

Perspectives

Infrastructure secondaries specialisation can unlock opportunities

Infrastructure Secondaries | April 2025



Wandy Hoh | Head of Infrastructure Secondaries

Christian Simmons | Infrastructure Secondaries Investment Associate

Aizhan Meldebek | Global Infrastructure Strategist

Executive summary

- Sourcing and identifying attractive opportunities in the private infrastructure secondaries markets requires a strong level of expertise and specialisation. The dispersion of historical returns within the private infrastructure asset class demonstrates that fund and asset selection is a key determinant of returns on both an internal rate of return (IRR) and multiple on invested capital (MOIC) basis.
- Purchasing infrastructure secondary assets at a discount to their net asset value (NAV) does not always guarantee success. Rather, it is important to focus on acquiring assets at a discount to their intrinsic value.
- The secondaries market presents opportunities for investors to gain immediate exposure to seasoned and high-quality infrastructure assets. There are several global macro themes including the growing need for digital infrastructure and power demand driven by data proliferation, as well as the development of non-traditional transport solutions that investors can gain exposure to through infrastructure secondaries investing.

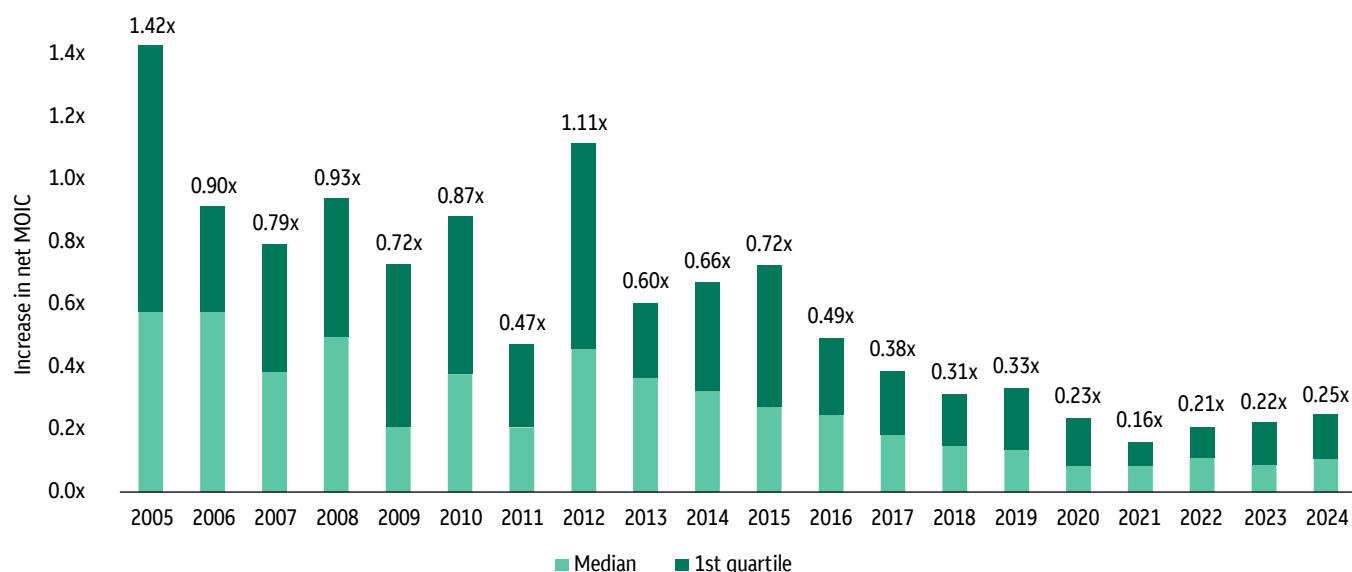
Specialisation is critical to success: Importance of asset (and fund) selection

Infrastructure is widely regarded as an attractive asset class for its resilient properties, namely low correlation with other asset classes, high barriers to entry, and a high degree of contracted cash flows, among other characteristics.¹ However, as with many asset classes, there is a dispersion of returns that separates good investments from great investments, emphasising the importance of asset, fund and manager selection.

Figures 1 and 2 demonstrate the relative improvement of a median and 1st quartile fund for each vintage versus a 3rd quartile fund. For the purpose of this analysis, the data label above each bar is the net MOIC spread between each vintage's 1st and 3rd quartile performance. The dark green bars are the delta between a 1st quartile and median return, and the light green bars represent the delta between the median return and a 3rd quartile return in each vintage. For example, in 2005, a 1st quartile fund had a net MOIC 1.4x higher than a 3rd quartile fund (2005 1st quartile return = 2.6x net MOIC vs 2005 3rd quartile return of 1.2x net MOIC).²

Figure 1:

Relative MOIC improvement of a median and 1st quartile fund (versus a 3rd quartile fund), of each vintage



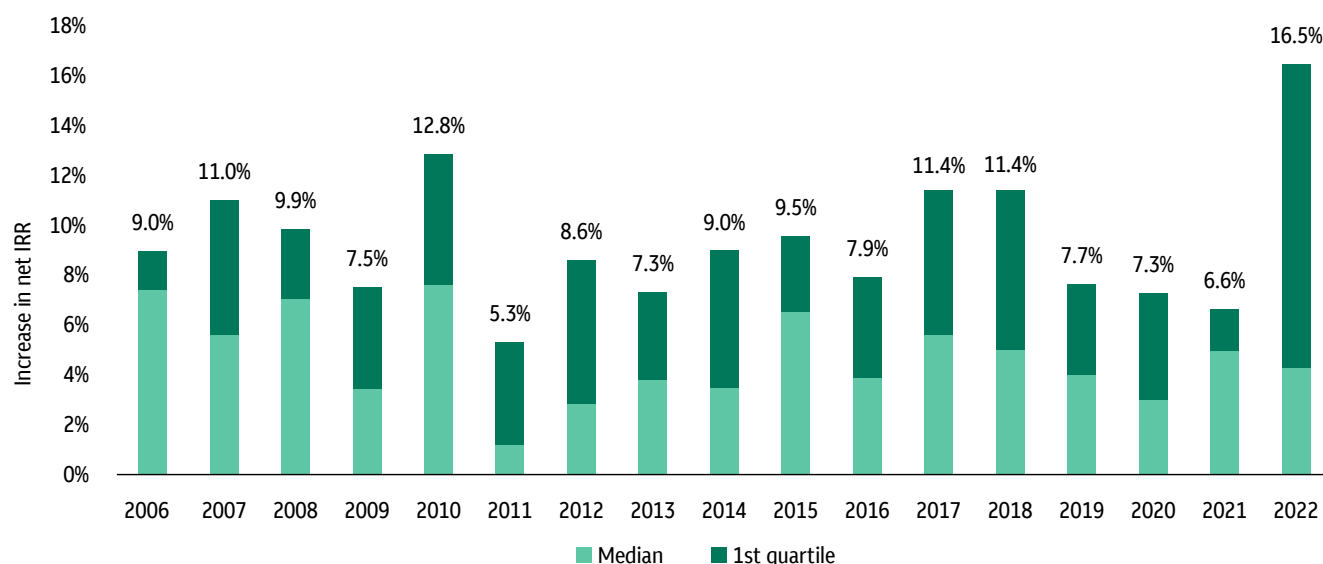
Source: Preqin (accessed in March 2025). Preqin private capital benchmarks, global infrastructure as of latest available reported date. Data downloaded in March 2025. Preqin is a database that collects fund performance data from both investors and general partners directly. The number of funds included in each vintage vary from 7 to 71 depending on vintage year. Funds included in the Preqin dataset include all infrastructure fund strategies (including core, core plus, value add, opportunistic and debt strategies).

The same methodology was applied to the IRRs in Figure 2. The dispersion of returns within the asset class demonstrates that fund selection, and more specifically asset selection, is paramount for returns on both an IRR and MOIC basis.

1. Medium, Private Infrastructure as an Asset Class (March 2025).

2. Preqin private capital benchmarks, global infrastructure as of latest available reported date. Data downloaded in March 2025. Preqin is a database that collects fund performance data from both investors and general partners directly. The number of funds included in each vintage vary from 7 to 71 depending on vintage year. Funds included in the Preqin dataset include all infrastructure fund strategies (including core, core plus, value add, opportunistic and debt strategies).

Figure 2:
Relative IRR improvement of median and 1st quartile fund (versus 3rd quartile fund), of each vintage



Source: Preqin (accessed in March 2025). Preqin private capital benchmarks, global infrastructure as of latest available reported date. Data downloaded in March 2025. Preqin is a database that collects fund performance data from both investors and general partners directly. The number of funds included in each vintage vary from 7 to 71 depending on vintage year. Funds included in the Preqin dataset include all infrastructure fund strategies (including core, core plus, value add, opportunistic and debt strategies).

Buying infrastructure secondaries assets at a discount to NAV is not always a winning strategy

When evaluating infrastructure assets on the secondaries market, it is important to distinguish between acquiring assets at a discount to their NAV versus acquiring assets at a discount to their intrinsic value. While a discount to NAV might initially appear attractive, it does not necessarily guarantee a successful investment. NAV is ultimately up to the discretion of the underlying fund manager and can, therefore, deviate (based on different valuation methodologies) from intrinsic value.

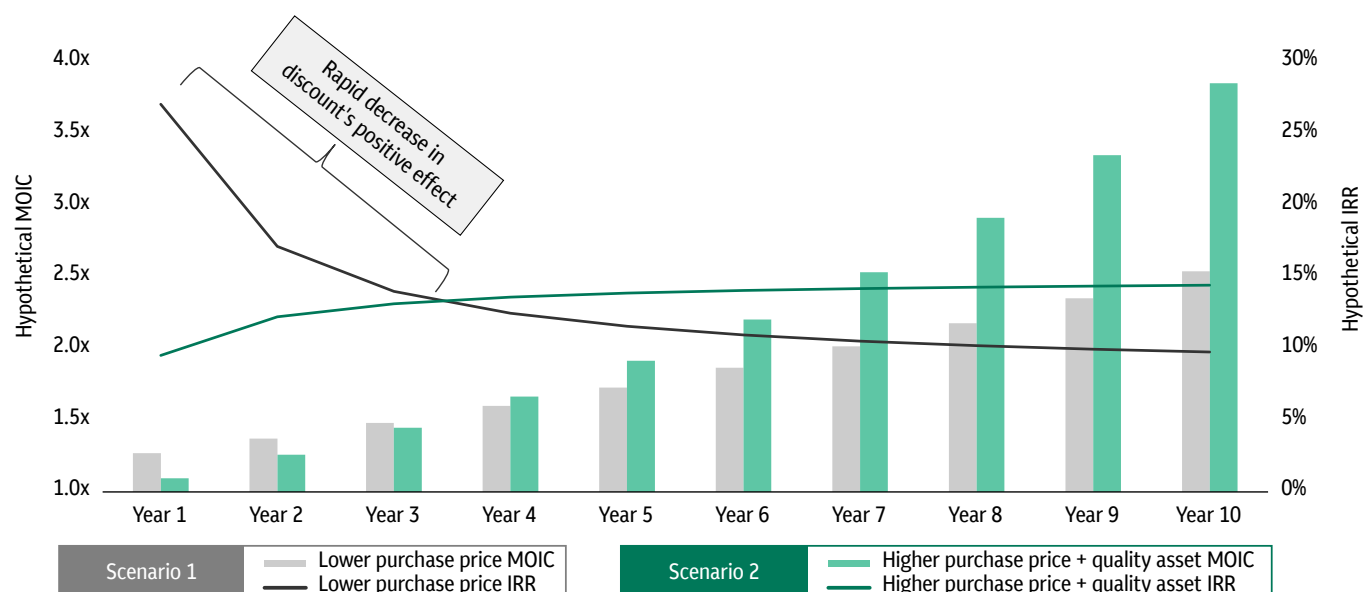
In contrast, intrinsic value reflects the long-term worth of the asset, considering factors such as future cash flows, growth potential, and underlying risks – consistent with the approach that direct bidders will be taking down the road when the fund seeks liquidity. The appropriate level of expertise and experience to identify assets that are undervalued from an intrinsic or fundamental perspective can help better position an investor for strong risk-adjusted returns.

Figure 3 shows an illustrative example of two theoretical deals, one with a focus on a headline discount at entry and one focused on acquiring quality performing assets.

- **Scenario 1, “Lower purchase price”:** This illustrative scenario assumes a secondary investor acquires a portfolio at a 15% discount to the marked NAV. The investment generates an 8% go-forward IRR on its marked NAV. This is intended to illustrate an asset with an aggressive valuation and less value creation potential being bought at a headline discount.
- **Scenario 2, “Higher purchase price + quality asset”:** This illustrative scenario assumes a secondary investor acquires a portfolio at a 5% premium to the marked NAV (which we note is atypical as discounts are still the going rate in the market, according to many advisors³). The investment generates a 15% go-forward IRR on its marked NAV. This is intended to illustrate a high-quality asset that is more conservatively marked, but with greater value creation potential bought at a headline premium.

Despite attractive entry metrics for the “lower purchase price” scenario, this illustrative example suggests this effect is quickly negated, implying a strong discount may not be a substitute for investing in performing assets over the long haul.

Figure 3:
Illustrative scenarios – high discount versus quality assets



Source: Macquarie Asset Management internal analysis (March 2025). The above is for illustrative purposes only to set forth arithmetic principles for how an increase in post investment performance can impact returns relative to an initial purchase discount. The returns do not relate to any specific investment and should not be viewed as a target, prediction, projection or guarantee of any returns to be achieved by any specific fund or investment.

Deep asset class expertise: Seeing the whole picture

A deep understanding of the unique characteristics of each asset at a micro level while continuing to consider macro level trends can lead to more accurate valuations of infrastructure assets. This is where sector specialisation can be an advantage as infrastructure is often complex and nuanced. Infrastructure specialists bring invaluable expertise, enabling investors to navigate factors that vary significantly from region to region. For instance, the regulatory landscape, political climate, and economic conditions in North America differ markedly from those in Europe or Asia. Moreover, an extensive long-term and multi-cycle understanding of the business at play can enable an investor to efficiently navigate local market dynamics, such as the availability of resources, labour market conditions, and technological advancements, all of which can influence the success of infrastructure investments.

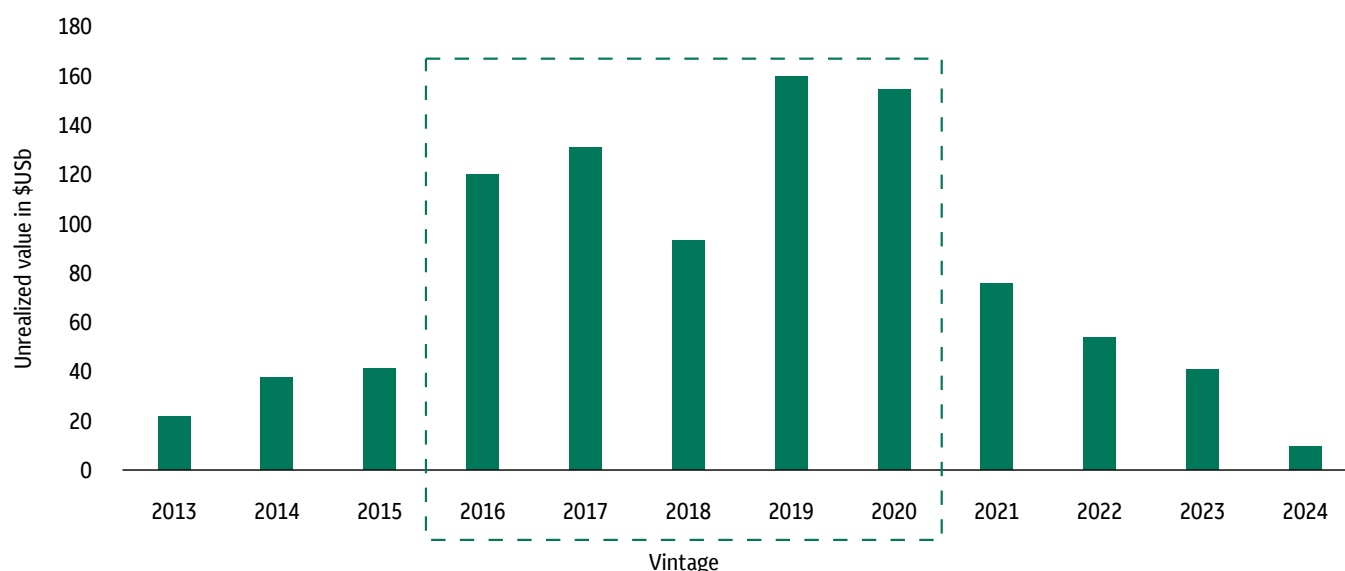
Infrastructure specialists (versus secondary generalists) can be relatively better equipped to assess these variables and devise strategies that mitigate risks and capitalise on opportunities specific to each business model and locale. Market insights ensure that investments are not only compliant with local regulations but also optimised for the unique demands and growth prospects of each market, which can lead to overall stronger investment outcomes.

Secondaries market opportunity set

The secondaries market can be an opportunity for investors to rapidly gain diversification across sector, vintage and geography while mitigating the J-curve. The current opportunity set for secondaries investors is historically strong as demand for liquidity across the board is elevated (transaction volume in FY 2024 was as high as \$US160 billion across all asset classes⁴).

Due to a recent lacklustre M&A market, many general partners (GPs) have been unable to liquidate their holdings in high-quality assets, leaving a significant amount of NAV outstanding. Figure 4 illustrates the large outstanding balance of NAV in 2016-2020 vintage funds. We consider these vintages strong secondary targets and believe this chart underscores the potential in the space. This backlog of NAV potentially provides secondaries investors ample opportunities to selectively gain exposure to exciting infrastructure trends.

Figure 4:
Infrastructure unrealised value by fund vintage



Source: Preqin (March 2025). Estimation by Preqin of Infrastructure unrealised value. Dataset includes core, core plus, value add, and opportunistic infrastructure strategies (excludes fund of funds, secondaries and debt strategies).

Strong tailwinds behind infrastructure investments

US data centre market

The rapid increase in data generation and consumption has led to a significant rise in demand for data centres (Figure 5). This growth is driven by the increasing adoption of cloud computing, internet of things (IoT) devices, and the proliferation of data-intensive applications. The US is the largest data centre market globally and currently represents approximately 60% of globally installed data centre capacity. Going forward, the US data centre market is expected to continue on a strong growth trajectory, expanding at a compound annual growth rate (CAGR) of 21.6% between 2025 and 2028 (Figure 6).⁵

4. Evercore FY 2024 Secondaries Market Review (February 2025).

5. Boston Consulting Group, "Breaking Barriers to Data Center Growth" (January 2025).

An exciting trend within data centres is the shift to “edge” data centres. Edge data centres, strategically located near the data source, process data locally and reduce the need for long-distance data transmission. This decentralisation not only enhances speed and efficiency but also improves data security and reliability. It is generally more economically viable (as well as easier logistically while providing operational flexibility for additional scale on demand) for hyperscalers to lease from colocation facilities on the edge than to own small-scale sites. We believe colocation data centres are favourably positioned to capitalise on the growing demand for edge data centres.

Figure 5:
US data centre market has experienced strong growth...

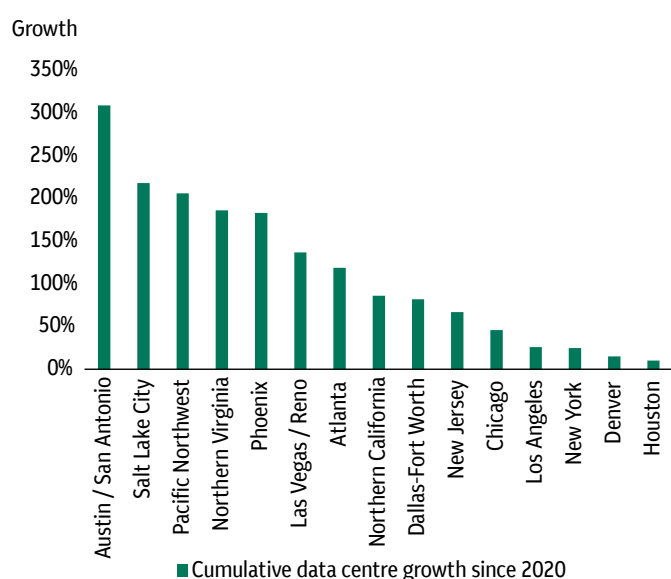
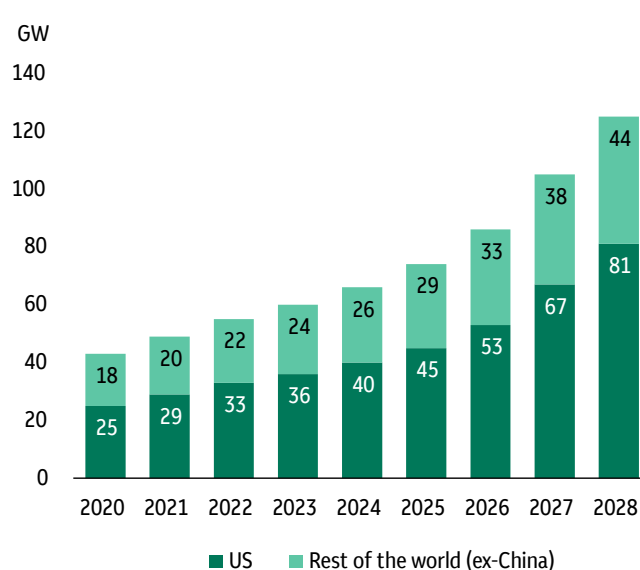


Figure 6:
...and is expected to continue on a strong growth trajectory



Source: JLL Research, Boston Consulting Group, “Breaking Barriers to Data Center Growth” (January 2025).

Power demand on the rise

Rapidly growing data centre development, a resurgence in energy-intensive US manufacturing, and the electrification of transport and heating are anticipated to drive significant electricity demand growth to levels not seen since the 1990s (Figure 7). Over the past two decades, electricity demand has been in a low-growth period (below 1% annually), however, the situation is rapidly changing. Data from Federal Energy Regulatory Commission (FERC) Form 714 in 2022 estimated five-year US peak load growth of about 23 gigawatts (GW). That estimated growth increased to 39 GW in 2023 and surged to 67 GW in 2024 (Figure 8).⁶ This implies that the nationwide forecast for electricity demand has risen sharply from 2.8% to 8.2% growth over the next five years.

In 2023, data centres accounted for 4% to 5% of US electricity consumption.⁷ This demand is expected to grow further due to the power requirements for artificial intelligence (AI) and complex large language models used by ChatGPT and similar applications. At the same time, manufacturing construction spending in 2023 was three times the average of the past decade. Protectionist policies have raised the cost of imported goods such as steel, aluminium, semiconductors and other components, further adding to the demand for US domestic manufacturing.⁸ In addition, the electrification of heating and transport are the other major drivers of US electricity demand growth. Altogether, this potentially provides compelling opportunities for infrastructure investors.

6. Source: Grid Strategies, “Strategic Industries Surging: Driving US Power Demand” (December 2024).

7. Wood Mackenzie “Gridlock: the demand dilemma facing the US power industry” (October 2024).

8. World Resources Institute (February 2025).

Figure 7:
Annual power demand growth is expected to reach levels not seen since 1990s

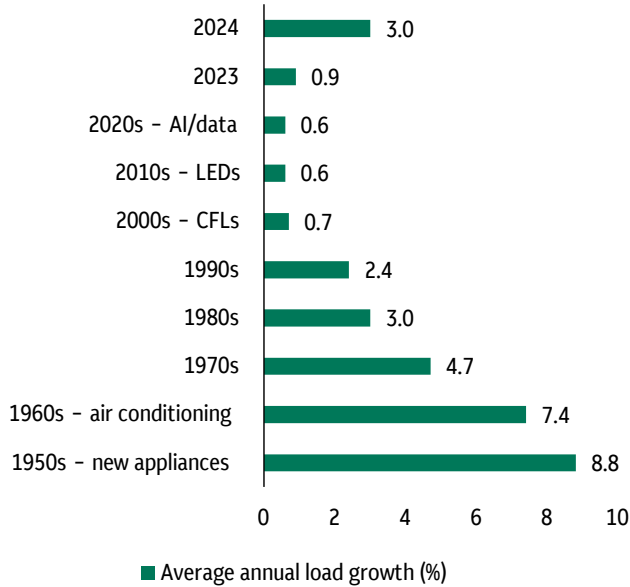
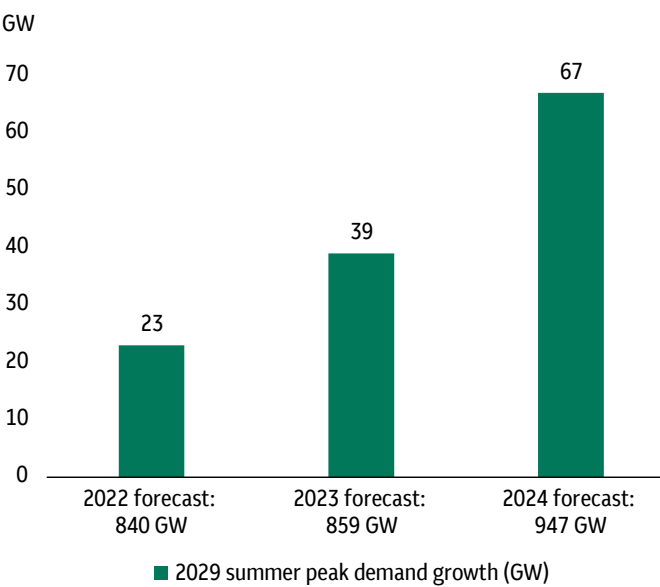


Figure 8:
The five-year load growth forecast increased from 23 GW to 67 GW



Source: FERC, Grid Strategies, “Strategic Industries Surging: Driving US Power Demand” (December 2024).

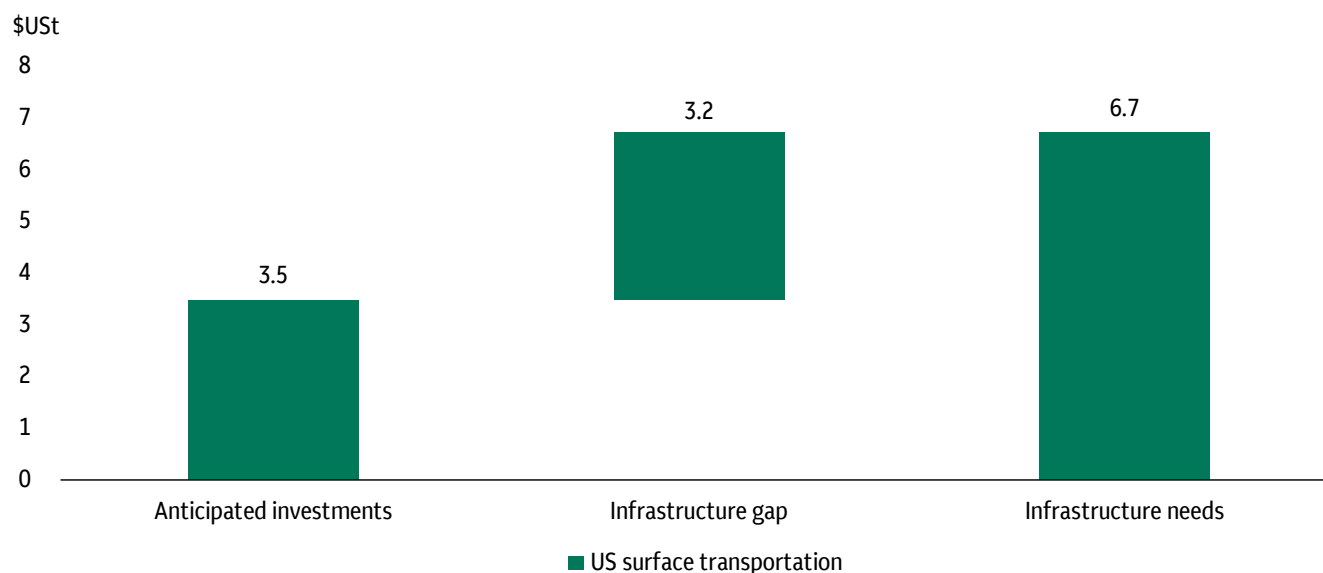
North American transport: Opportunities in traditional and non-traditional sectors

According to the American Society of Civil Engineers’ 2024 Bridging the Gap economic report, surface transportation needs over the 20 years from 2024 to 2043 total about \$US6.7 trillion, representing the largest infrastructure needs among all infrastructure sectors. The report suggests that infrastructure investment gap may reach up to \$US3.2 trillion⁹ (Figure 9). The gap creates an opportunity for private infrastructure investors across various sub-sectors. Historically, in the US, private transportation investments have concentrated in ports; however, going forward we may increasingly see opportunities in other sectors.

For example, we increasingly see opportunities in non-traditional transport infrastructure such as transportation leasing. Transportation leasing generally has strong infrastructure characteristics such as (i) long-lived assets (15-25 years), (ii) strong barriers to entry driven by established branch networks, (iii) acting as an essential service provider for logistics providers, and (iv) strong protection, in general, from contracted cash flows. This sub-segment could continue to benefit from the proliferation of ecommerce and consumption of goods.

9. American Society of Civil Engineers, Bridging the Gap: Economic Impacts of National Infrastructure Investment, 2024-2043. The data refers to “Snapback” scenario under which the Infrastructure Investment and Jobs Act (IIJA)’s authorised spending continues through 2026. In 2027, infrastructure spending “snaps back” to 2019 levels in place prior to passage of the IIJA and other major spending bills.

Figure 9:
US surface transportation infrastructure gap



Source: American Society of Civil Engineers, Bridging the Gap: Economic Impacts of National Infrastructure Investment, 2024-2043. The data refers to "Snapback" scenario under which the Infrastructure Investment and Jobs Act (IIJA)'s authorised spending continues through 2026. In 2027, infrastructure spending "snaps back" to 2019 levels in place prior to passage of the IIJA and other major spending bills.

Key risks of investing in secondaries

The key risk factors of secondaries investments include:

- Less information transparency given the secondary nature of investment (often information is reserved for the primary investor only, and secondaries funds are restricted by confidentiality agreements in receiving asset-specific information).
- Potentially lower MOICs when compared with primary funds, resulting from shorter duration investments.
- Requirement to pay fees at the direct fund level and secondary fund level.

Notwithstanding these risk factors, the numerous benefits of infrastructure secondaries can potentially outweigh information asymmetry, and often pricing for secondaries takes into account fees from the direct fund.

IMPORTANT INFORMATION

The opinions expressed are those of the author(s) as of the date indicated and may change based on market and other conditions. The accuracy of the content and its relevance to your client's particular circumstances is not guaranteed.

This market commentary has been prepared for general informational purposes by the team, who are part of Macquarie Asset Management (MAM), the asset management business of Macquarie Group (Macquarie), and is not a product of the Macquarie Research Department. This market commentary reflects the views of the team and statements in it may differ from the views of others in MAM or of other Macquarie divisions or groups, including Macquarie Research. This market commentary has not been prepared to comply with requirements designed to promote the independence of investment research and is accordingly not subject to any prohibition on dealing ahead of the dissemination of investment research.

Nothing in this market commentary shall be construed as a solicitation to buy or sell any security or other product, or to engage in or refrain from engaging in any transaction. Macquarie conducts a global full-service, integrated investment banking, asset management, and brokerage business. Macquarie may do, and seek to do, business with any of the companies covered in this market commentary. Macquarie has investment banking and other business relationships with a significant number of companies, which may include companies that are discussed in this commentary, and may have positions in financial instruments or other financial interests in the subject matter of this market commentary. As a result, investors should be aware that Macquarie may have a conflict of interest that could affect the objectivity of this market commentary. In preparing this market commentary, we did not take into account the investment objectives, financial situation or needs of any particular client. You should not make an investment decision on the basis of this market commentary. Before making an investment decision you need to consider, with or without the assistance of an adviser, whether the investment is appropriate in light of your particular investment needs, objectives and financial circumstances.

Macquarie salespeople, traders and other professionals may provide oral or written market commentary, analysis, trading strategies or research products to Macquarie's clients that reflect opinions which are different from or contrary to the opinions expressed in this market commentary. Macquarie's asset management business (including MAM), principal trading desks and investing businesses may make investment decisions that are inconsistent with the views expressed in this commentary. There are risks involved in investing. The price of securities and other financial products can and does fluctuate, and an individual security or financial product may even become valueless. International investors are reminded of the additional risks inherent in international investments, such as currency fluctuations and international or local financial, market, economic, tax or regulatory conditions, which may adversely affect the value of the investment.

This market commentary is based on information obtained from sources believed to be reliable, but we do not make any representation or warranty that it is accurate, complete or up to date. We accept no obligation to correct or update the information or opinions in this market commentary. Opinions, information, and data in this market commentary are as of the date indicated on the cover and subject to change without notice. No member of the Macquarie Group accepts any liability whatsoever for any direct, indirect, consequential or other loss arising from any use of this market commentary and/or further communication in relation to this market commentary. Some of the data in this market commentary may be sourced from information and materials published by government or industry bodies or agencies, however this market commentary is neither endorsed or certified by any such bodies or agencies. This market commentary does not constitute legal, tax accounting or investment advice. Recipients should independently evaluate any specific investment in consultation with their legal, tax, accounting, and investment advisors. Past performance is not indicative of future results.

This market commentary may include forward looking statements, forecasts, estimates, projections, opinions and investment theses, which may be identified by the use of terminology such as "anticipate", "believe", "estimate", "expect", "intend", "may",

"can", "plan", "will", "would", "should", "seek", "project", "continue", "target" and similar expressions. No representation is made or will be made that any forward-looking statements will be achieved or will prove to be correct or that any assumptions on which such statements may be based are reasonable. A number of factors could cause actual future results and operations to vary materially and adversely from the forward-looking statements. Qualitative statements regarding political, regulatory, market and economic environments and opportunities are based on the team's opinion, belief and judgment.

Other than Macquarie Bank Limited ABN 46 008 583 542 ("Macquarie Bank"), any Macquarie Group entity noted in this document is not an authorised deposit-taking institution for the purposes of the Banking Act 1959 (Commonwealth of Australia). The obligations of these other Macquarie Group entities do not represent deposits or other liabilities of Macquarie Bank. Macquarie Bank does not guarantee or otherwise provide assurance in respect of the obligations of these other Macquarie Group entities. In addition, if this document relates to an investment, (a) the investor is subject to investment risk including possible delays in repayment and loss of income and principal invested and (b) none of Macquarie Bank or any other Macquarie Group entity guarantees any particular rate of return on or the performance of the investment, nor do they guarantee repayment of capital in respect of the investment.

Past performance does not guarantee future results.

Diversification may not protect against market risk.

International investments entail risks including fluctuation in currency values, differences in accounting principles, or economic or political instability. Investing in emerging markets can be riskier than investing in established foreign markets due to increased volatility, lower trading volume, and higher risk of market closures. In many emerging markets, there is substantially less publicly available information and the available information may be incomplete or misleading. Legal claims are generally more difficult to pursue.

Alternative investments often are speculative and include a high degree of risk. Investors could lose all or a substantial amount of their investment. Alternative investments are appropriate only for eligible, long-term investors who are willing to forgo liquidity and put capital at risk for an indefinite period of time. They may be highly illiquid and can engage in leverage and other speculative practices that may increase the volatility and risk of loss. Alternative Investments typically have higher fees than traditional investments. Investors should carefully review and consider potential risks before investing.

Investment strategies that hold securities issued by companies principally engaged in the infrastructure industry have greater exposure to the potential adverse economic, regulatory, political, and other changes affecting such entities. Infrastructure companies are subject risks including increased costs associated with capital construction programs and environmental regulations, surplus capacity, increased competition, availability of fuel at reasonable prices, energy conservation policies, difficulty in raising capital, and increased susceptibility to terrorist acts or political actions.

Macquarie Group, its employees and officers may act in different, potentially conflicting, roles in providing the financial services referred to in this document. The Macquarie Group entities may from time to time act as trustee, administrator, registrar, custodian, investment manager or investment advisor, representative or otherwise for a product or may be otherwise involved in or with, other products and clients which have similar investment objectives to those of the products described herein. Due to the conflicting nature of these roles, the interests of Macquarie Group may from time to time be inconsistent with the interests of investors. Macquarie Group entities may receive remuneration as a result of acting in these roles. Macquarie Group has conflict of interest policies which aim to manage conflicts of interest.

All third-party marks cited are the property of their respective owners.

© 2025 Macquarie Group Limited

macquarie.com/MAM

Contact us by region

Americas

Fifth Avenue
New York
212 231 1000
mim.americas@macquarie.com

EMEA

Ropemaker Place
London
44 20 303 72049
mamclientservice.emea@macquarie.com

Australia

Elizabeth Street
Sydney
1 800 814 523
miminstitutionalclients@macquarie.com

Asia

Harbour View Street
Hong Kong
852 3922 1256
macquarie.funds.hk@macquarie.com