

# THE GREATEST INVESTMENT THEME OF OUR LIVES?

How global listed infrastructure can provide  
the potential for stable, reliable and growing cashflows

MAY 2016



## IN THIS PAPER:

### The greatest investment theme of our lives

In this section we look at the growth drivers for listed infrastructure, and examine the infrastructure investment needs across key sectors and regions.

### Governments can't do it all

The state of many government balance sheets is precarious. With a greater focus on reducing expenditure, it is inevitable that the private sector will need to play a key role undertaking infrastructure investment.

### Frameworks to encourage private investment

Proactive governments and regulators often provide attractive and stable return frameworks to encourage greater and more efficient investment by the private sector.

### Manageable risks

Contracts and regulation minimise the various risks to cash flows. We look at the exposure of global listed infrastructure companies to interest rates, inflation, oil prices and demand.

### Not all global listed infrastructure is the same

It's important to understand the underlying exposures of different infrastructure investments, the nature of their cash flows and risks to return.

### Allocating to global listed infrastructure

The investment characteristics proving increasingly attractive to retail and institutional investors alike. Allocations, however, remain low but we expect them to rise in the years ahead.

3 The cash flow characteristics of global listed infrastructure companies are what differentiate the asset class from its peers. These companies are the owners and operators of assets such as electricity transmission and distribution grids, oil and gas pipelines, water pipeline networks, communications infrastructure, airports, toll roads and ports. The unique nature of their cash flows result from the essential services provided by infrastructure projects, their strong monopolistic characteristics, long life, stable regulatory or contract frameworks, and a degree of protection from macroeconomic risks, such as inflation.

6 In this paper we discuss the attributes of the asset class, focussing mainly on the cash generated by the underlying assets, and how this can provide investors with stable, reliable and growing income. These dynamics have led to the emergence of an asset class which has exhibited strong growth over the last decade, but which is still only in its early stages of development.

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### Unique cash flow characteristics

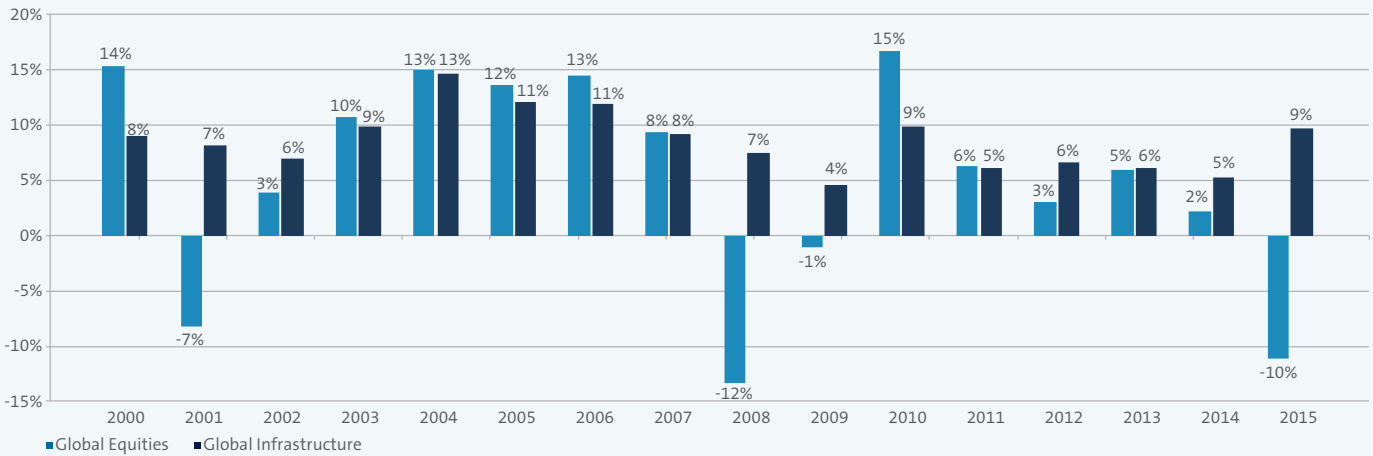
The inherent necessity for essential services provided by infrastructure assets is fundamental to the sustainable cash flow streams they generate. It is these characteristics that provide all global listed infrastructure companies with a common trait despite being allocated to diverse global equity sectors, such as energy, utilities, industrials and telecommunications. The stability of the cash flows allows for reliable dividends to be paid that grow at attractive rates, often above the level of inflation.

> The assets owned by global listed infrastructure companies benefit from long-term contracts or regulation that deliver a visible and stable stream of cash flows.

> The cash flows, in turn, provide for an attractive and reliable level of dividends as well as the potential for further investment in the asset base, according to the returns set by regulation or negotiated in long-term contracts.

> In recent years the global infrastructure investment requirement has been steadily increasing. Yet governments, the traditional providers of infrastructure, have been more focused on reducing expenditure. Therefore, the private sector has increased its share of investments, usually encouraged by attractive return frameworks from government. These are positive dynamics for growing cash flows.

### Cash flow (EBITDA) growth through cycle

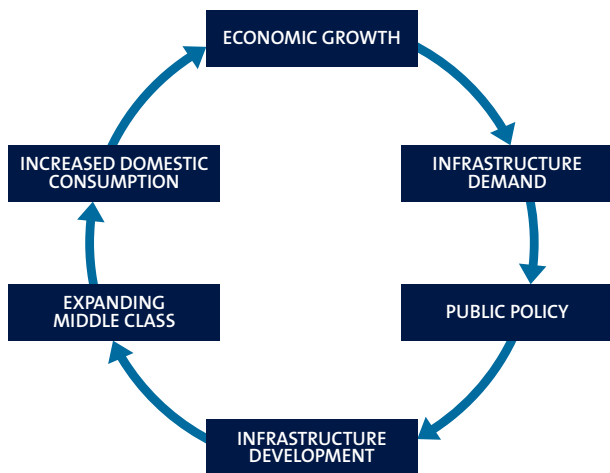


Past performance is not a reliable indicator of future performance  
Source: AMP Capital Research, Bloomberg, Merrill Lynch Global Quantitative Strategy as at 31 December 2015

## THE GREATEST INVESTMENT THEME OF OUR LIVES

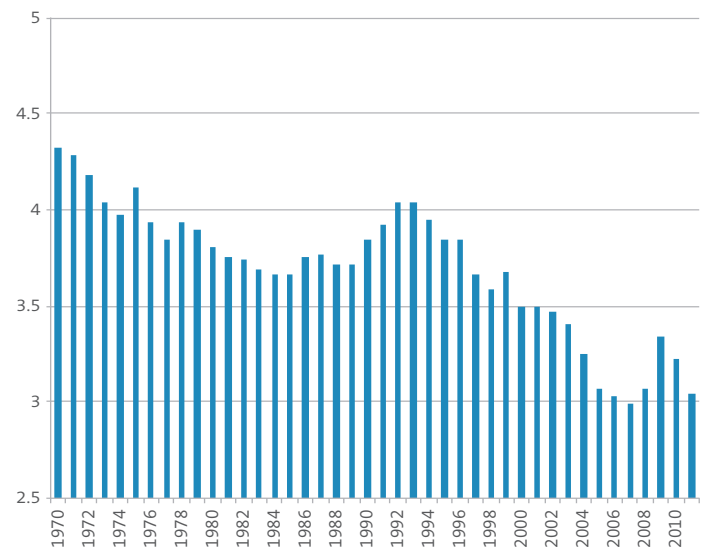
The need for infrastructure investment is a never ending cycle. Investment in infrastructure helps stimulate sustainable long-term economic growth which then creates a further need for infrastructure.<sup>1</sup> Ultimately, infrastructure promotes higher living standards as it fosters economic growth and creates jobs. The World Economic Forum estimates that every dollar spent on infrastructure generates an economic return of between 5 to 25%.<sup>2</sup> Infrastructure is the backbone for economies to develop and remain competitive.

Infrastructure is the backbone for economies to develop and remain competitive



The future growth in infrastructure will not only be driven by the need for new infrastructure, particularly in developing economies, but also to replace existing ageing infrastructure, perhaps first constructed decades ago in developed economies. Since the 1970s, real public infrastructure investment in advanced economies has been falling as a percentage of GDP, as demonstrated in the chart below. This has left many infrastructure projects deferred and even abandoned, ultimately magnifying the infrastructure gap that is only expected to widen going forward.

### Real public investment (% of GDP, advanced economies)



Source: OECD

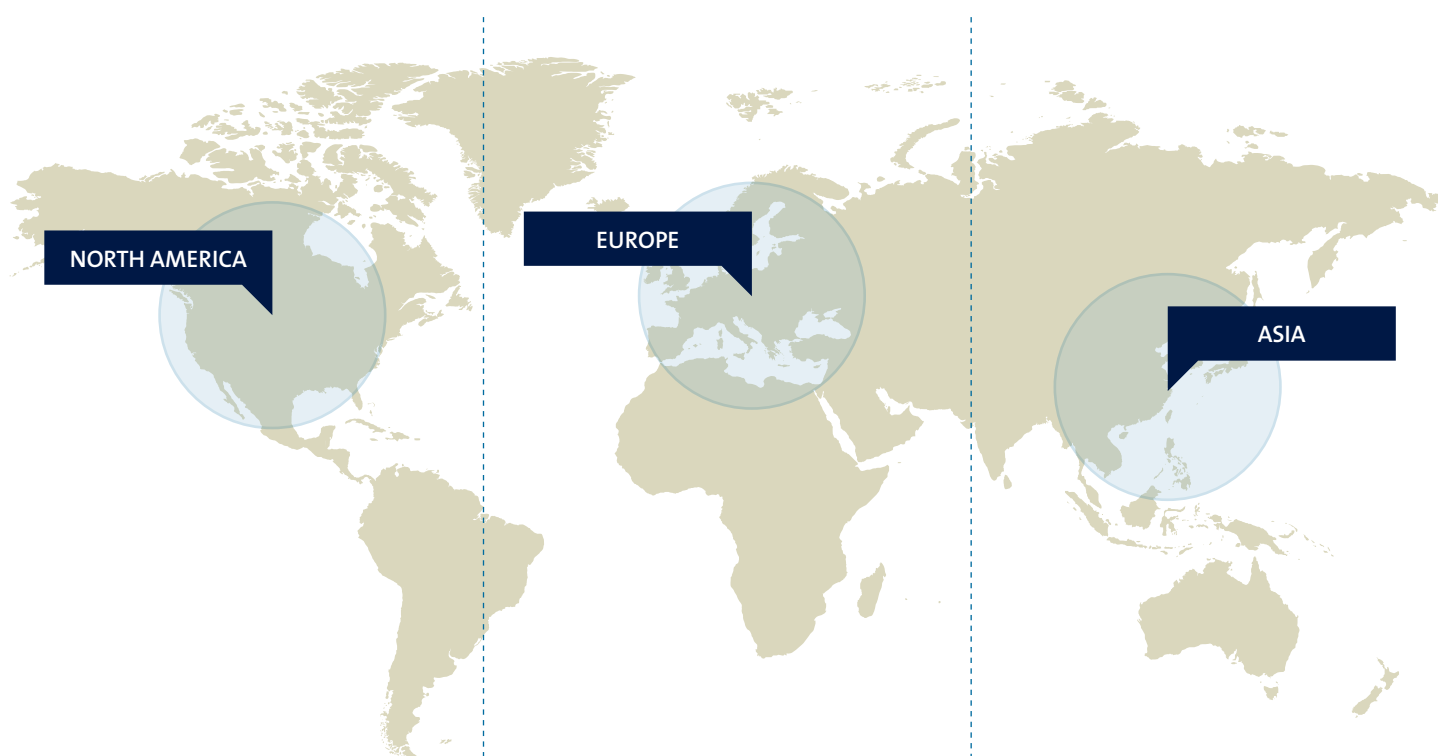
## HOW MUCH INFRASTRUCTURE IS NEEDED?

Many consultants have completed extensive research into global infrastructure investment needs, demonstrating the significant amount required.

- > The OECD, estimate that total cumulative infrastructure requirements for transport, communication, energy and water will be more than US\$70 trillion between 2007 and 2030<sup>3</sup>
- > McKinsey forecasts that a US\$57 trillion investment is required on core infrastructure alone between 2012 and 2030, just to keep up with GDP Growth<sup>4</sup>

> In 2014 Price Waterhouse Coopers forecasted that current global infrastructure investment would need to increase from US\$4 trillion per annum to US\$9 trillion by 2025 for all infrastructure sectors. Overall, this amounts to a US\$78 trillion global investment bill for the next two decades<sup>5</sup>

## REGIONAL INFRASTRUCTURE INVESTMENT



### NORTH AMERICA

America's public infrastructure spending is, for example, at a 20-year low, even with the American Society of Civil Engineers (ASCE) rating their infrastructure on average as poor.<sup>6</sup> ASCE estimates America needs US\$3.6 trillion in infrastructure investing between now and 2020 to reach an adequate standard of infrastructure.<sup>7</sup> However, this would require an additional US\$1.6 trillion of funding than currently committed.

### EUROPE

The European Commission (2014) estimated that between 2013 and 2020, infrastructure investment needed for transport, energy and communication in Europe amounts to over EUR€ 1 trillion.<sup>8</sup> However, during the financial crisis investment fell sharply and has remained weak since. In 2015, the European Commission launched an Investment Plan for Europe to unlock EUR€ 315 billion of investments over the next three years. This will mobilise additional investments in the real economy in areas including infrastructure, renewable energy, and energy efficiency.<sup>9</sup>

### ASIA

The Asian Development Bank forecasts demand for infrastructure investment to be US\$730 billion per annum for the next decade. McKinsey forecasts that 70% needs to be invested in transport and energy assets.<sup>10</sup> For example, India will require over US\$1 trillion of investment in infrastructure over the next five years, as their current inadequate transport, energy and water infrastructure is preventing their economy from growing at a greater pace.<sup>11</sup>

## THE NEED FOR INFRASTRUCTURE INVESTMENT IS DOMINATED BY THE CORE INDUSTRY SECTORS

The huge need for infrastructure investment is across all geographies - both in the developed and developing worlds. It also transcends all infrastructure sectors but is dominated by the four core sectors of transport, energy, water and communications. The requirement is so great it raises the question of whether governments can recover their proportion of spending, with so many other demands on their finances. And if they can't, who, will cover the shortfall?

## WATER

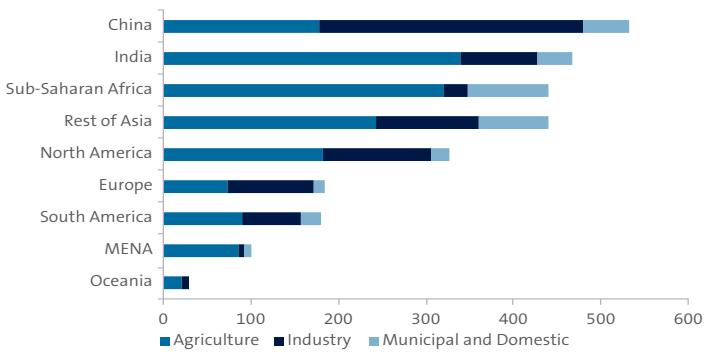
### Demand is expected to exceed supply

An expanding human population, coupled with unpredictable global water distribution, makes the ability to store and efficiently deliver a reliable water supply imperative. Around 70-80% of available water is currently used for agriculture. This will be exacerbated as developing economies, such as China, increase their demand for meat with an associated increase in water demand. As an example, it takes 957 gallons of water to create a single Big Mac!

The OECD forecast water demand to increase by 55% between 2000 to 2050, which will be primarily driven by demand from manufacturing, electricity and domestic use. A majority of this demand will stem from the Asia Pacific region.<sup>12</sup>

The majority of demand is driven by the Asia Pacific region. The following chart shows the expected increase in global water demand by 2030 - Asia Pacific is estimated to account for over 50% of global demand. This represents an investment of US\$130 billion to be spent in building water supply infrastructure and improving sanitation in this region, according to the Asian Development Bank.

### Global water demand by 2030 (cubic meters, billions)



Source: 2030 Water Resources Group, 2009

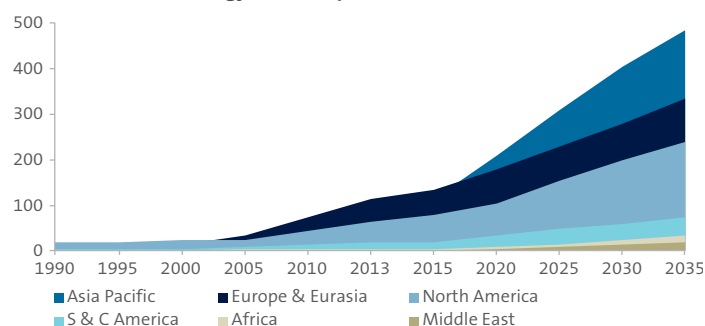
## ENERGY

### Investments in energy efficiency will be important

The production and supply of energy will become increasingly important in enabling and maintaining global economic growth. The International Energy Agency (IEA) forecasts the world energy sector investment to total US\$6-8 trillion from 2015 to 2040, of which 32% will be spent on end-use efficiency.<sup>13</sup>

The drivers of this investment are many and varied. The sources of energy continue to evolve, not just from fossil-fuel to renewables, but also the changing dynamics of particular resources. In the United Kingdom, for example, as the North Sea gas resource becomes depleted, replacement volumes are being sourced from pipelines to Continental Europe and LNG. Connecting these new and changing resources as well as reinforcing existing networks to cope with different supply and demand dynamics requires significant investment. BP forecasts that renewable consumption will more than double between now and 2035.

### Total renewable energy consumption



Source: BP, 2015. Million tonnes oil equivalent. Renewables include wind power, solar electricity and other renewables.

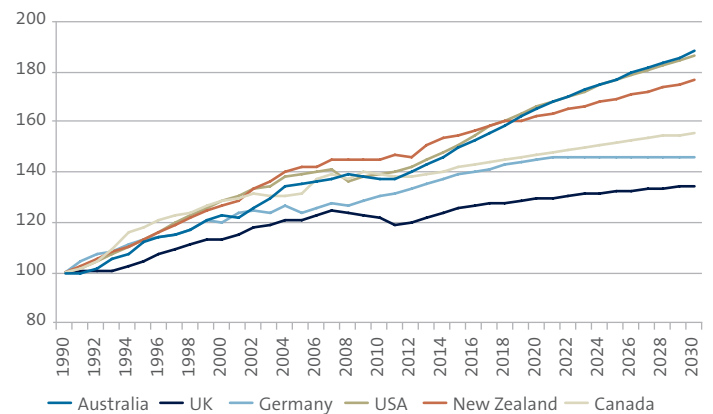
## TRANSPORT

### Many forms of transport are set to double or triple in demand

The OECD believes GDP could double by 2030, which could result in airline traffic growing by 4.7% per annum, with rail and freight traffic rising by 2-3% per annum between now and 2030. Many forms of transportation are set to double or triple in demand over the next two decades, yet current capacity levels will only meet a small proportion of this demand, with capacity only able to rise by 50%.

In India, the Council on Foreign Relations disclosed that only half of their roads are paved, and less than a quarter of their highways meet required standards, even though this is the main means of freight transport for the country,<sup>11</sup> while the Australian Government has made commitments over A\$50 billion for current and future infrastructure investments, including funding for land transport projects, such as the Investment Road and Rail Programme, and the Road for Recovery Programme.<sup>14</sup>

### Vehicle distance travelled, rebased (kms)



Source: BITRE, 2012

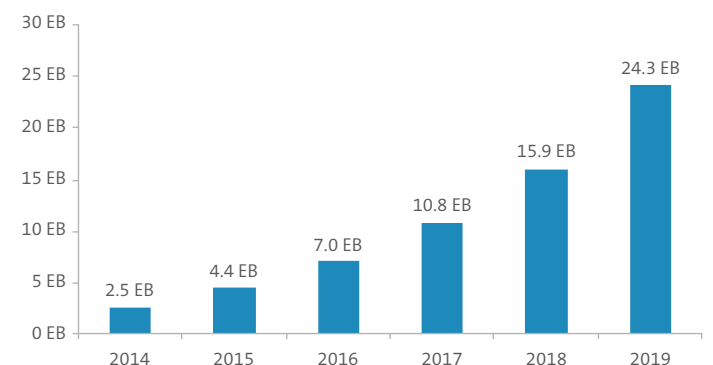
## COMMUNICATION

### Global mobile traffic is expected to rise nearly 10-fold between 2014 and 2019

Communication infrastructure has rapidly advanced over the past decades, and whilst many countries have upgraded their infrastructure, the rapid pace in which technology is advancing means countries will continually need to invest to stay globally competitive. For example, McKinsey forecasts US\$9.5 trillion is needed in telecom infrastructure investment between 2013 and 2030.<sup>4</sup>

A large portion of the investment is needed in communication towers, to allow for a functioning modern economy, as it facilitates the global transition of mobile communications from voice and basic data to high-speed broadband. The chart below demonstrates the huge rise in global mobile data traffic - it is expected to increase nearly 10-fold between 2014 and 2019!

### Global mobile data traffic growth (exabytes per month)



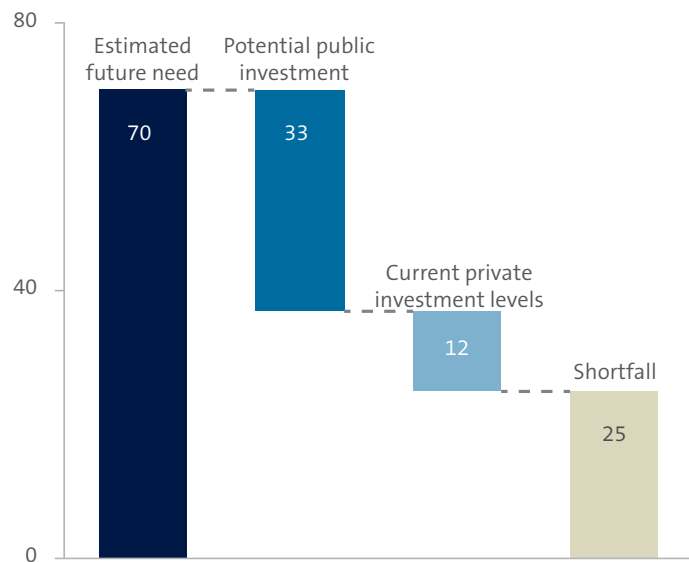
Source: CISCO, 2015.

## GOVERNMENTS CAN'T DO IT ALL

Governments have traditionally been the providers of a nation's infrastructure investment. Most of this has been financed by a combination of tax revenues and tax revenue-backed debt. However, since the financial crisis, government finances have come under considerable stress due to lower tax revenues and increasing expenditures. This has resulted in many embarking on austerity measures aimed at reducing spending. With only minimal success to date, and further structural pressures on government finances in the developed world from their ageing populations, the ability of governments to maintain their role as the primary provider of infrastructure will weaken.

The dynamics of a greater investment need and the financial constraints governments now face led the B20 Infrastructure & Investment Taskforce to identify that an infrastructure shortfall of US\$25 trillion would accumulate by 2030. That is, of the OECD's estimated US\$70 trillion investment requirement, only US\$45 trillion would be spent. This already includes a sizeable participation from the private sector. The shortfall highlights the challenge facing governments in sourcing additional funding at a time when many are already running budget deficits. Further involvement of the private sector in the provision of infrastructure is therefore inevitable.

### Shortfall in infrastructure capacity expected by 2030 (US\$ billions)

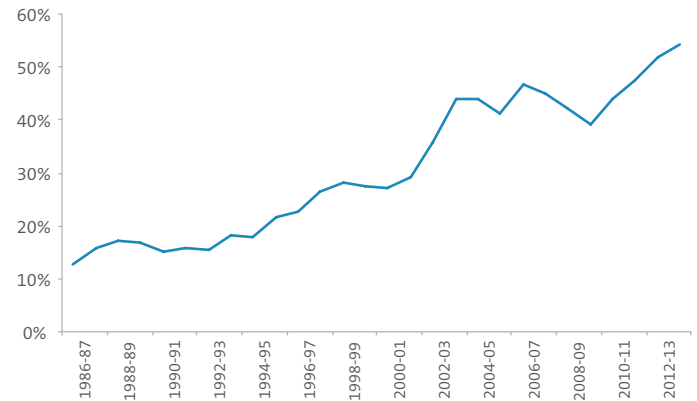


Source: b20 Australia.info & OECD

## FRAMEWORKS TO ENCOURAGE PRIVATE INVESTMENT

Different governments are at various stages of the continuum of involving the private sector in providing their infrastructure, and the model varies greatly from country to country. Those who are most advanced, such as the UK and Australia, recognise that private sector infrastructure companies value transparency, certainty and the ability to manage risks in the regulatory frameworks or contracts.

### Private sector share of infrastructure investment in Australia

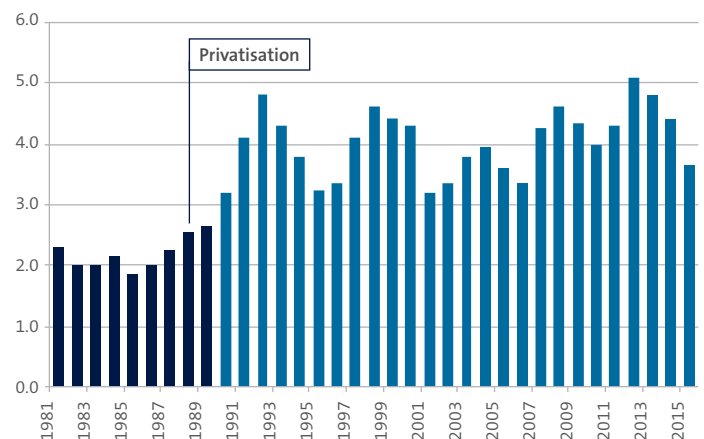


Source: ABS and BCA

Financial models have been developed in these countries to best share risk between the public and private sectors, evident in structures like public private partnerships and frameworks for privatisations. Governments are aware that maintaining regulatory and contract frameworks that provide stable, reliable cash flows that grow, over the long-term, contribute to lowering the risk premium for a nation and their investments. The long-term stability is critical considering that the expected useful lives of these assets can be 30-40 years or longer, and will therefore outlast a number of different governments.

Governments also recognise that capital markets are competitive, and for new capital to undertake the required investment, an attractive return framework needs to be provided. It has not been uncommon for regulators to offer incentives above a base level return, either implicitly or explicitly, so that global listed infrastructure companies undertake specific strategic investments, which the government would otherwise not have been able to complete. This effective competition for capital has been increasingly evident as more and more governments look to involve the private sector in the provision of their infrastructure and we expect this will continue to grow going forward.

### Investment in the UK water industry (GBP £trillions)



Source: OFWAT

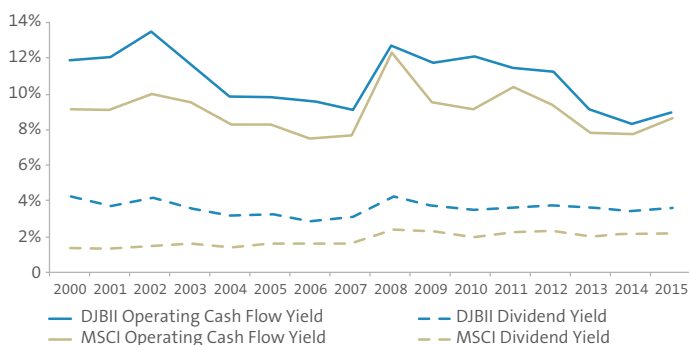


## A STRUCTURAL GROWTH STORY

These conditions are the basis for a structural growth story for global listed infrastructure companies. As cost recovery is either implicit or explicit in the regulatory frameworks and/or contracts, the rate of return and the size of the investment will therefore determine the rate of cash flow growth. The infrastructure requirement is massive, as discussed previously, and with attractive returns and supportive frameworks we expect continued stable, reliable, cash flow growth from global listed infrastructure companies of 7-9% over the medium to long-term.

The cash flow generation from continued investment by global listed infrastructure companies has been sufficient to reward investors with an attractive dividend yield and fund their future growth. This is shown by the coverage of cash flow yields to dividend yields for global listed infrastructure companies, suggesting that should a particular company not see attractive returns for further investments, significant potential exists to increase dividends. These dynamics also compare favourably to global equities. Not only is the dividend yield more appealing for global listed infrastructure but the growth opportunities are considerable. Anecdotal reports suggest global equity companies are hoarding cash due to their perceived limited investment opportunities in what has become a low economic growth world. Further, the cash flow growth from global listed infrastructure companies is arguably more stable and reliable.

### Global listed infrastructure and global equities cash flow yields



Source: AMP Capital & Bloomberg, Dow Jones Brookfield Global Infrastructure Index and MSCI

## MANAGEABLE RISKS

Although global listed infrastructure companies will go to great lengths to manage risks they might be exposed to through their regulatory framework or contract, no investment is completely without risk. Some of these risks include inflation, interest rates, economic growth and subsequently volume, commodity price risk, and industry dynamics such as competition. Management of these risks contributes to the stability and reliability of the cash flow stream and an environment in which investments can be undertaken to realise further growth in the cash flows.

Governments and regulators are complicit in reducing these risks with the expectation that lower risks result in investments being undertaken at a lower rate of return. This could mean a lower final tariff for the consumer or a higher selling price if the asset is being sold (or leased) to the private sector. A lower return is not necessarily a bad thing for global listed infrastructure companies provided it is more than offset by the reduction in risk, and that it maintains attractive risk adjusted returns to promote continued investing. Another function of reducing these risks is that it allows the global listed infrastructure company to focus more on the operations of the asset and to provide a higher quality of service to consumers/users.

Global listed infrastructure companies are focused on reducing their exposure to many of the risks mentioned above, but particularly interest rates, inflation, commodity prices and volume. In addition to improving the stability, reliability and growth of the cash flows, it has also proven to lead to greater risk-adjusted returns as reflected by share price performance.

## INTEREST RATES

### Severn Trent (water)



Most regulatory frameworks allow for explicit or implicit pass through of interest expense via the cost of debt in the allowed cost of capital. In the RAB-based approach adopted by OFWAT, the UK water regulator, for companies such as Severn Trent, this is achieved by updating the cost of debt assumption every five years. This may be higher or lower depending on the prevailing interest rate environment. The regulator does this using current market inputs with an outlook to the next five years of the regulatory period.

Once the allowed cost of capital has been determined the company is free to set their own capital structure in order to outperform the regulator's assumptions. As the regulator provides such certainty through the stability, reliability and growth path for cash flows, it is not uncommon for Severn Trent and its peers to achieve a cost of debt materially lower than that set by the regulator. This, in turn, benefits shareholders.

## INFLATION

### Transurban (transportation)



The limited sensitivity to inflation is a characteristic commonly associated with global listed infrastructure companies. A level of protection from inflation is generally the case, but it is important to understand the nuances in different regulatory and contract frameworks, and critically, those that don't include the pass through.

Transurban is a good example of the inflation pass through mechanism. Each of their 10 Australian toll roads located in Melbourne, Sydney and Brisbane see their tolls increased annually with inflation. However, the rate of inflation used and increment of the increase differs from road to road. This has varying impacts on the cash flows, albeit these are minimal in a diversified portfolio. The effect of these contract terms is that almost 100% of the cash flows from the Australian operations are protected from rises in inflation.

## OIL PRICES

### Enbridge (energy)



Operating in the energy industry often involves handling commodities as part of the day-to-day business. However for the owners and operators of much of the energy infrastructure the exposure of their cash flows to the volatile trading activity of oil, gas, and the many derived products is very limited.

Enbridge is a Canadian company that operates the world's longest and most sophisticated crude oil and liquids transportation system, with 46,670 km of pipeline in the Canada and the US. It also owns almost 3,000 km of gas transmission pipeline, is the largest gas distributor in Canada and has over 1,800 wind, solar and geothermal power capacity.

The majority of Enbridge's cash flows are sourced from long-term contracts, from 20 to 40 years, whilst others are backed by regulation. Therefore, despite the diverse nature of the US\$85 billion of assets, almost US\$4 billion of EBITDA is generated, of which less than 5% has any direct exposure to commodity prices.

## VOLUME

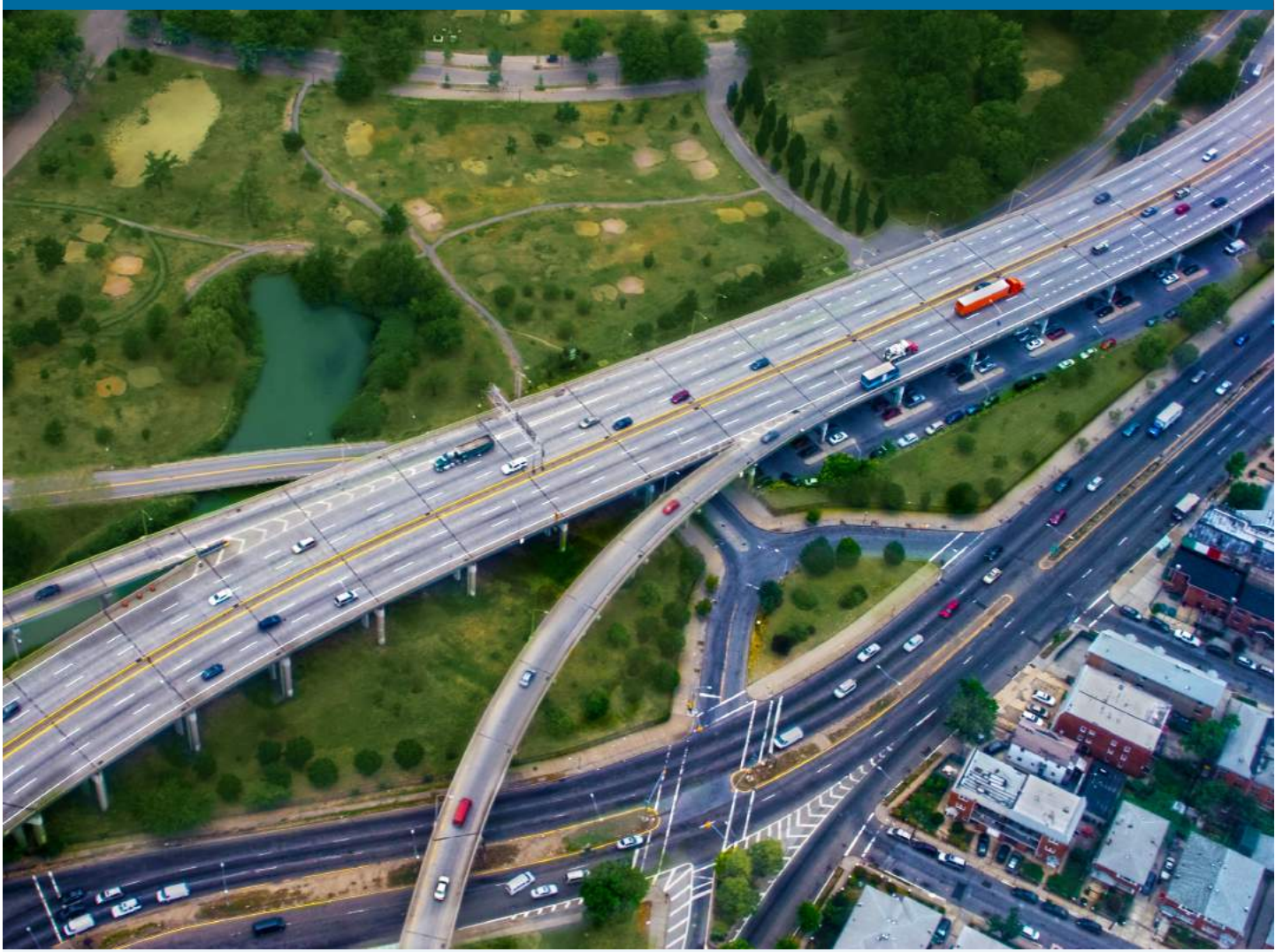
### American Tower (communications)



Exposure to volume risks varies depending on the nature of the infrastructure. Generally, the stronger the monopolistic characteristics the less exposure the cash flows will have to changes in volume. However, even for those infrastructure assets with exposure to volume, the elasticity of demand is often quite low due to the essential nature of the service that is being provided.

Communications infrastructure, often protected by high barriers to entry and providing a very essential service, has limited exposure to volume risk. American Tower is an owner and operator of more than 143,000 wireless and broadcast towers on five continents. Space on their towers is leased to telcos and broadcasters for periods of 10 years with no exposure to the amount of usage. Therefore, should demand for a particular service fall in a period the cash flows of American Tower would be unaffected.

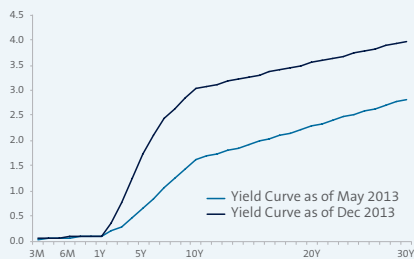




## IMPACT OF RISING RATES ON GLOBAL LISTED INFRASTRUCTURE SHARE PRICES

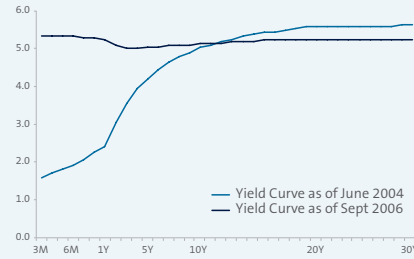
Our research has shown that different interest rate environments will have different effects on the share price performance of the global listed infrastructure company. This is dependent on the reason for the rate increases and which part of the interest rate curve is increasing. Generally, despite the limited sensitivity of cash flows to interest rates that the companies display, rising long-term rates will result in weak global listed infrastructure share price performance and underperformance relative to global equities. However, the share price sensitivity of the asset class to interest rates needs to be understood in conjunction with the economic environment and the evolution of the yield curve. In an environment where the yield curve flattens, which is the current expectation at AMP Capital, our research found that global listed infrastructure companies, particularly ‘core and pure’ companies, outperform global equities. The types of companies that were shown to perform well included those in the energy (particularly pipelines) and communications sectors. This is largely due to the perception of these companies as ‘defensive growth’. In an environment where the yield curve flattens, economic growth expectations may remain largely unchanged to which the cash flows of these companies aren’t exposed. Inflation, on the other hand, may be rising which is generally ‘passed through’ to cash flows.

### Steepening scenario



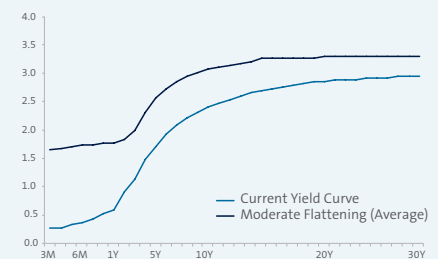
	Absolute (%)	Relative (%)
Global Equities	8.3	-
Global Listed Infrastructure	6.8	-1.5

### Flattening scenario



	Absolute (%)	Relative (%)
Global Equities	1.6	-
Global Listed Infrastructure	7.4	+5.8

### Moderate flattening (average) scenario

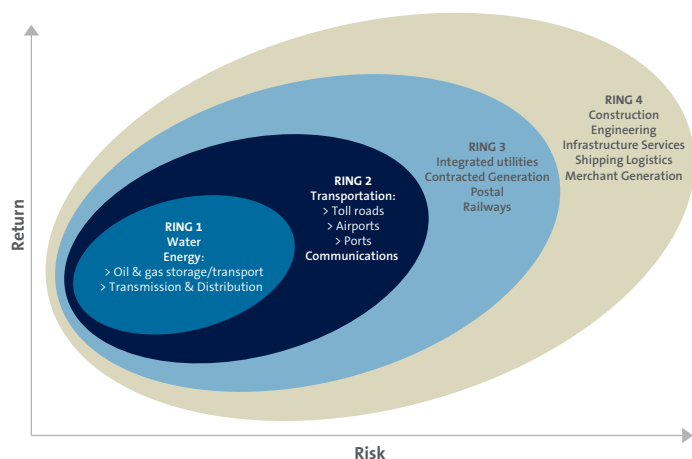


	Absolute (%)	Relative (%)
Global Equities	4.3	-
Global Listed Infrastructure	6.3	+2.0

Source: Bloomberg & AMP Capital

## NOT ALL GLOBAL LISTED INFRASTRUCTURE IS THE SAME

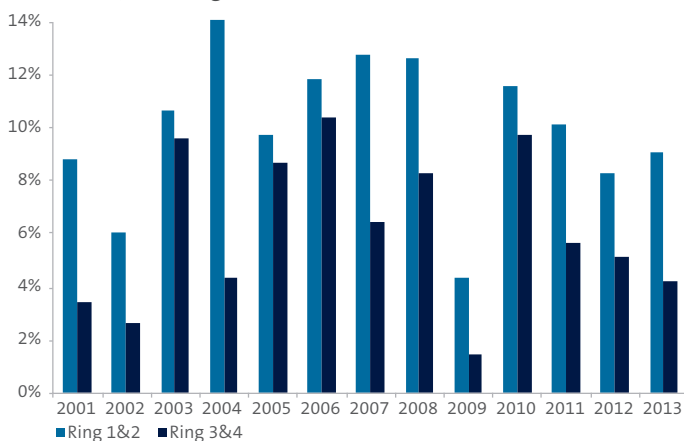
A global listed infrastructure company's exposure to different risks can vary greatly from one asset to the next. Therefore, it is imperative to understand the underlying exposures of an infrastructure investment and the risks that the cash flows generated by the companies' assets might be exposed to. Despite the growth seen in recent years, global listed infrastructure is still a relatively new asset class without a widespread definition. The broadest definitions include companies who own a diverse range of assets, whose cash flows are exposed to varying risks, many of which would not normally be associated with an infrastructure investment. The diagram below illustrates all the major sectors across the infrastructure universe, all of which have been allocated to a ring based on the risk and return characteristics of their activities and cash flows.



Source: AMP Capital

At AMP Capital, we take a 'core and pure' approach to defining the global listed infrastructure universe and only focus on the companies shown in rings 1 and 2. The cash flows generated by the companies in these rings are exposed to fewer risks than companies in rings 3 and 4 and we have found they generally produce greater risk adjusted returns. These companies typically have lower sensitivity to economic cycles, commodity prices, volume and competition risk as well as limited greenfield risk. This, in turn, can provide greater cash flow stability. There is greater visibility of the cash flows from a high degree of regulation and/or long-term contracts, supporting the reliability of the cash flow stream. Core and pure global listed infrastructure companies have also been exposed to significant growth drivers in recent years with a huge backlog of investment requirements leading to, and continuing to lead to, greater cash flow growth.

### Cash flow (EBITDA) growth



Source: AMP Capital, Bloomberg

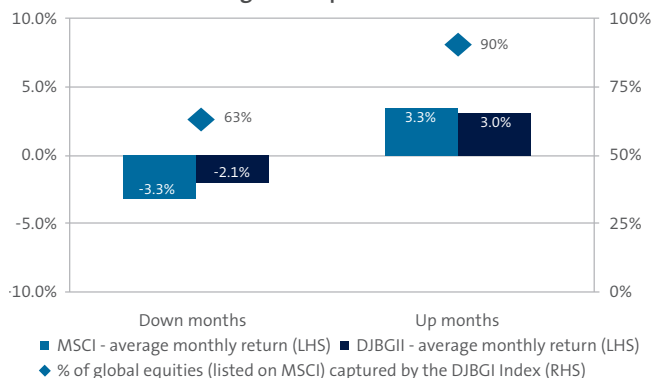
## ALLOCATING TO GLOBAL LISTED INFRASTRUCTURE

Investors have been increasingly recognising the benefits of global listed infrastructure and its stable, reliable and growing cash flows. In addition, global listed infrastructure also displays complementary attributes to other asset classes in a balanced portfolio. It can play the role of a low risk bedrock within a global equities allocation. It may be a low risk alternative for fixed income investments, and it can quickly increase a real asset exposure due its liquidity. With such unique investment characteristics, built on the stable, reliable and growing cash flows, global listed infrastructure can play a number of roles in a balanced portfolio and we believe it should be a key consideration for every investor.

### Diversifying from existing global equities

In addition to the higher risk-adjusted returns than global equities, global listed infrastructure also offers appealing diversification qualities compared to the broader market. The essential service nature of global listed infrastructure companies' activities and their stable, reliable and growing cash flows, means that capital preservation is another notable characteristic. This can be seen through the upside and downside capture displayed relative to global equities, the relatively good performance in up markets, and the relatively more defensive performance in down months.

### A lower correlation to global equities in down markets

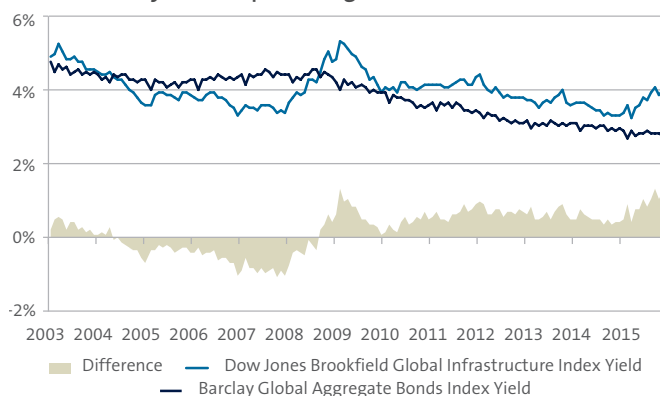


Source: AMP Capital, Bloomberg, Dow Jones, MSCI World. Data from 31 December 2002 to 31 December 2015. The graph depicts average monthly returns derived from months that delivered a negative/positive return.

### Enhancing yield from fixed income

Regulatory and contract frameworks provide for significant cash flow generation from the underlying assets. While an amount of this cash flow will be reinvested, due to the demanding investment requirements, there is still ample opportunity for global listed infrastructure companies to pay attractive dividends to their shareholders. The level of these dividends, the yield, currently compares favourably to bonds, as well as to global equities. In addition, the dividends are seeing good growth – often well above inflation – from the cash flow growth that comes from companies continuing to invest and earning returns above their cost of capital.

### Fixed income yield compared to global listed infrastructure

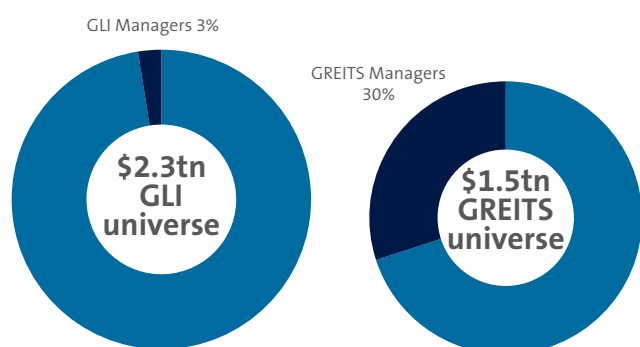


Source: AMP Capital, Preqin, Bloomberg as at 31 December 2014

## Complementary to property

Allocations to global listed infrastructure are still low by comparable standards. Approximately 3% of the core and pure infrastructure universe is owned by dedicated global listed infrastructure fund managers, as opposed to the 30% of the global real estate investment trust (REIT) universe which is owned by their dedicated fund managers. This represents significant scope for further development of the asset class, as well as opportunities for active fund management to create value. In fact, we believe that global listed infrastructure is currently where GREITs were 20 years ago with considerable potential for further growth and evolution of the asset class.

### Comparing dedicated ownership of global listed infrastructure and GREITs

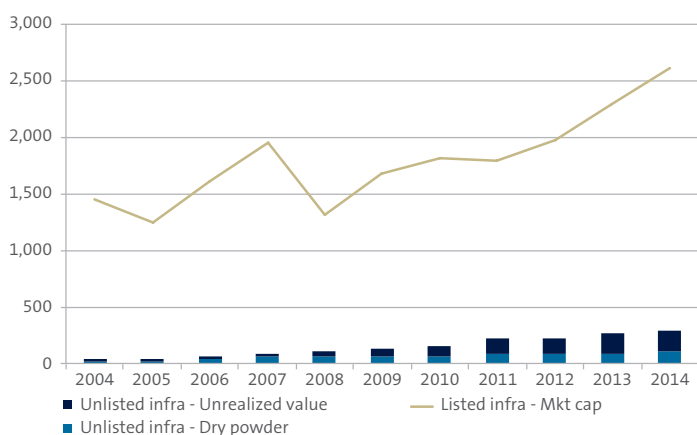


Source: AMP Capital, Bloomberg, Consilia Capital as at 31 December 2015

## A liquid alternative to direct infrastructure

The increased interest in infrastructure, both direct and listed, has resulted in unprecedented levels of capital waiting to be allocated by direct fund managers. There exists US\$105 billion<sup>15</sup> of cash waiting to be invested in direct infrastructure assets, while the current size of the direct infrastructure market is only \$305 billion.<sup>16</sup> In comparison, the more diverse listed infrastructure markets now total over \$2,300 billion, and as they are liquid funds, they can be deployed immediately. Considering the underlying assets are essentially the same and the expectation that over the long-term returns should be very similar, listed infrastructure is an attractive proposition for an infrastructure allocation due to the speed at which this money can be invested.

### A large and diverse opportunity (US\$billions)



Source: AMP Capital, Preqin, Bloomberg as at 31 December 2014

A recent study undertaken by Consilia Capital also highlighted the complementary nature of allocating to both the direct and listed infrastructure asset classes. A good example of this is The Future Fund in Australia which disclosed that as at 30 June 2015, 7.5% or A\$8.7 billion of the fund was exposed to infrastructure and timberland and 29% of this was invested in listed infrastructure. This is a trend we expect to continue around the world as investors increasingly realise the benefits of listed infrastructure within the broader infrastructure asset class. This relates specifically to liquidity and diversification. In fact, it has been common in recent years to see direct infrastructure funds buying assets from the listed market due to the more attractive valuations and greater opportunity set.

Valuation opportunities vary across the global listed infrastructure universe due to the diverse nature of the assets, as well as growth drivers and risks. This, in turn, creates additional advantages for active management. Through a better understanding of the risks, and by diversifying across many regions and sectors, investors can hope to achieve better returns with lower risks. In addition, as it is an immature asset class, it creates greater potential benefits for active management. This is potentially due to greater price discrepancies and undiscovered quality companies within the market.

## CONCLUSION

The world is currently faced with a huge infrastructure investment requirement to maintain the current level of services and activity, but also to provide for future growth. The likelihood of the public sector maintaining their traditional role as the provider of this investment is low with their currently limited funding capacity. Governments that have greater awareness of this situation have recognised the predicament and now encourage investment by the private sector through attractive regulation and contract frameworks. Minimising the risks to cash flows in these structures provide greater stability and reliability in the returns from which the companies can pay dividends or continue investing. As a result of the considerable global investment requirements global listed infrastructure companies are likely to see strong growth for decades to come.

Stable, reliable, growing cash flows are unique characteristics to the global listed infrastructure asset class and contribute to attractive risk-adjusted returns. However, recognition of these attributes is still low and the asset class remains at the early stages of its development suggesting today is an ideal time to make an allocation to global listed infrastructure.

1. Australian Government, 2015. Department of Infrastructure and Regional development. [www.infrastructure.gov.au/infrastructure/](http://www.infrastructure.gov.au/infrastructure/)
2. World Economic Forum, 2012. Strategic Infrastructure.
3. OECD, 2007. Infrastructure to 2030: Mapping Policy for Electricity, Water and Transport.
4. McKinsey Global Institute, 2013. Infrastructure Productivity: How to save \$1 trillion a year. [www.mckinsey.com/insights/engineering\\_construction/infrastructure\\_productivity](http://www.mckinsey.com/insights/engineering_construction/infrastructure_productivity)
5. PwC, 2014. Capital Project and Infrastructure Spending
6. The Economist, 2014. The Trillion-Dollar Gap. [www.economist.com/news/leaders/21599358-how-get-more-worlds-savings-pay-new-roads-airports-and-electricity](http://www.economist.com/news/leaders/21599358-how-get-more-worlds-savings-pay-new-roads-airports-and-electricity)
7. American Society of Civil Engineers, 2013. Grade Sheet: America's Infrastructure Investment Needs. [www.infrastructurereportcard.org/a/#p/grade-sheet/americas-infrastructure-investment-needs](http://www.infrastructurereportcard.org/a/#p/grade-sheet/americas-infrastructure-investment-needs)
8. European Investment Bank, 2013. Private Infrastructure Finance and Investment in Europe.
9. European Commission, 2015. A Boost for Investment in Europe.
10. McKinsey, 2012. Asia's \$1 Trillion Infrastructure Opportunity. [www.mckinsey.com/insights/financial\\_services/asias\\_1\\_trillion\\_infrastructure\\_opportunity](http://www.mckinsey.com/insights/financial_services/asias_1_trillion_infrastructure_opportunity)
11. Council on Foreign Relations, 2014. Governance in India: Infrastructure. [www.cfr.org/india/governance-india-infrastructure/p32638](http://www.cfr.org/india/governance-india-infrastructure/p32638)
12. OECD, 2012. Environmental Outlook to 2050
13. IEA Energy Outlook, 2015. World Energy Investment Outlook 2015 Factsheet.
14. Australian Government, 2016. Department of Infrastructure and Regional Development. <http://investment.infrastructure.gov.au/>
15. Preqin, 2015. The 2015 Preqin Global Infrastructure Report.
16. Tower Watson, 2014. Global Alternative Survey 2014.

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