Comparing Infrastructure Returns Between the Private and Public Markets

Amid historic low interest rates, many investors turned to real assets and infrastructure in search of steady and predictable cash flows. With interest rates rising, now is a good time to look back on the relative success of private infrastructure investing versus public market alternatives. Private market investments in infrastructure rose significantly in recent years, and overall returns have been positive, averaging, net of fees, 7.54% between 2007 through 2022.

To assess comparative returns of private market investments in infrastructure against public market equivalents, we compared the performance of two established ETFs — SPDR S&P Global Infrastructure ETF (GII) and Alerian MLP ETF (AMLP) — with comparable private market funds. These ETFs focus on infrastructure investments and its subsectors, including transportation, energy generation and telecommunications infrastructure.

Of the nearly 11,000 funds covered on CEPRES, 558 are classified as infrastructure funds. From these general infrastructure funds, we took 125 European, 116 Northern American funds and 200 global funds with a strategy closely aligned with the GII and AMLP ETFs. GII does not focus on any specific geographic region, whereas AMLP strongly focuses on North America.

For each of these funds, we calculated the total value to paid in (TVPI) for every quarter between Q1 2007 and Q2 2022 and linked them into a time series of quarterly returns. Starting with the inception date of GII — the older ETF — we have set the initial value of all time series as 100. Based on return data for the private equity infrastructure funds and ETF data, we have constructed a comparison that demonstrates the value of investment into one of the three vehicles and what each would be worth at a given time.

Private market infrastructure outperforms over the long term

In 14 out of 15 years, the CEPRES infrastructure time series private equity annual returns were positive. Only 2009 — at -1.00% — yielded negative returns. In nine years, returns yielded between 0% and 10%, while five years yielded over 10%.

Conversely, the distribution of ETF returns shows boom and bust cycles with considerably higher volatility. Less than half of all annual returns are in this 0% to 10% range. Both GII and AMLP had four negative years. For AMLP, a third of all years since its inception have yielded negative returns. Although the number of years with returns above 10% is comparable to the CEPRES time series — 7 for GII and 4 for AMLP — they fail to keep up with the consistency of private equity returns.

Figure 1: Returns by quarter Q1 2007 – Q2 2022

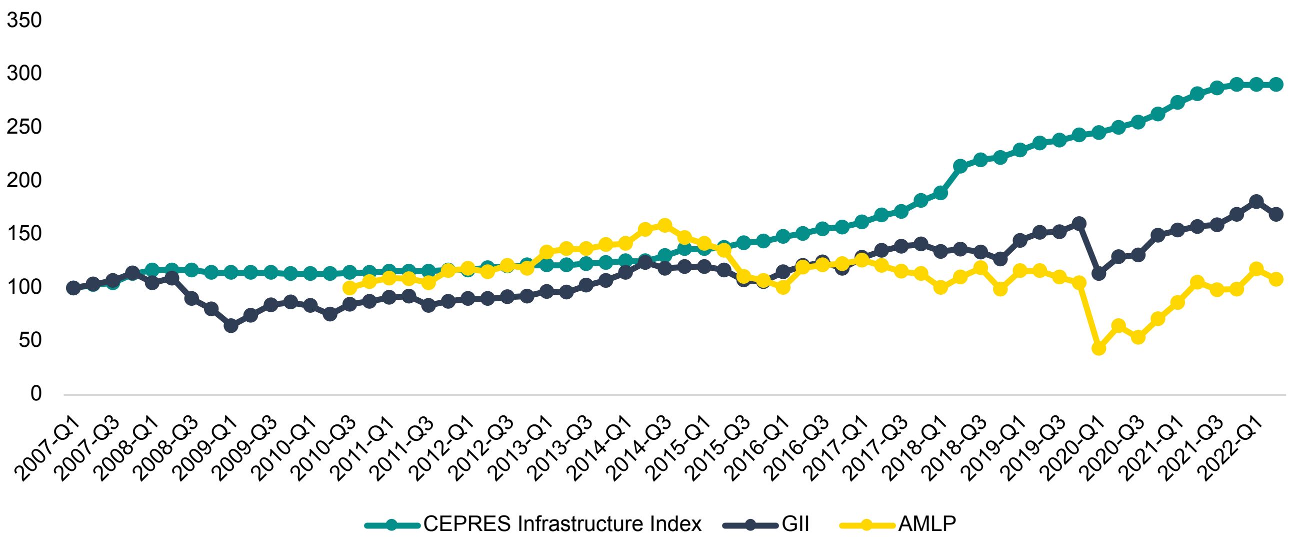

Figure 2: Five-year average returns between private and public infrastructure funds

5 year average returns	CEPRES infrastructure time series	GII	AMLP
2007 to 2011	3.28%	-1.27%	7.88%
2012 to 2016	6.14%	6.69%	2.57%
2017 to 2021	13.19%	8.33%	-1.55%

Data in figure 2 shows the average returns over five-year periods. While ETF returns at times outperform the private markets, the consistency of the CEPRES private market infrastructure time series returns causes it to yield higher returns in the long run.

After their initial gains, the two ETFs fell together, given their high degrees of correlation. While the CEPRES time series yielded lower returns in the short run, its steady returns surpassed those of GII and AMLP. From 2017-2022, private equity returns significantly outperformed GII and AMLP.

Figure 3: Standard deviation of the CEPRES time series and infrastructure ETFs

	CEPRES infrastructure time series	GII	AMLP
Standard deviation	2.29%	8.06%	15.23%

Private market infrastructure is less volatile

The CEPRES time series demonstrates less volatility than the public ETFs — even after accounting for distributions and dividends.

This difference is most evident when comparing standard deviations of the returns of the three indexes. Returns of the CEPRES time series have a standard deviation of 2.29%, whereas GII and AMLP have 8.06% and 15.23%, respectively. This dichotomy implies that private equity returns are more stable. Assuming a normal distribution of returns, 95.45% of the yearly returns of the funds in the CEPRES time series should be in the 2.96% to 12.12% range. Meanwhile, GII returns range between -11.53% to 20.70% and AMLP ranges from -28.71% to 32.19%. The returns of private equity infrastructure investments are more predictable.

Figure 4: Upper and lower ranges of infrastructure funds

Confidence interval	CEPRES infrastructure time series	GII	AMLP
Lower range	2.96%	-11.53%	-28.71%
Average	7.54%	4.58%	1.74%
Higher range	12.12%	20.70%	32.19%

Much of the CEPRES time series stability can be attributed to the dynamics of private equity investing. In the first few years of a fund, contributions from investors are the main types of cash flows of private equity funds, which is when most of a fund's investments occur. Although fund managers make some reappraisals during the investment period, most of a fund's returns occur through distributions resulting from dividends paid from underlying investments or final distributions at the deal exit — both of which tend to be more concentrated toward the end of a fund's lifetime. For this reason, it may take several years for returns in a private equity fund to be recognized.

Public infrastructure is correlated

While the focus between the two publicly traded ETFs differs considerably, they are closely correlated with a correlation coefficient of 77.55%. Conversely, there are low correlations of 14.88% and 9.80% between the CEPRES infrastructure time series and GII and AMLP, respectively. Because of this high correlation between GII and AMLP, infrastructure investors hoping to limit their portfolio risk by diversifying their investments into these two indexes would still see their portfolio behave in much the same way as if they had invested solely in one of these two indexes. Allocating significant investments into private equity infrastructure can give portfolio managers the diversification they may seek.

Lower volatility of the CEPRES time series translated into lower returns in the short run. However, after their initial gains, the two ETF indexes fell, and the steady returns of private equity funds surpassed those of GII and AMLP. From 2017-2022, private equity returns strongly outperformed GII and AMLP.

Figure 5: Annual returns dispersion

Number of observations	CEPRES infrastructure time series	GII	AMLP
Larger than 10%	5	7	4
Between 5% and 10%	4	2	2
Between 0% and 5%	5	2	2
Lower than 0%	1	4	4

Private equity fund managers often eschew spending resources on frequent reappraisals of their assets in the early years of a fund's lifetime. Instead, they can redeploy those saved resources to other activities, including finding new investment opportunities. Conversely, the underlying assets of public funds trade daily, meaning that their performance is volatile from inception.

Figure 6: Correlations of returns between the three infrastructure time series

Correlations	CEPRES infrastructure time series	GII	AMLP
CEPRES infrastructure time series	-	14.88%	9.80%
GII	14.88%	-	77.55%
AMLP	9.80%	77.55%	-

Figure 7: How much would an investment of $100 yield?

		CEPRES infrastructure time series	GII	AMLP
Inception of GII	2007-Q1	$190.28	$68.64	-
Inception of AMLP	2010-Q3	$153.48	$98.54	$8.07
10 Years ago	2012-Q2	$143.61	$87.59	$6.15
8 Years ago	2014-Q2	$131.79	$36.12	$30.18
6 Years ago	2016-Q2	$92.29	$39.49	$-9.50
4 Years ago	2018-Q2	$35.80	$23.59	$-2.00

Conclusion

Based on a 15-year review of performance, private equity infrastructure funds are often on par with ETFs in the short run. However, private equity funds outperform comparable ETF investments in the long run. These higher returns coupled with lower volatility in returns can provide the best of both worlds for investors with expectations of stable returns. In the 15 years since 2007, the CEPRES infrastructure time series has outperformed GII, the better of the two ETFs, twice over.

How CEPRES Market Intelligence helps investors thrive

Backed by deal cash flow data as well as operating asset P&L and balance sheet data from thousands of the world's top GPs and LPs, CEPRES Market Intelligence helps private market investors maximize returns, reduce risk and uncover hidden potential. All while gaining a true outside-in perspective. With CEPRES, investors access the best private market data coverage from nearly 11,000 funds, more than 107,000 PE-backed companies, 2,000,000 cash flows and 4,000 LPs and GPs — representing over 40 trillion USD in asset value.

CEPRES Market Intelligence empowers you to customize your analysis at the fund, deal or company operating level. Leverage simple, intuitive reporting and single-click analytics to get deep insights in a fraction of the time. Discover how your investment thesis holds up against actual fund, deal and operating performance comps. Use CEPRES's proprietary, primary-sourced data to sharpen your analysis and make better decisions.

Abridged prospectuses of selected ETFs

SPDR S&P Global Infrastructure ETF (GII)
"Seeks to provide exposure to the 75 largest infrastructure-related stocks based on float-adjusted market cap"[1]
"Index is diversified across transportation, utilities, and energy infrastructure sub-industries"

Alerian MLP ETF (AMLP)
"The fund provides exposure to the AMZI Index, which is a capped, float-adjusted, capitalization-weighted composite of energy infrastructure Master Limited Partnerships (MLPs) that earn the majority of their cash flow from midstream activities including the transportation, storage, and processing of energy commodities."[2]

[1](State Street Global Advisors, 2022) [2](ALPS Advisors, 2022)

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Better Outcomes

Develop new portfolio strategies by measuring a GP's track record or your own portfolio of investments against the returns of the broader private or public markets.

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- Asset allocation movements
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CEPRES is the first platform built for the age of digital transformation in private markets. We connect investors with proprietary deal data, complete cash flows of funds and deals with portfolio company operating metrics, and real-time analytics to unlock better, more actionable insights. All on a highly modular platform.

4,000
LPs and GPs

107K
PE-backed companies

10.8K
Funds and portfolios

$40.5T
Total asset value

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