds either take a controlling stake or a position where they can exert significant influence over strategic and management decisions. Many private infrastructure managers have experienced in-house operations teams and expertise in various infrastructure sectors.

¹ Note that lower observed volatility does not necessarily mean it is less risky.

² See the Appendix for more information on correlations.

Public infrastructure benefits

Public infrastructure typically requires less resources and capital than investing in private infrastructure. Constructing and maintaining a private infrastructure portfolio typically requires significant and dedicated research resources for due diligence and monitoring. The minimum commitment size for most private infrastructure investment vehicles, typically \$1 million to \$10 million, can also limit the flexibility for some investors to build a diversified portfolio using only private markets. Public infrastructure does not have (or has a much lower) minimum commitment size, which enables smaller investors to participate in infrastructure whereas they may not be able to with private funds.

Public infrastructure funds tend to offer lower fees than private infrastructure. Private infrastructure funds often include a performance-based fee, known as “carried interest.” This serves as a higher hurdle for private infrastructure to overcome relative to public infrastructure, especially compared to passively managed public infrastructure funds. Some (often larger) investors mitigate the fees by deploying a portion of their capital into lower-fee private infrastructure investments like co-investments and direct investments.

Public infrastructure assets typically offer daily liquidity. Hence for investors that face significant liquidity constraints, it may be the only way for them to achieve a meaningful allocation to the asset class.³ Moreover, for investors who are in the process of building or increasing an infrastructure program, public markets tend to serve as the closest proxy for these assets, and thus can serve an interim role until the target allocation is reached. Public market assets can be invested immediately, which can help get a new infrastructure program off the ground.

Finally, benchmarking public infrastructure is easier as, unlike private infrastructure, the available benchmarks conform to the standard approaches used in public market asset classes. Additionally, the options for using a peer universe for public infrastructure are not as limited as they are for private infrastructure composites.

Historical performance

Benchmarking

Benchmarking infrastructure can be particularly difficult due to the limited number of funds and availability of data. Throughout this paper, we use the Cambridge Associates Global Infrastructure Composite as a proxy for private infrastructure and the Dow Jones Brookfield Global Infrastructure Index as a proxy for public infrastructure. There are several other commonly used public infrastructure benchmarks which are described in the Appendix, though all have produced very similar historical returns and followed similar return/volatility patterns.

³ Private open-end infrastructure funds may offer greater liquidity than private close-end funds, though not as much as public infrastructure.

⁴ The Cambridge Associates Global Infrastructure Composite tracks the performance of closed-end private infrastructure funds. The Dow Jones Brookfield Global Infrastructure Index measure the performance of infrastructure companies domiciled globally who derive at least 70% of cash flows from infrastructure lines of business and includes all infrastructure sectors. Both indices are net of fees.

Historical returns and volatility

While public and private infrastructure have followed generally similar return patterns, private infrastructure has outperformed over both the 20- and 10-year periods. The private infrastructure composite generated a 9.8% 20-year net annualized return while the public infrastructure index generated an 8.8% net annualized return. The discrepancy between the two was larger over the 10-year period, with private infrastructure producing a 9.7% net annualized return while public infrastructure produced only a 3.6% net annualized return.

Some of the recent public infrastructure underperformance has been due to negative annual returns in the 2015, 2018, 2020, and 2022 calendar years (see Figure 1), while private infrastructure's annual returns remained positive during those periods. In fact, private infrastructure only posted one negative year over the past twenty years, during the Global Financial Crisis in 2008.

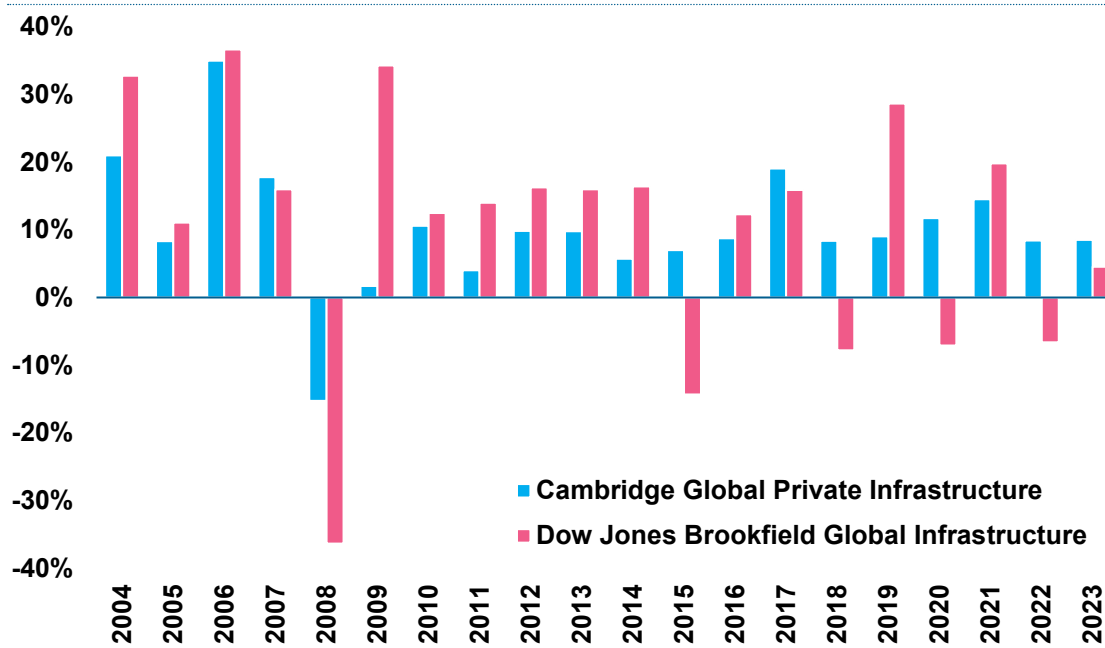


FIGURE 1
Calendar Year Returns

Source: Cambridge Associates via IHS Markit and Investment Metrics, as of June 30, 2024. Private data pulled in October 2024. Public data pulled in December 2024. Indices: Cambridge Associates Global Private Infrastructure, Dow Jones Brookfield Global Infrastructure Index Net. Returns are net of fees.

Note: For purposes of return comparison, throughout this document we linked quarterly IRRs of Private Infrastructure as reported by Cambridge Associates. This is because timeweighted returns for these series were not available and the quarterly IRRs used should not differ materially from time-weighted quarterly returns. Note that the trailing returns we present by linking the quarterly IRRs are different from the trailing IRRs as the trailing IRRs are running the calculation over a longer period in which the weighting of cash flows has a more substantial impact.

As noted earlier, private infrastructure is not priced daily, which tends to result in private market returns lagging those of public markets, thus smoothing out the observed return. Additionally, private markets typically feel the effects of market downturns later than public markets and, conversely, are slower to show better performance during upturns. Therefore, there may be a disconnect between public and private infrastructure returns when there is an inflection point in the market.

The pricing mechanism for private infrastructure assets also smooths the volatility profile. Hence, private infrastructure exhibits lower volatility than public infrastructure (see Figure 2).

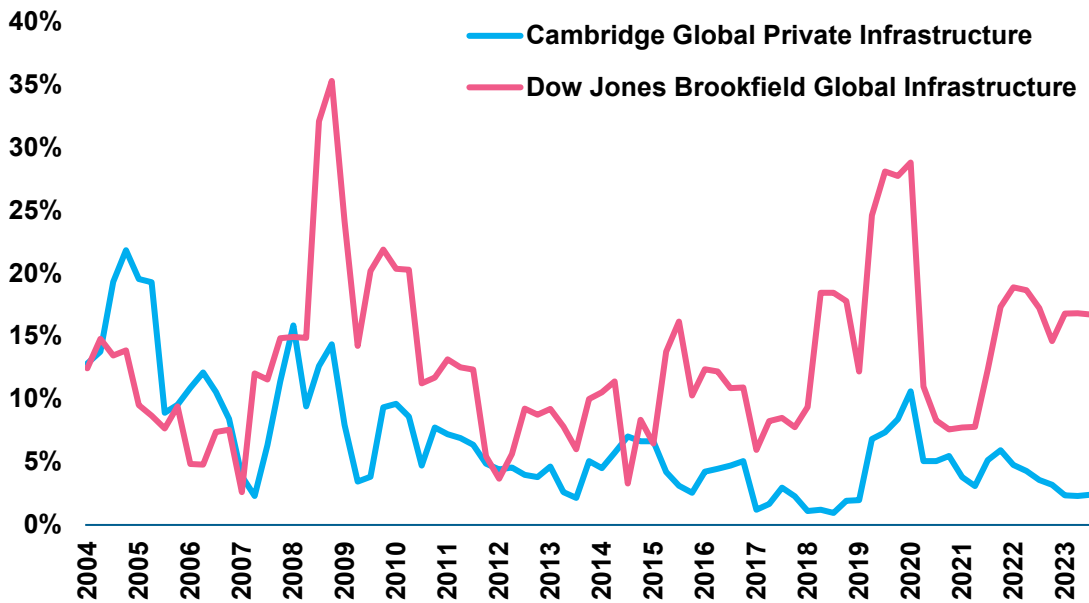


FIGURE 2
Rolling One-Year
Annualized Standard
Deviation

Source: Cambridge Associates via IHS Markit and Investment Metrics, as of June 30, 2024. Private data pulled in October 2024. Public data pulled in December 2024. Monthly public data converted to quarterly. Indices: Cambridge Associates Global Private Infrastructure, Down Jones Brookfield Global Infrastructure Index Net.

Summary

There are distinct advantages and challenges associated with both public and private infrastructure investments. Private infrastructure offers more “pure play” characteristics, such as downturn and inflation protection, and its performance is primarily driven by operational performance rather than market trends. This results in lower observed volatility and greater diversification benefits. Additionally, private infrastructure allows for better alignment of interests between owners and management, fostering a long-term focus on enhancing underlying assets. However, it generally requires significant resources and capital to invest, and the fund structures for private infrastructure typically charge higher fees and offer limited liquidity.

Public infrastructure provides easy access with lower or no minimum commitment size, making it suitable for smaller investors. It offers lower fees and daily liquidity, which is beneficial for investors with significant liquidity constraints. Public infrastructure can also serve as an interim role for investors that are building an infrastructure program until their target allocation is reached. Despite these benefits, public infrastructure is subject to higher volatility and is more influenced by market trends and investor sentiment. Ultimately, the choice between public and private infrastructure investments depends on an investor’s specific needs, resources, and long-term goals.

Appendix

Benchmarking public infrastructure

There are numerous public market indices used to track public infrastructure performance, though there is not one that is widely used and considered to be the “standard” benchmark. Three of the most common indices include the MSCI World Core Infrastructure Index, the Dow Jones Brookfield Global Infrastructure Index, and the S&P Global Infrastructure Index. Figure 3 describes the characteristics of each, their inception and first value date, as well as the number of constituents included.

The Dow Jones Brookfield Global Infrastructure index was chosen to proxy public infrastructure performance in this paper because of its relatively longer history, global geographic focus, and inclusion of all infrastructure sectors and strategies.

	MSCI World Core Infrastructure Index	Dow Jones Brookfield Global Infrastructure Index	S&P Global Infrastructure Index
Inception Date	January 16, 2015	July 14, 2008	February 22, 2007
First Value Date	November 2003	December 2002	November 2001
Description	The index is designed to represent the performance of listed companies within the developed markets that are engaged in core industrial infrastructure activities.	The index is designed to measure the performance of pure-play infrastructure companies domiciled globally who derive at least 70% of cash flows from infrastructure lines of business.	The index is designed to track companies from around the world chosen to represent the listed infrastructure industry while maintaining liquidity and tradability.
Number of Constituents as of November 2024	96	100	76
Weighting Scheme	Market Cap weighted	Market Cap weighted	Market Cap weighted
Sectors Included	All infrastructure sectors	All infrastructure sectors	Energy, transportation, & utilities

FIGURE 3
Public Infrastructure Benchmarks Characteristics

Source: MSCI and S&P Dow Jones Index Methodologies, as of November 2024

Performance of public infrastructure indices

The three public infrastructure indices have all produced very similar historical performance and volatility. Over the past 20 years, the three indices have performed within ~1.8% of each other (annualized). Similarly, over the past 10 years, they have performed within ~1.3% of each other. Historical volatility has also been very similar, within roughly ~2.5% of one another over the past 10 and 20 years.

	MSCI World Core Infrastructure Index (Net)	Dow Jones Brookfield Global Infrastructure Index (Net)	S&P Global Infrastructure Index (Net)
20 Year Annualized Return	8.2%	8.8%	7.0%
20 Year Annualized Standard Deviation	14.5%	15.0%	16.8%
10 Year Annualized Return	4.9%	3.6%	3.7%
10 Year Annualized Standard Deviation	13.0%	13.9%	15.6%

FIGURE 4
Public Infrastructure Benchmarks Performance

Source: Investment Metrics, as of June 30, 2024, pulled in December 2024. Indices: MSCI World Core Infrastructure Index Net, Dow Jones Brookfield Global Infrastructure Index Net, S&P Global Infrastructure Index Net.

As Figures 5 and 6 show, all three indices have followed nearly identical calendar year return and rolling one-year annualized volatility patterns.

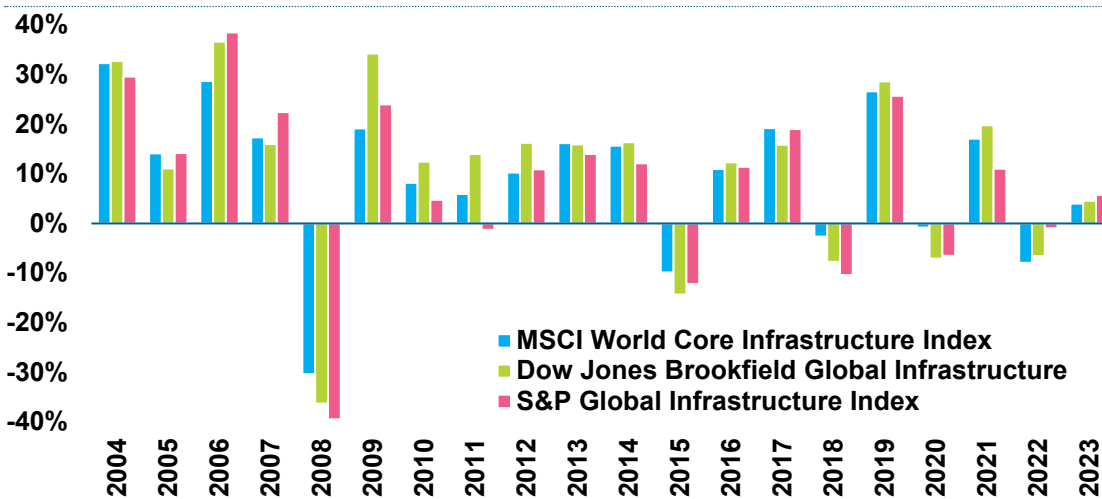


FIGURE 5
Calendar Year Returns

Source: Investment Metrics, as of June 30, 2024, pulled in December 2024. Indices: MSCI World Core Infrastructure Index Net, Dow Jones Brookfield Global Infrastructure Index Net, S&P Global Infrastructure Index Net.

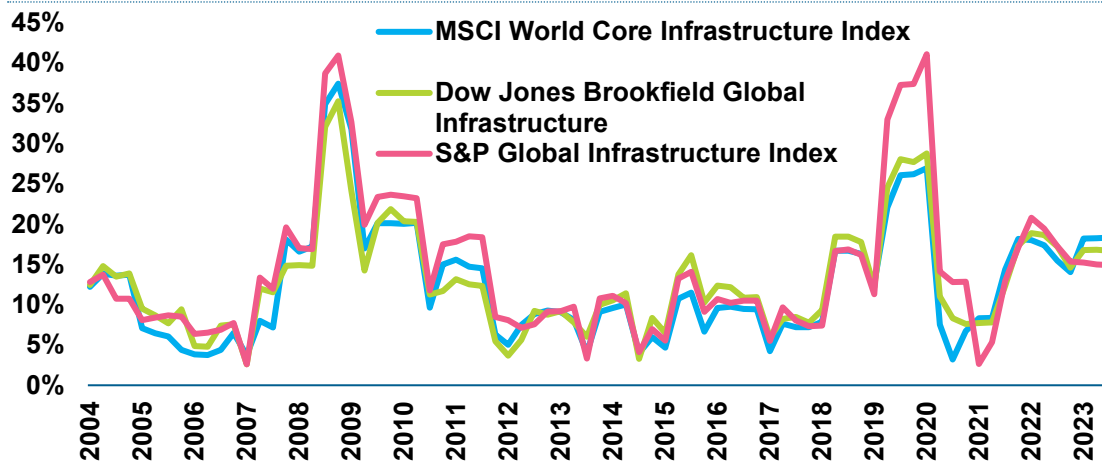


FIGURE 6
Rolling One-Year Annualized Volatility

Source: Investment Metrics, as of June 30, 2024, pulled in December 2024. Monthly public data converted to quarterly. Indices: MSCI World Core Infrastructure Index Net, Dow Jones Brookfield Global Infrastructure Index Net, S&P Global Infrastructure Index Net.

Public and private infrastructure correlation to equities

Public infrastructure has exhibited a higher correlation with traditional equities relative to private infrastructure, though both have followed similar trends (see Figure 7). Since 2004, public infrastructure has had an average correlation of 0.79 with US equities, higher than private infrastructure's 0.50 average correlation over the same period.⁵

⁵ Source: Cambridge Associates via IHS Markit and Investment Metrics, as of June 30, 2024. Private data pulled in October 2024. Public data pulled in December 2024. Indices: Cambridge Associates Global Private Infrastructure, Dow Jones Brookfield Global Infrastructure Index Net, Russell 3000. For the period 1/1/2004 to 6/30/2024.

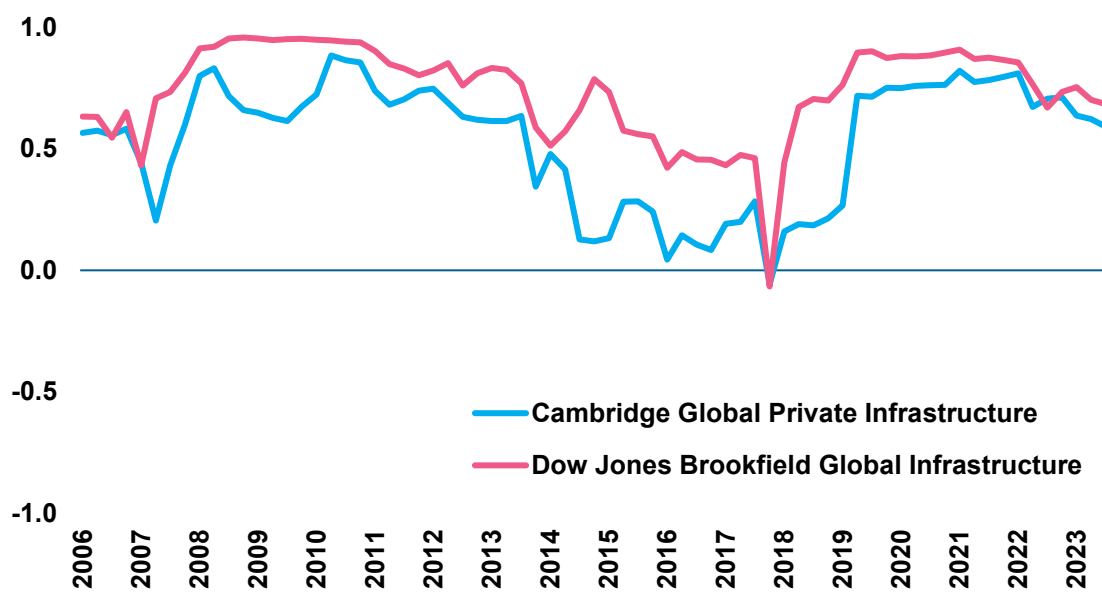


FIGURE 7
Rolling 3-Year Correlation with US Equity

Source: Cambridge Associates via IHS Markit and Investment Metrics, as of June 30, 2024. Private data pulled in October 2024. Public data pulled in December 2024. Indices: Cambridge Associates Global Private Infrastructure, Dow Jones Brookfield Global Infrastructure Index Net, Russell 3000.

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