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Did infrastructure weather the inflation storm?

INFRASTRUCTURE | October 2024

Infrastructure investments are generally considered to have strong downside protection and inflation linkage, but since infrastructure became an investable asset class, inflation has remained relatively benign. In 2022 as the world came out of lockdown, the theory came face-to-face with reality.

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Infra and inflation: the concept

What happened in markets?

In 2022, a combination of post-pandemic growth, labor shortages, the war in Ukraine and other country-specific factors caused inflation to rise to its highest level in 30 years. Central banks around the world responded by quickly and aggressively raising benchmark lending rates. And yet, inflation persisted for two years before returning to more normal levels (**Figure 1**).

Two things stand out to us about this inflationary period in particular:

1. Owing to the 30-year gap, many management teams and investors did not have direct experience managing assets during an inflationary period.
2. Energy, commodity and food cost increases were the cause of the inflation—rather than the outcome.

FIGURE 1: UK & US INFLATION (ANNUAL %)

Source: Bureau of Labor Statistics and Office for National Statistics, August 2024.

What should have happened to Infra?

In theory, infrastructure assets are relatively well protected from high inflation thanks to their ability to contractually pass on cost increases to customers as well as the inelastic demand for their services. However, this theory had never been tested. Inflation had been relatively benign since infrastructure had become an investable asset class.

In May 2022, here is what we said should happen:

Utilities	**Utilities** should benefit from increased inflation as both revenues and the rate base are typically linked to inflation. Over time, affordability may become a political concern.
Transport	**Transport assets** should benefit from inflation-linked revenue and, in some cases, minimum volume agreements or capacity-based payments. There may, however, be some pushback from customers on increasing costs (e.g., airport landing charges).
Digital	**Digital infrastructure** could benefit from longer-term, inflation-linked contracts or an ability to reset short-term rates, but that should be balanced against competitive threats. Risks may be more acute for greenfield or CapEx-intensive projects.
Renewables	**Operational renewable energy assets** might benefit from inflation-linked contracts, which can be enhanced or offset by energy prices—especially those with no fuel costs. However, the risk of construction cost overruns for new assets may be heightened.

Infra and inflation: the reality

In general, inflation pass-through worked as expected, with cash flows and valuations remaining robust. Some timing issues have affected working capital and sector-specific interventions, although these have largely been short-lived.

Utilities

Utilities performed as expected for the most part: Rate bases and OpEx allowances increased in line with inflation. As a result, profitability remained strong.

There were, however, some short-term impacts, such as a time lag between higher costs being incurred and revenues being adjusted, which led to some pinch points, however, overall, EBITDA growth remained ahead of inflation (**Figure 2**). Regulated assets also often have the ability to pass through cost increases in capital expenditure but some in-flight projects that were not subject to indexation saw cost increases that were not recoverable.

Political and regulatory intervention such as clawing back perceived inflationary benefits was discussed in some jurisdictions, including the UK, though these have not been implemented yet.

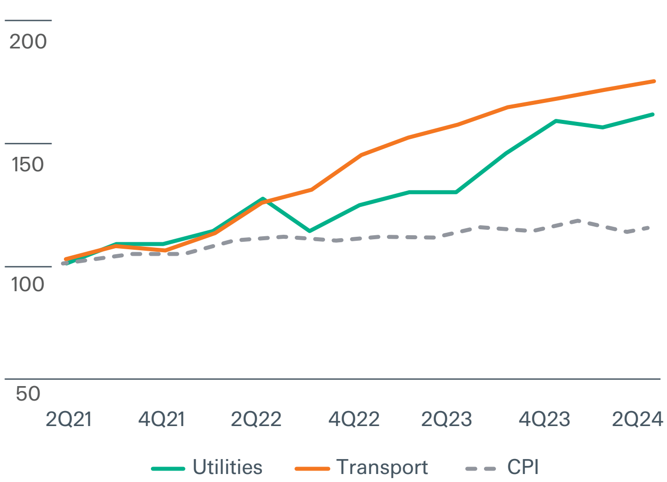
Overall, valuations remained robust despite increases in the risk-free rate (**Figure 3**).

Transport

Transport as a whole remained robust through the period, although each subsector was affected differently.

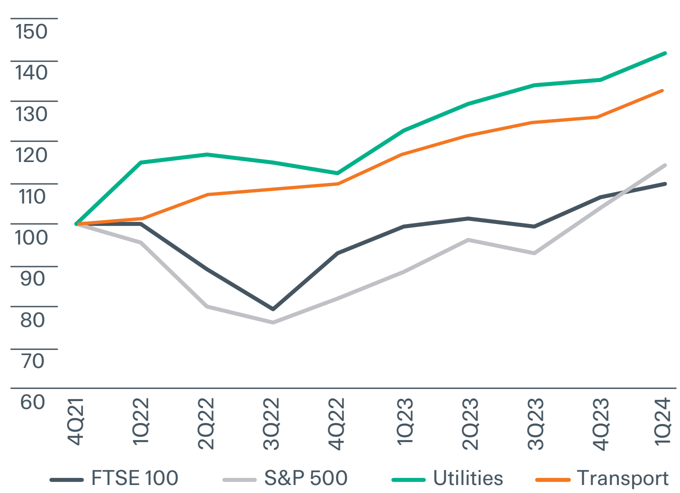
- Airports were largely able to fully pass on costs, in part owing to high pent-up demand for travel following the pandemic—despite cost-of-living pressures.
- Toll roads were able in most cases to increase prices without impacts on volume.
- Ports and rail freight were also able to pass along inflation-linked costs, although it should be noted that other factors such as changing container leasing costs also affected overall shipping prices.

FIGURE 2: EBITDA GROWTH: *UTILITIES AND TRANSPORT*



Source: StepStone analysis of EBITDA growth of a basket of infrastructure assets.

FIGURE 3: HORIZON TOTAL RETURNS: *UTILITIES AND TRANSPORT*



Source: StepStone analysis of total returns of individual assets in a basket of private market infrastructure funds compared with total returns of the FTSE 100 and S&P 500.

Overall, both digital and renewable assets outperformed public indices throughout the inflationary period (**Figure 4**).

Digital

Operational data centers did not see significantly higher energy costs as they typically have the ability to pass through all energy costs to customers. Data centers that were under construction were exposed to escalation in CapEx however, due to the demand for cloud computing and more recently AI, these new data centers were often able to recoup these higher costs.

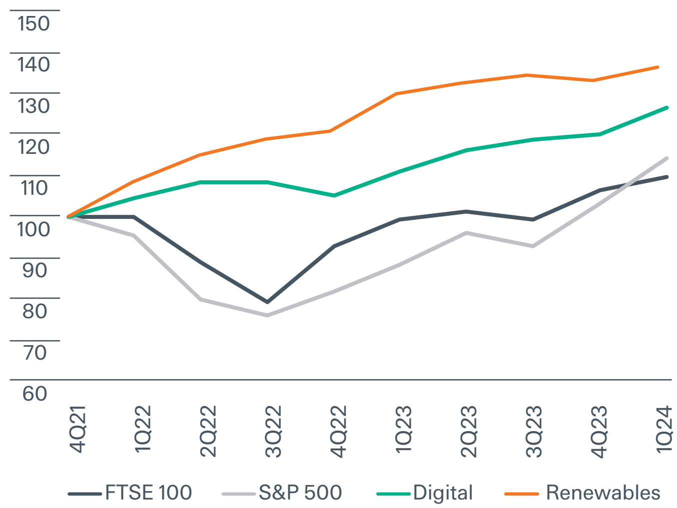
Likewise, fiber networks and towers were able to pass on costs since many B2B and B2C contracts have inflation-linked adjustments built in.

Renewables

While EBITDA for renewables steadily increased over the inflationary period (**Figure 5**), there was something of a dichotomy between operating assets and platform businesses.

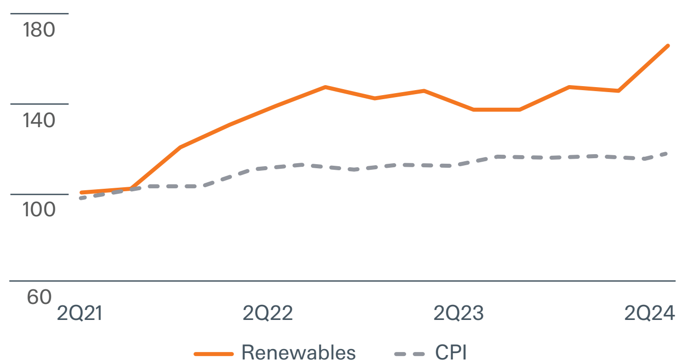
- Operating renewables that were fully contracted were largely insulated and may benefit from indexation clauses in the offtake agreement. Those with merchant exposure benefited from high power prices. This led some governments to impose windfall taxes, which partially offset these gains.
- For platform businesses, there was a temporary disparity between contracted revenues and increased CapEx, which meant new projects were briefly paused.[1] This was subsequently resolved, and projects have been renegotiated at higher contract prices.

FIGURE 4: HORIZON TOTAL RETURNS: *DIGITAL AND RENEWABLES*



Source: StepStone analysis of total returns of individual assets in a basket of private market infrastructure funds compared with total returns of the FTSE 100 and S&P 500.

FIGURE 5: EBITDA GROWTH: *RENEWABLES*



Source: StepStone analysis of EBITDA growth of a basket of infrastructure assets.

[1] For example, AR5 in the UK saw no successful bidders because the price ceiling was too low.

Infra and inflation: private market portfolios

Infrastructure was briefly a victim of its own success as relative valuation growth compared with other asset classes adversely affected portfolio construction in 2023, but has since rebounded.

Denominator effect on 2023 allocations

While infrastructure valuations and returns outperformed the market (**Figure 6**), other asset classes, such as real estate, were more negatively affected during this time, particularly with the added pressure of working from home and higher interest rates.

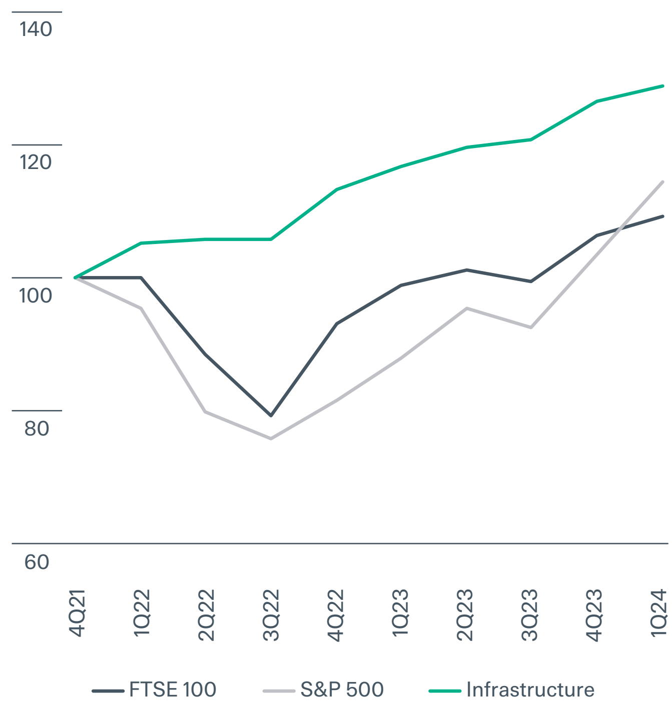
As a result, in diversified portfolios infrastructure values increased relative to the values in other asset classes. This made it harder to deploy capital from those portfolios into infrastructure as allocations became more overweight.

Bounce-back in 2024

The pent-up demand for infrastructure investment was catalyzed by major thematic drivers including energy transition and digitization alongside increasing market confidence that the macroeconomic environment was stabilizing. As a result, the first half of 2024 saw a significant bounce-back of activity across the spectrum, including new infrastructure mandates, fundraising and capital deployment.

The good news is infrastructure performed as it was meant to through the 2022–24 inflation spike. It held or grew its value and outperformed markets and other asset classes, such as real estate and private equity, despite some ripple effects that were largely a result of infrastructure's relative success and resilience.

FIGURE 6: HORIZON TOTAL RETURNS: *PRIVATE INFRASTRUCTURE*



Source: StepStone analysis of total returns of individual assets in a basket of private market infrastructure funds compared with total returns of the FTSE 100 and S&P 500.

By and large, infrastructure assets made it through this period of inflation unscathed.

Infra and inflation: the outcome

Infrastructure has largely lived up to its billing and made it through the recent inflation spike unscathed and in some cases stronger.

While some effects were felt at an asset level, these have been relatively benign such as delaying projects. Over the last three years, EBITDA growth across a number of sectors has outpaced inflation (**Figure 7**).

At a portfolio level, wider market effects saw a slower 2023 for infrastructure deployment, but the rebound in 2024 has been strong.

In short, total returns in infrastructure have outperformed on a relative basis, and infra's inflation-linked protection mechanisms have worked as expected. No longer viewed as speculative or unproven, infrastructure is critical to any well-rounded portfolio.

FIGURE 7: EBITDA GROWTH VS US CPI

SECTOR	CAGR JUN '21–JUN '23
Utilities	17.3%
Transport	19.6%
Renewables	18.3%
US CPI	4.9%

Source: StepStone analysis of EBITDA growth of a basket of infrastructure assets; US Bureau of Labor Statistics.

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