portfolio construction CONFERENCE
25/26/27 August 2009 | Australian Technology Park, Eveleigh, Sydney

Due Diligence Forum Research Paper

GLOBAL LISTED INFRASTRUCTURE - THE BEST DEFENCE IS A GOOD OFFENCE

Peter Meany, Head of Global Infrastructure Securities, Colonial First State Global Asset Management

Colonial First State

Infrastructure may be a new asset class in private hands, but many of the assets have long operating histories. This research paper presents evidence from recessions since the early 1970s to highlight the relative strength of the asset class and the pace at which earnings can rebound. It explains that infrastructure earnings are supported by essential or contracted demand, inflation-linked price increases and capex-driven growth, and that robust earnings currently translate into dividend yields above 5% per annum with recent market volatility creating a unique opportunity for long-term investors to access these scarce assets at discounted prices.

INTRODUCTION

Infrastructure is increasingly being accepted as a stand-alone asset class. Global listed infrastructure meets the requirements of many investors by offering stable income, predictable growth, an inflation hedge, simplicity and liquidity. Investors also have the ability to both profit from and contribute to themes like globalisation, climate change and security of energy supply.

The universe of listed infrastructure has been steadily increasing, both in terms of stock numbers and diversity of assets. The combination of privatisations, initial public offerings, corporate restructurings and solid equity returns has seen the listed infrastructure universe grow from around 40 stocks with a market capitalisation of $400 billion in 1990 to around 100 stocks and over $1,200 billion in 2009.

Global listed infrastructure has delivered higher returns with lower risk than global equities. Total returns over the last 15 years average 8.0% per annum compared to 5.4% for the MSCI World. Emerging Markets and Info Tech experienced periods of exceptional performance but have ultimately delivered lower returns than Infrastructure with twice the risk.

Infrastructure is a general term for a broad range of real assets. Assets including regulated water utilities, airports, wireless towers or oil storage will deliver varied risk and return profiles. A portfolio that balances “income” and “growth” infrastructure should outperform over the long-term, a recommended portfolio delivering 11.6% per annum over 15 years. Relative performances during 2008/09 highlight the potential for a skilled active manager to outperform a passive approach when markets over-react.

© PortfolioConstruction Conference 2009.

DEFINING THE LISTED INFRASTRUCTURE UNIVERSE

Before defining the listed infrastructure universe, it is important to ask this simple question: What are investors looking for? The following characteristics are often highly valued by investors:

- Stable income - Many investors are risk averse and require a relatively stable income stream to fund pension payments for institutions and living expenses for individuals. Companies with high cash flow generation are well placed to meet this requirement.

- Predictable growth - Capital appreciation is a key concern for all long-term investors as they attempt to grow their wealth over time. Investing in business models with a proven history of growth through economic cycles should be a good start.

- Inflation hedge - Maintaining the real value of wealth is important for portfolios with long investment horizons. Assets with the power to pass through general inflation or higher input costs should be highly valued.

- Simplicity - Investors are looking for investments that are easy to understand, in terms of their underlying assets, corporate or product structures and unit pricing.

- Liquidity - Recent market volatility and the increasing presence of alternative investments highlight the need for liquidity. The ability to promptly rebalance a portfolio or take advantage of mispriced opportunities is an advantage.

- Thematic - Investors are conscious of the world around them and can see opportunities to both profit from and contribute to this constant change. Issues such as globalisation, climate change and security of energy supply are common.

Inclusions

Roads

Toll roads or motorways are typically operated under long-term leases of greater than 30 years. Revenues tend to be robust and can match GDP growth over the long-term. For example, net toll revenue on the New Jersey Turnpike has grown at 5.9% pa since 1970 and has only fallen twice, following the oil crisis in 1974 and the credit crisis in 2008. Volumes on intra-city or commuter roads tend to be more stable than inter-city roads with a higher proportion of heavy vehicles. For example, traffic on the ASF motorway network in France for the 12 months to June 2009 included heavy vehicles down 8.6% but light vehicles down just 0.3%. Price increases are typically linked to inflation with negotiated compensation for additional capital expenditure. Private toll roads are well established in France, Italy, Spain and Australia and present a large growth opportunity in most countries.

© PortfolioConstruction Conference 2009.

Airports

Airports tend to operate under long-term leases and are subject to some form of regulation. Driven by globalisation, increased wealth and declining real airfares, passenger volumes have historically grown at multiples of GDP. For example, international passengers to/from Australia have grown at 8.3% pa since 1970. Traffic at primary airports (like Heathrow, Paris, or Sydney) tends to be more stable than secondary airports reflecting scarcity of airline slots and the lower proportion of discretionary travel. For example, BAA traffic for the 12 months to June 2009 included Heathrow -3%, Gatwick -8% and Stansted -10%. Airports offer increasingly diversified revenue streams including income from retailing, car parking and property development. With the sector in North America still in government hands, airports represent a significant growth opportunity for the listed infrastructure market.

Ports

Sea ports handle containers and bulk cargo under ownership or long-term leases with port authorities. The sector has historically delivered strong volume growth reflecting the globalisation of trade. For example, container volumes through Port of Rotterdam have grown at 7.2% pa since 1975. Significant trade routes include the export of bulk commodities to Asia and the subsequent import of containerised finished goods. Listed ports are dominated by companies based in China, though recent listings of companies based in Hamburg and Dubai added to the sector. Key port operations in Singapore and the US are still in government hands.

Rail

Rail companies usually operate passenger or freight services. There are a handful of listed passenger rail companies in Japan, Hong Kong and Singapore while listed freight rail is limited to North America. Passenger volumes tend to be more stable than freight, which is more closely linked to economic growth and has to compete with trucks over shorter distances. For example, volumes reported by Eurotunnel for the 12 months to June 2009 include Eurostar passengers –2% but freight volumes –13%. Significant capital costs and public sensitivity to price increases has tended to restrict returns on passenger services. Pricing power of freight services in North America has been improving with deregulation and industry consolidation, as evidenced by the industry return on equity moving from 2% in the early 1980's to 10% in 2008.

Utilities

Utilities can broadly split into regulated and integrated. Transmission and distribution networks tend to be monopoly suppliers of electricity, gas and water. Residential volumes are relatively stable though industrial volumes are more closely linked with economic activity. For example, volumes for leading US electric utility Southern Company for the 6 months to June 2009 included residential -1% and industrial -17%. Pricing is usually restricted by formal regulation of returns on equity. Integrated utilities may own networks but will also own electricity generation, gas production/storage or retailing activities. These additional segments are more competitive but can offer higher return opportunities given the lack of regulation. Utilities offer good geographic diversification with listed companies in almost every country.

© PortfolioConstruction Conference 2009.

Energy

Oil and gas pipelines and storage assets typically receive a regulated return on equity. Prices tend to keep pace with inflation while volumes are supported by long-term, take-or-pay contracts. The listed energy infrastructure market is dominated by North America, including pipelines delivering Canadian energy products to key US markets.

Communications

Communications infrastructure includes broadcast or mobile towers and satellites. Increased demand for capacity has delivered strong revenue growth while barriers to entry are created by planning restrictions on tower sites and satellite positions. Long-term contracts up to 15 years tend to provide for inflation price increases and limit technology risks. There are a few listed tower companies in the US and satellite companies in Europe.

Exclusions

In contrast, companies which focus on riskier activities would be unlikely to meet investor expectations for listed infrastructure. These include: road construction, airlines, shippers, trucking, merchant power generation, oil/gas exploration and production, and telecom services and equipment manufacture. While these activities are related to the infrastructure sector, characteristics including low barriers to entry and limited pricing power would tend to deliver less predictable cash flows and higher stock price volatility. For example, for the 12 months to June 2009 the average stock return on key airports was -5% (Paris, Frankfurt, Sydney, Auckland), which compares to their main airline at -25% (Air France, Lufthansa, Qantas, Air New Zealand).

GROWING OPPORTUNITY SET

The universe of listed infrastructure has been steadily increasing over the last 20 years. In 1990 the sector was dominated by domestic utilities with a handful of roads, one airport, and some US rail companies. The combination of privatisations, initial public offerings, corporate restructurings and equity returns has seen the listed infrastructure universe grow from around 40 stocks with a market capitalisation of $400 billion in 1990 to around 100 stocks and over $1,200 billion in 2009 (refer Figure 1).

The increased size of the universe has also improved diversification opportunities for investors in listed infrastructure. Examples of these changes include:

- Geographic diversification – airport privatisations from Auckland, Beijing and Copenhagen to Paris, Sydney and Zurich has reduced regulatory and event risk (eg. terrorist attack or plane crash) in the airports sector.

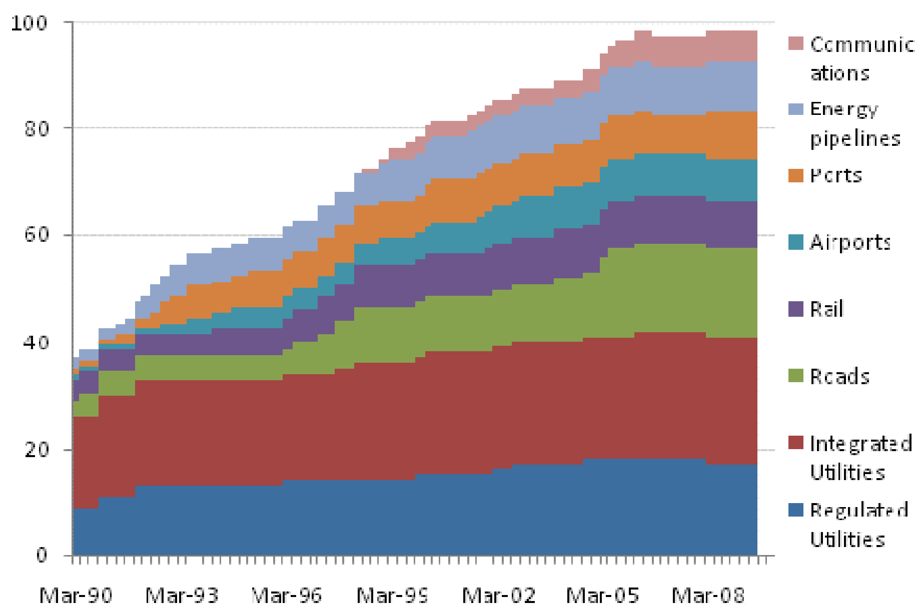
© PortfolioConstruction Conference 2009.

- Sector diversification - communications infrastructure spin-offs, including wireless towers in 1998/99 and satellites in 2004/05, added stocks with strong growth outlooks.

- Asset diversification - regulatory requirements forcing separation of electricity and gas transmission and distribution networks from integrated utilities added stocks with higher earnings certainty, due to limited competition or commodity price sensitivity.

Privatisation has been a key driver of the growth in the listed infrastructure market. France alone has added over €50 billion in market capitalisation in five sub-sectors through the floats of Electricite de France, Gaz de France, Aeroports de Paris, ASF-APRR-Sanef motorways, Eutelsat and Eurotunnel. The financial crisis deferred IPO activity through 2008 and 2009, but the reality of corporate deleveraging and ballooning government debt should see this process resume.

Figure 1: Global Listed Infrastructure Stock Count by Sector



Source: Bloomberg, CFS GAM, 22 June 2009

RISK-ADJUSTED RETURNS

Global listed infrastructure has delivered higher returns with lower risk than global equities. Total returns over the 15 years to June 2009 average 8.0% per annum compared to 5.4% for the MSCI World. For reference, US economic growth also averaged 5.4% per annum (including 2.8% GDP and 2.6% inflation) over the same period. On a sector basis, Energy was the only sector that delivered higher returns than Infrastructure as the crude oil price moved from $17 to around $70 over this

© PortfolioConstruction Conference 2009.

period. Emerging Markets and Info Tech experienced periods of exceptional performance but have ultimately delivered lower returns with twice the risk (refer chart on left below).
Given listed infrastructure is often seen as a diversifying strategy, it is also worth considering how it behaves in different market conditions. Compared to global equities over the last 15 years, global listed infrastructure has delivered around 70% of the upside but only 50% of the downside. That is, in an average month where global equities deliver positive total returns, the MSCI World has risen 3.3% and Infrastructure has risen 2.3%. Conversely, in an average month of negative returns for global equities, the MSCI World has fallen 4.0% and Infrastructure has fallen 1.9% (refer Figure 3).

Figure 2: Global Listed Infrastructure Risk and Return

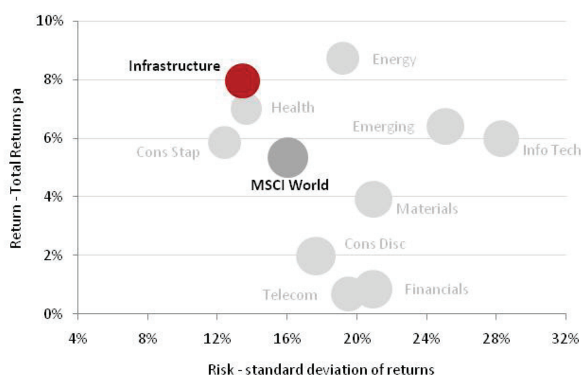


Figure 3: Up/Down Markets

Source: UBS Global Infrastructure, MSCI World, Bloomberg, Jan 1994 - Jun 2009, USD

Excess returns

Can the infrastructure sector sustain excess returns for the next 15 years?

Total returns are a function of many factors but four are likely to be critical – current dividend yields, the impact of inflation, underlying growth of the assets and new investment opportunities.

- Yield – the 12-month forward dividend yield at June 2009 is 4.5% for Infrastructure compared to 3.3% for the MSCI World. With dividends of cyclical sectors still vulnerable to the economic downturn, the yield represents an initial advantage for infrastructure returns.

- Inflation – an extended period of low interest rates stimulating demand, coupled with reduced private investment limiting supply, may lead to a period of heightened inflation in the medium term. In this environment, infrastructure assets with ability to pass through higher inflation and input costs should outperform more competitive sectors.

- Asset growth – Roads, airports and ports have been able to grow at multiples of GDP for many decades and will benefit from a return to economic growth. Fiscal stimulus, concerns over the security of energy supply and environmental requirements are also adding to investment opportunities for many sectors including rail and energy transmission and storage.

© PortfolioConstruction Conference 2009.

- Sector growth – privatisations and corporate restructurings should continue to provide investment opportunities in assets which may be run inefficiently or valued conservatively by their current owners. For example, through staff reductions and outsourcing implemented post-privatisation, gross operating margins at Sydney Airport have improved from 60% in 2000 to 81% in 2008.

Risk factors

What risk factors should be considered for the next 15 years:

- Regulation – monopoly assets providing essential services will always face a degree of regulation. Returns could be impacted by a marked increase in social unrest or political interference. This risk could be minimised through diversification by country and selective exposure to emerging markets.

- Credit – some infrastructure companies have increased their use of debt funding in the last decade. For example, European toll roads increased gearing from 2.5x net debt / EBITDA in 2000 to 6.5x in 2008. A lower interest rate environment would have been supportive of returns. This risk could be minimised by avoiding companies with complicated or excessive debt structures and limited pricing power.

- Environment – Infrastructure companies will need to address their impact on the environment. Issues range from carbon emissions at coal-fired power stations and aircraft noise around airports to gas pipelines through wilderness areas and water leakage from distribution networks.

BUILDING A PORTFOLIO THAT PERFORMS THROUGH THE CYCLE

Infrastructure is a general term for a broad range of real assets. While the combination can deliver good risk-adjusted returns compared to equities, investors need to actively monitor risk and return opportunities through the cycle. Regulated utilities face heightened political and customer scrutiny during periods of regulatory rate cases when prices are set. Integrated utilities will tend to be impacted by commodity prices as rising/falling energy costs impact retail/generation asset valuations. Water utilities were boosted by leveraged buyout activity (typically acquired at 20-30% premiums to regulated asset base) which subsequently dissipated with tighter credit. Transport volumes can be more or less sensitive to economic activity depending on the proportion of trucks driving on a road, containers loaded at a port or leisure passengers arriving at an airport. Passive or index investment in a diverse sector increases the risk that investors miss out on opportunities.

The varying risk and return opportunities available in the listed infrastructure sector can be observed in figure 5. All infrastructure sectors were able to outperform the MSCI World on a total return basis, and returns were generally higher for sectors with higher growth prospects (e.g. communications and roads outperforming integrated and regulated utilities). Risk is related to the degree of economic

© PortfolioConstruction Conference 2009.

sensitivity. Utilities with a high proportion of regulated activities delivered the lowest risk. Transport infrastructure that is more economically sensitive, like ports and airports, produced higher risk.

A number of sectors require further explanation. Airports lagged the sector during an unprecedented period where passenger demand was impacted by the Iraq War, 9/11 and SARS. The availability of limited data warrants caution in interpreting outcomes for rail and communications. Rail is limited to companies listed in the US (industry restructuring) and Japan (low cost of capital) while the Communications sector only took form in the last five to 10 years. Taking a closer look by sector highlights varied performance in down markets. Again, in a month where the MSCI World is down 4.0%, the average return for communications was -3.5%, roads and integrated utilities -1.8%, and regulated networks better than -1.0%. Conversely, in MSCI World up markets, it is important to hold positions in growth sectors like communications and transport infrastructure.

Figure 4: Risk & Returns

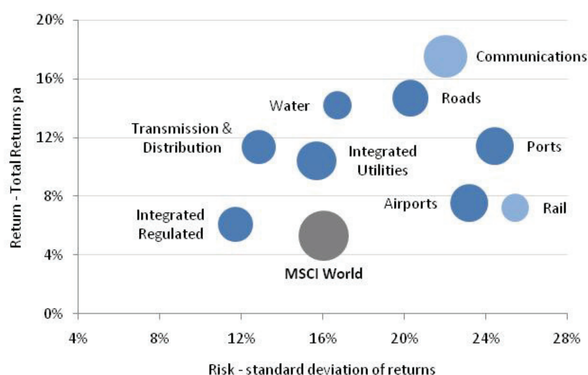
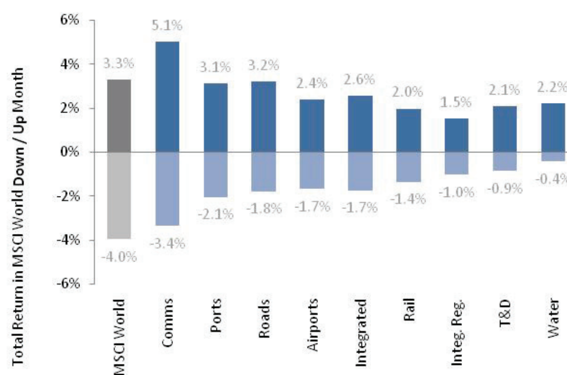


Figure 5: MSCI Up/Down Months



Note: Size of circle reflects correlation to MSCI World
Source: UBS Global Infrastructure Indices, Bloomberg, Jan 1994 - Jun 2009, USD

Financial markets were extremely challenging in 2008. The impact on asset prices from tighter credit, higher equity risk premiums, reduced confidence and falling demand was widespread. Listed infrastructure was not immune from this volatility, with the UBS Global Infrastructure & Utilities Index falling 32% in calendar 2008. While this represents a reasonable performance in the context of a -41% return from the MSCI World over the period, it also serves to highlight the varying risk and return opportunities available in the sector.

Relative performance by sector in 2008 was broadly as expected as regulated utilities fell less than transport infrastructure as seen in Figure 6. Would it make sense to just own utilities? While this strategy has been the more defensive, it has tended to reduce total returns over the long-term and would miss the tactical opportunity available in growth infrastructure stocks. A question in response: Why introduce market volatility into a portfolio and then ignore mispricing?

Absolute declines in 2008 were exacerbated by a number of headline fears:

- Ports - largest decline in export volumes from Japan and Germany since WWII (down 30%-40%)

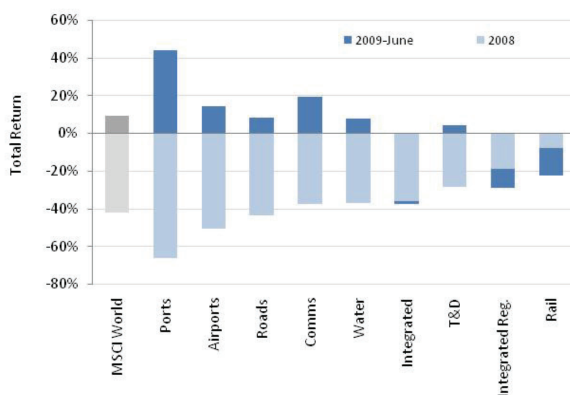
© PortfolioConstruction Conference 2009.

- Airports - low cost carrier collapses, 20% decline in premium travellers, travel warnings for swine flu
- Roads - declines in heavy vehicle traffic and high level of sector gearing
- Integrated utilities - industrial electricity loads down 20%-30%

These fears proved to be overstated and many transport infrastructure stocks rebounded from their February 2009 lows as shown in Figure 6. This period presented a unique opportunity for active managers that were prepared to reposition portfolios out of defensives into undervalued growth infrastructure. Despite the rebound, many listed infrastructure stocks still trade below fundamental value. Airports are a good example with Frankfurt, Paris, Vienna and Zurich trading around book value in June 2009, though would be almost impossible to re-build at historic cost. Airline slots are scarce and consolidation has reduced the risks of the main carrier. Airport revenues have been diversified towards retail and property income, often with minimum guarantees. Operating margins are higher and labour more flexible as many airports have disposed of unionised operations like ground handling and security. Airports are an example of market volatility creating some rare investment opportunities.

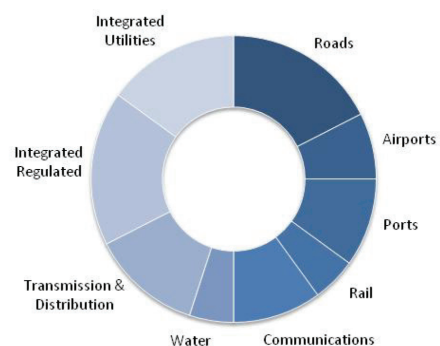
The relative performance outcomes outlined above highlight the significant potential for a skilled active manager to outperform a passive approach through the cycle. Compared to a market-cap weighted approach, the recommended portfolio outlined below reweights away from integrated utilities towards regulated utilities (aim to reduce risk), roads and communications (aim to improve returns), and airports, ports, rails (tactical value). Using sub-sector returns from the UBS Global Infrastructure & Utilities Index over the 15 year period, the recommended portfolio would deliver 11.6% per annum versus 9.1% for the passive, market-cap weighted benchmark.

Figure 6: Total Returns for 2008/09



Source: UBS Global Infrastructure Indices, Bloomberg, USD

Figure 7: Recommended Portfolio



Source: CFS GAM

© PortfolioConstruction Conference 2009.

Conclusion

Infrastructure is a general term for a broad range of real assets. The combination can deliver good risk-adjusted returns compared to equities but investors need to actively monitor risk and return opportunities through the cycle. A portfolio that balances "income" and "growth" infrastructure should outperform over the long-term. Relative performances during 2008/09 highlight the potential for a skilled active manager to outperform a passive approach when markets over-react.

© PortfolioConstruction Conference 2009.