

AMP Capital Investors

Infrastructure Research Report

December 2010 - Global Medium-Term Outlook for Infrastructure Investment



Important note: While every care has been taken in the preparation of this document, AMP Capital Investors Limited (ABN 59 001 777 591) (AFSL 232497) makes no representation or warranty as to the accuracy or completeness of any statement in it including, without limitation, any forecasts. The content of this document has either been sourced from third party sources that AMP Capital Investors considers reliable, or is the opinion of AMP Capital Investors. Past performance is not a reliable indicator of future performance. This document has been prepared for the purpose of providing general information, without taking account of any particular investor's objectives, financial situation or needs. An investor should, before making any investment decisions, consider the appropriateness of the information in this document, and seek professional advice, having regard to the investor's objectives, financial situation and needs. This document is solely for the use of the party to whom it is provided.

Introduction

The aftershocks of the global financial crisis continue to rumble through financial markets. While the continued growth of the major emerging economies of India and China is encouraging, many developed economies are now faced with record levels of public debt which continue to grow. Whether or not the so-called 'debt mountain' will hobble growth in these economies remains to be seen.

In times of uncertainty, investors have often turned to infrastructure investments, attracted to their strong and reliable cash flows. Infrastructure also offers good growth prospects as it features prominently in most governments' recovery plans. This sector, therefore, warrants further consideration given the current market conditions.

This paper considers the global prospects for infrastructure looking over a medium-term (five-year) horizon.

Why infrastructure?

Infrastructure performance, at the asset level, was generally strong through the global financial crisis, with cash flows holding up well. However, some listed infrastructure vehicles proved to be overgeared, usually through excessive debt held at the Holdco level. As a result, a number of these vehicles failed despite the strong underlying asset performance.

While valuations of unlisted infrastructure funds were far less volatile, across the board they were impacted by a number of issues, including:

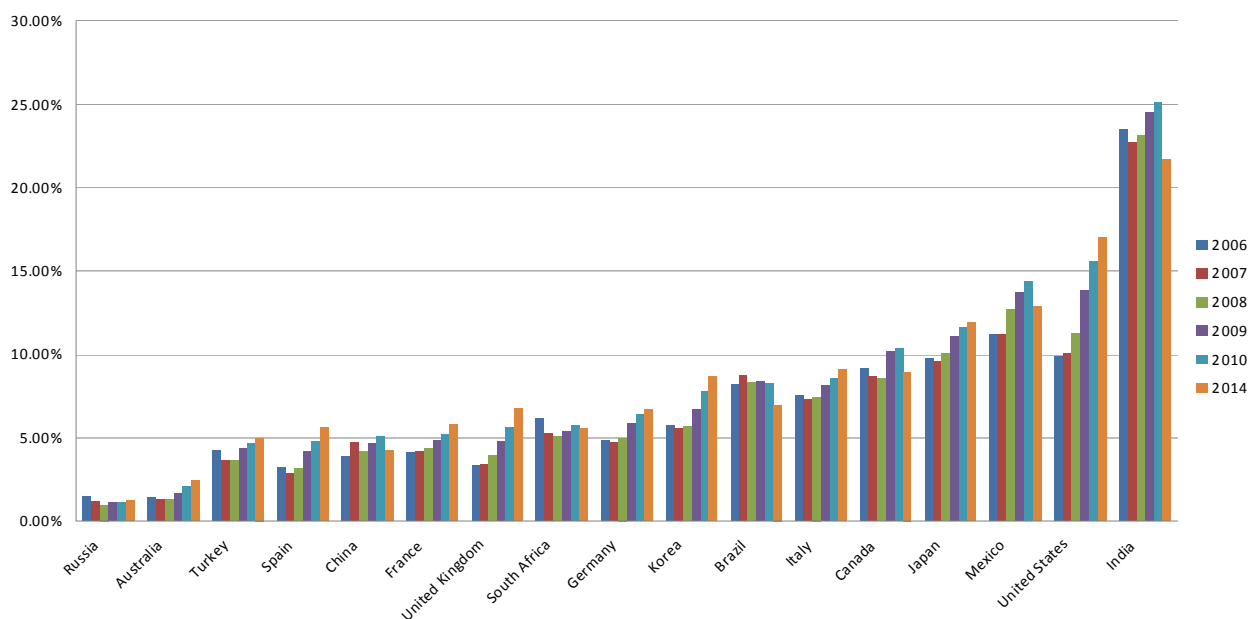
- Some negative valuation impact arising from forecast higher debt margins in future refinancings; and
- Assets that are strongly leveraged to a country's gross domestic product (GDP), such as ports, airports and toll roads, have been marked down in view of their reduced medium-term growth prospects. Assets for which revenues are mainly availability-based or regulated, such as gas and electricity transmission and water assets, have been largely unaffected by GDP considerations.

Coming out of the financial crisis, balance sheets have been strengthened through deleveraging and pricing is at its best level for many years.

Looking ahead for the next five years, the outlook for new investment in infrastructure is very strong. This stems from a number of parallel trends which will see demand for infrastructure funding challenging financial markets:

- Firstly, in response to the global financial crisis, governments of most developed economies have initiated significant stimulus packages. These usually feature major infrastructure development packages. Infrastructure spending offers a means of stimulating employment and economic growth, both in the short and long term. Typically, spending on infrastructure in developed countries is estimated to increase from the 2009 level of approximately 3% of GDP to about 3.7% of GDP through to 2014 (source: Organisation for Economic Co-operation and Development).
- Secondly, there is an emerging trend to seek higher levels of private sector involvement in infrastructure provision. Increased government spending on infrastructure to promote economic growth threatens to make the current account problems worse. Over the period under review, debt repayments are forecast to become an increasing proportion of government revenues in many countries (see the following graph).

Public Interest Service Burden % Taxation Receipts



Source: International Monetary Fund World Economic Outlook 2009

Rather than borrow more money to fund infrastructure programs, governments have a strong incentive to stimulate private sector investment in the sector. Private sector interest would normally be highest in those assets where stand-alone revenues can support an investment case. However, emerging innovative partnering arrangements may stimulate private sector interest in less obvious areas.

- Thirdly, the major emerging economies of India and China also need to continue to invest a large proportion of GDP in new infrastructure development to maintain their economic momentum. Consequently, India and China are expected to spend approximately 8% and 10% respectively of GDP annually on new infrastructure development over the review period. Investments will mainly be in economic infrastructure in the transport and energy sectors, both of which leverage strongly to growth.

India and China face very different challenges in maintaining such high levels of investment. India's public debt servicing burden is forecast to require about 25% of government revenues, the highest ratio in the major economies (see the graph above). This is a result of both high levels of public debt and the high interest rates necessary to sell Indian government bonds. As a consequence, the Indian Government is targeting a 30% contribution by the private sector in new infrastructure development.

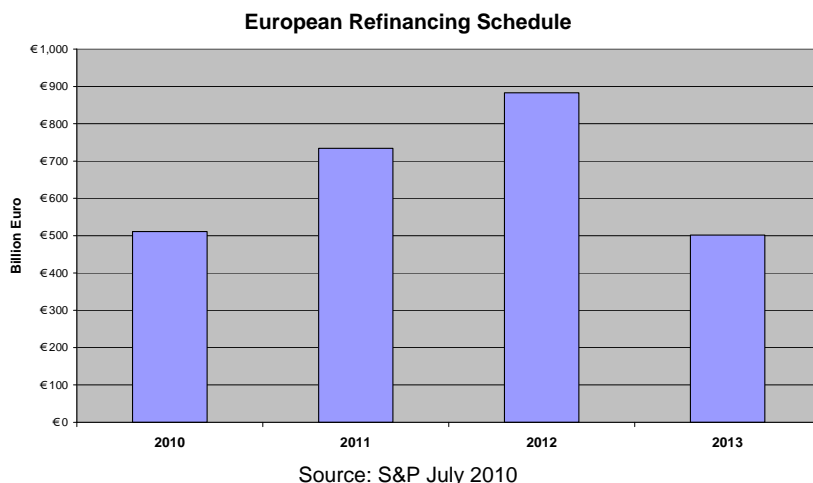
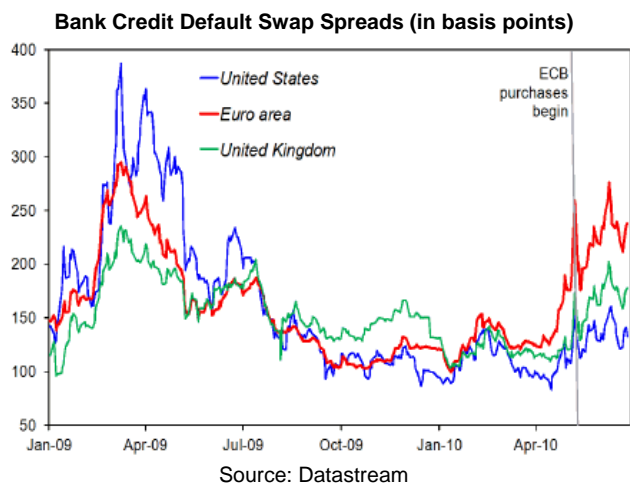
By way of contrast, China has among the lowest levels of public debt of the major economies with public debt consuming only about 5% of government revenues. It has less of an incentive to turn to the private sector than India. However, the size of the infrastructure program is so vast that we anticipate that the Chinese Government will also seek significant private sector investment. This will probably be a mix of 'directed' investments by the rapidly-growing local insurance and pension funds and foreign capital. Recent changes to the regulation of foreign investment in infrastructure have progressively facilitated such investment.

Additionally, capital-rationed regional governments are expected to increasingly turn to the private sector to assist in urbanisation projects.

- Lastly, as is discussed in the following section of this paper, large numbers of loans in the sector are due for refinancing in the medium term, making this sector particularly attractive for debt providers.

Debt or equity?

Government deficit spending continues to create a flurry of activity in bond markets. This has soaked up much of the liquidity in traditional debt markets. The impact of the lack of liquidity in traditional markets can be seen by comparing the movement of investment-grade spreads since 2009 (see the graphs below). Despite some recovery, spreads are now double their 2008 levels.



In the short term:

- In the bond markets, governments have so far been able to leverage off investor demand for 'quality' to issue bonds at relatively low spreads.
- Bank spreads have been under pressure in 2010 as weak economic growth has reduced the demand for new loans.
- However, the supply side has also been constrained as regulatory changes, perceived increases in sovereign risk and foreclosure risk in the US have led to banks improving their reserves.

The combination of low bond yields and moderating debt spreads has resulted in low financing costs for quality deals in Europe and North America.

In the medium term, we see:

- A recovery of bond yields as investors become weary of returns less than the rate of inflation;
- The large volumes of medium-term loans are due for refinancing in Europe over the 2012-2013 period (see the graph above), and:
- The continued pressure of the government deficits on the bond markets.

Our view is that yields will trend to nominal GDP, i.e. 3.5% to 4% in Europe and 4.5% to 5.5% in the US, while debt spreads will remain around current levels.

This combination, together with possible increases in hedging costs, will force developers of new infrastructure projects to cope with significant increases in financing costs.

The strong underlying cash flows typical of infrastructure have traditionally permitted gearing levels ranging between 60% and 80%. This high level of debt makes infrastructure development particularly sensitive to financing costs. The major challenge of most new private sector projects will be access to such levels of debt at reasonable prices.

Operators of existing infrastructure assets face similar problems when it comes to refinancing debt. They will be competing in a debt market in which much of the liquidity has been soaked up by government bond issues.

We expect that the high demand for debt will also drive innovation in financial engineering for infrastructure projects. For example, we anticipate a significant growth in hybrid or mezzanine debt/equity products. These will be used where they can reduce the net cost of funding, for example, by allowing a smaller but lower-priced tranche of senior debt. In the

event that senior lenders demand more conservative debt service coverage ratios, mezzanine products may be an effective way of reducing higher-priced equity requirements. However, they should be used with caution and never to overgear a project.

When the requirements of funding new developments and refinancing of existing debt are combined, we anticipate that debt will amount to 75% to 80% of the funds raised by the private sector for infrastructure in the medium term.

An opportunity for infrastructure is to use the capital markets rather than the banks that have to pass on their higher costs of funding to their borrowing customers. Capital market spreads (versus governments) in the most developed markets are back down to long-term averages. This situation creates an obvious opportunity for new debt products which the market has been quick to exploit¹.

This still means that new equity amounting to between 20% and 25% of the total funding requirement will have to be raised. This will be very challenging in an environment where the available equity margins over debt spreads will have investors querying whether the additional risk has been adequately priced.

In the event that equity is in short supply, a significant risk will be the temptation to substitute excessive mezzanine or hybrid products for equity. In effect, all this would achieve is an increase in gearing and a leveraging up of risk held by the true equity holders.

Despite the risks, we foresee good opportunities for experienced equity investors who conduct appropriate due diligence. The growing trend towards private sector involvement should result in a significant number of projects emerging in which equity is attractively priced. The emerging economies of India and China offer a compelling case for investors seeking high-growth opportunities, while investors with a longer-term perspective may be tempted by the counter-cyclical investment opportunity offered in developed countries by assets that are strongly leveraged to country GDP, e.g. ports and other transport facilities.

Where will be the best opportunities?

AMP Capital Investor's (AMP Capital) approach has been to target key geographic regions enabling the investment proposition and strategy to be tailored to the particular characteristics of the relevant region, rather than attempt a 'one size fits all' global solution. AMP Capital's current areas of interest are:

- Western Europe;
- North America; and
- Asia-Pacific, including India and China and Australasia.

These jurisdictions offer a balance between the mature, mainly yield-based returns of the developed economies and the growth prospects of the emerging Asian giants.

As a consequence of the factors outlined above, we see a wide and increasing range of infrastructure opportunities being presented to the private sector in all the target geographic areas. However, opportunities will vary widely depending on country and will range from the broad private sector first policies of the UK and India to more limited opportunities in the utility sector in the US and Germany.

Western Europe

Western Europe is still struggling to recover from the worst effects of the global economic crisis. We believe growth will be subdued but steady across Europe with some regional differences, as can be seen from the following table. This trend should continue but it will depend on continued growth in world trade and the impact of fiscal tightening policies which differ from country to country. These policies vary from Spanish public sector reform, large spending cuts to local government spending in Italy and the recently-announced UK deficit reduction plan.

¹ An example of such a product is AMP Capital's Infrastructure Debt Fund. It is a closed-end subordinated infrastructure debt fund seeking to raise €500 million and targeting internal rate rates of return of between 10% and 12.5%. Cash yields are expected to be in the range of 9% to 11%. The intention is for this fund to act as an arranger and lead investor in most of its activities.

Growth in real GDP

	2008	2009	Forecast 2010	Forecast 2011
Sweden	-0.6	-5.1	4.2	2.7
Germany	0.7	-4.7	3.4	1.7
Poland	5.2	1.7	3.4	3.1
Switzerland	1.9	-1.9	2.9	2.3
Finland	1	-8.1	2.4	2
Czech Republic	2.5	-4.1	2.2	2.4
Denmark	-0.9	-4.7	2	2
Netherlands	1.9	-3.9	1.8	1.2
Belgium	0.8	-2.7	1.8	1.2
United Kingdom	-0.1	-4.9	1.7	2
Austria	1.9	-3.8	1.6	1.3
Portugal	0	-2.6	1.6	0
France	0.1	-2.5	1.5	1
Italy	-1.3	-5.1	1.1	0.9
Norway	0.6	-1.3	0.9	2.5
Hungary	0.6	-6.3	0.6	3
Spain	0.9	-3.7	-0.5	0
Ireland	-3.7	-7.6	-0.5	1.2
Greece	2	-2	-4.3	-2.7

Sources: Deutsche Bank Global Markets Research, National Statistical Authorities

Inflation should also be subdued, averaging less than 2% per annum throughout the review period.

The relatively more stable areas of Western Europe have seen the bulk of recent deal flow in the infrastructure sector. The main beneficiary has been the renewables sector.

While increased spending on infrastructure has been a major objective for most European governments, some are now having second thoughts given the size of the required investment. For example, the UK National Infrastructure Plan estimates that £200 billion of investment will be required over the next five years. However, new austerity measures have seen a reduction of 30% in the Department of Transport budgets over four years.

The private sector can assist in reducing some of this funding gap. We expect to see increasing asset sales across Europe as governments seek to reduce debt and fund programs.

Governments can leverage private sector involvement in developing new infrastructure by addressing concession, tax and other incentives. Britain, in particular, has a long track record of successful private sector provision of infrastructure which has left the country with the legacy of a mature regulatory framework. This framework could readily be extended to encompass other sectors for which private sector investment has not been the norm. In addition, the new government is planning to set up an infrastructure bank aimed at leveraging public funds as much as possible for the development of new infrastructure. This may lead to new forms of public-private partnership including possible joint ventures, particularly in infrastructure that does not generate strong economic returns, such as health.

In the Euro-zone, there is uncertainty as to whether the current Irish crisis will be the last major challenge or whether the contagion will spread to the increasingly larger economies of southern Europe. Germany is showing growing impatience at being the banker for the rest of the Euro-zone. This may seem to manifest itself as a threat to the concept of European monetary unity. We expect that increased austerity would lead to reduced funding of new projects. This may favour increased private sector participation through both project development and asset sales.

On balance, from our perspective as an investor, vendor price expectations have come down sharply since 2008/09. When coupled with a mature political and regulatory environment, Europe is one of the main attractions for infrastructure investors. Finding the right risk/return payoff with appropriate regulatory backing is they key.

North America

The Congressional Budget Office forecasts US GDP growth as follow:

	Est 2009	Forecast 2010	Forecast 2011	Projected 2012-14	Projected 2015-20
Nominal GDP \$ billion	\$14,253	\$14,706	\$15,116	\$17,816	\$22,770
Change Nominal %	-1.30%	3.20%	2.80%	5.60%	4.20%
Change Real %	-2.50%	2.20%	1.90%	4.40%	2.40%

Infrastructure spending is expected to increase from its 2009 level of 3.7% of GDP to the likes of 4.5% of GDP through to 2014 as a result of federal stimulus programs.

Transport (including highways, ports, airports and mass transit systems), water and wastewater services have traditionally been provided by state or municipal authorities. Funding for these sectors has relied on a combination of federal grants and concessions, municipal bond raisings and access revenues. Private sector involvement has historically been focused on the health, telecommunications and utility sectors.

There is strong evidence that this system is failing to provide an adequate level of reinvestment in built infrastructure. Recent studies by the American Society of Civil Engineers suggest that \$2.2 trillion would be required to bring existing American infrastructure up to a satisfactory standard over the next five years. This is an amount equal to that planned for all new infrastructure. It appears highly unlikely that such spending will take place.

Continued deficit spending in the US means that government debt is expected to exceed 100% of GDP by 2014. By 2016, servicing of this debt is forecast to exceed 5% of GDP (source: US Treasury). The high debt servicing costs are a combination of both the increased amount of debt and the forecast recovery in bond yields from their current very low levels.

Consequently, US President Obama has identified a pressing need to increase private sector involvement in infrastructure. In terms of investment opportunities, the traditional utility sector offers a mature regulatory regime and strong low-volatility cash flows.

Government policies and financial concerns may eventually encourage state and local authorities to offer increased opportunities for the private sector in non-traditional areas. The best prospects would be for those sectors with strong economic basics, such as:

- Toll roads;
- Ports and airports; and
- Water and wastewater systems.

These could prove to be highly-attractive privatisation opportunities. However, the innate conservatism of the American public should not be underestimated. Such programs could face significant grassroots political opposition.

Asia Pacific

India

India continues to grow at a steady pace with GDP growth forecast at 9.2% for the 2011 financial year, higher than the International Monetary Fund's forecast of 8.4%.

The Indian Government plans to spend US\$500 billion in infrastructure over the period between 2007 and 2012 and is likely to increase funding to US\$1 trillion over the following five years. The Government recognises the funding challenges and is therefore targeting 30% of spending to be met by the private sector. Given the success of private investments in roads, power assets, telecommunications, ports and airports, the role of the private sector will remain critical to the Government's overall plans for infrastructure capacity.

The demand-supply gap across the sectors is significant. Government targets include:

- An additional 67,000 megawatts of electrical generating capacity, amounting to US\$200 billion;
- Continued investment in the telecommunications network - despite the great strides in the past 10 years, teledensity is underserved at 59%; and
- The transportation sector, including ports, airports, roads and railways, has a target of US\$225 billion in new investment.

This acceleration in investment, coupled with strong macroeconomic fundamentals and an improved risk appetite, has benchmarked valuations and return expectations upwards of 20%.

The main threat has been the poor delivery performance of some public sector projects. For example, over the first three years of the Eleventh Plan, only 62,000 megawatts of a planned 78,740 megawatts of new generating capacity are expected to be delivered.

In contrast, private sector performance has been excellent as exemplified by the telecommunications sector. This sector has seen mobile telephone penetration rising to more than 500 million users from almost nothing in 10 years.

The failure to create physical infrastructure on time has the potential to be a binding constraint on the expansion of the economy. Many of the difficulties arise from an inefficient bureaucracy and a lack of uniform laws between states.

In addition to the funding benefits, increased private sector involvement is seen, therefore, as a way of catalysing reform in the public sector.

China

China has reaffirmed its position as the world's second largest economy, achieving an impressive domestic demand-fuelled GDP growth of 10.6% for the first three quarters of 2010, well above its annual 8% target. The strong growth prospect and sturdy underlying economic fundamentals continue to attract foreign direct investment (FDI) into China with a 16.6% year-on-year rise in FDI for the first three quarters of calendar year 2010.

China currently maintains a ratio of infrastructure investment to GDP of approximately 10%, including education and health expenditure. This translates into annual infrastructure spending of approximately US\$400 billion, split two thirds to capital investment and one third to operational expenditure. The largest single sector is electricity, followed by transport.

China's record of project delivery is significantly better than India's and regulators are developing a consistent policy for private and foreign sector investment in infrastructure.

The Chinese Government will continue economic reform to encourage private investment and reduce the reliance of economic growth on investment and exports, thereby ensuring the sustainability of long-term economic growth. While regulatory reform continues to develop a mature capital market, significant risks remain around the real estate bubble, where high liquidity has also caused sharp increases in property prices coincident with a declining demand for Chinese exports.

The clean-up of the financing platforms of the local governments will force municipalities to turn to private investors to fund investment in urban infrastructure. Given the strong growth prospects of the country, the underlying drivers of demand for infrastructure services (i.e. population growth, urbanisation and industrialisation) will remain for many years to come.

We see particularly good prospects in energy generation (including renewables), energy transmission and distribution, logistics and airports.

Australia

Australia's growth prospects are among the strongest for a developed nation.

Public sector debt is at relatively low levels and is expected to contract into the future on the back of strong economic growth.

The Federal Government expects infrastructure spending to near 5% of GDP over the medium term, with strong investments in telecommunications, the mining sector, transmission and distribution and the transport sectors.

Downside risks are potential inability of the new minority Government to deliver on programs. Already a gap in energy generation capacity is developing as new investment is stalled by the Government's failure to settle on a carbon pricing policy.

The Government's centrepiece 'nation building' program of developing a US\$40 billion National Broadband Network is also under threat as a result of its politicalisation.

From a private sector perspective, Australia offers a good environment for infrastructure investment for the following reasons:

- The rules for private sector involvement in infrastructure are well established. In most states, the decision to go to the private sector is determined by an economic comparator, that is, the private sector must offer value for money against public sector provision of a comparable service.
- Australia has a mature infrastructure regulatory regime.

Significant opportunities will emerge either through asset sales, e.g. Brisbane Port and the New South Wales generation assets, or new project developments. These include:

- Significant opportunities in gas transmission on the back of liquefied natural gas export developments in Queensland; and
- When carbon pricing issues are resolved:
 - Electricity generation, including renewables; and
 - Electricity transmission.

Conclusion

Overall, the next five years should see a massive growth in new infrastructure led by the emerging economies of China and India with strong support from Europe. We also anticipate increased sales of existing infrastructure assets emerging from Europe.

Investors will be able to participate in this growth through a range of new debt and equity opportunities. Of the latter, China and India offer excellent growth prospects, while Europe promises a stronger yield focus.

In contrast, while the US will continue to offer opportunities in the renewables, telecommunications and utility sectors, significant structural reform would be required before the private sector can fully engage across all sectors.

Australia will see a continuation of asset sales, but its full potential will be realised more towards the end of the period under review, when we anticipate the pent-up demand for new energy projects will see a significant boom in this area.

On balance, we believe that increased demand for private sector investment in the period through to 2015 will offer an excellent opportunity for new entrants into the sector.