CAIA Viewpoint

Is it Time to Take the Toll Road?

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The full article may be accessed here.

Central Issue of the Paper

How will investments in toll roads and other infrastructure projects fare during the upcoming period of rising interest rates? Historically, listed infrastructure has provided a positive return during periods of rising interest rates (10.1%), but this is lower than its average return (11.5%). During rising real interest rates, some infrastructure subsectors perform significantly worse than usual. This is in sharp contrast with equities that have had above average performance during periods of rising real interest rates in the recent past (10.4% versus an average of 8.52%).

In "Infrastructure and the Economy," Declan O'Brien seeks to answer: Will the historical performance continue? Are there any structural changes that may alter the relative performances of equities and infrastructure? How might GDP growth and inflation impact infrastructure returns when interest rates are rising?

Approach Employed by Paper

In a three-pronged approach, the author:

1. identifies potential cash flow drivers and related variables (GDP growth, real and nominal yields, inflation and lagged inflation);
2. analyzes historical performance of listed and unlisted infrastructure and subsectors in periods of above and below average GDP growth and other cash flow drivers; and
3. evaluates the elasticity of demand for infrastructure investments relative to various economic conditions.

Return data over the 2004 to 2017 period is obtained from the Dow Jones Brookfield Global Infrastructure Index and its subsectors (airports, toll roads, ports, telecoms, electric T&D, oil and gas transportation, water and a diversified infrastructure index.) The data is divided into periods of above average and below average GDP growth, nominal interest rates, real interest rates, inflation and lagged inflation. Infrastructure returns in each environment is compared to its average annual return for the entire period and the relative performance is compared to the relative performance of (primarily) equities, yet also the relative performance of bonds.

Findings of the Paper

Infrastructure remains an attractive investment area for the upcoming period that is expected to be characterized by rising real and nominal interest rates. The negative impact of rising interest rates will likely be mitigated by a structural change relative to past cycles whereby now low rates have been locked in by many infrastructure owners putting long-term facilities in place. Furthermore, even historically, rising real interest rates have been accompanied by strong GDP growth and inflation which also boost cash flows and offset negative impacts of rising real rates.

When GDP growth is lower than on average, most infrastructure sub-indices have negative returns. However, these are generally of a much smaller magnitude than that of equities. There is a bond-like quality to infrastructure returns, resulting in less volatility over the business cycle relative to equities and yet with an added yield pick-up over bond yields.

Infrastructure is also shown to be a good inflation hedge since it is strongly correlated with inflation (lagged one year). Most infrastructure conflicts have contractual terms relating to inflation changes, but these are generally updated at the end of the year. Therefore, lagged inflation is more strongly correlated with infrastructure returns than concurrent inflation rates.