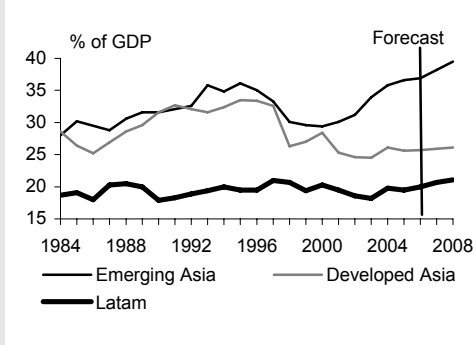


GLOBAL

Investment ideas

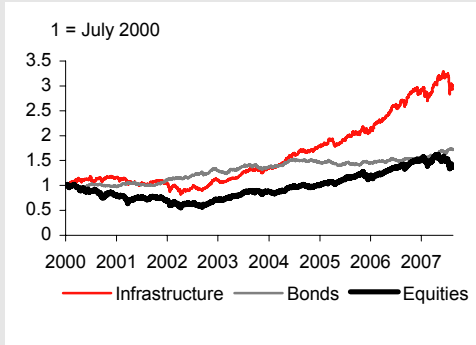
14 March 2008

Investment strongest in emerging Asia



Source: IMF, October 2007

Infrastructure assets on top



Source: Datastream, March 2008

GEM infrastructure: a growth story

Event

- Surging global growth is straining infrastructure assets globally. Infrastructure assets in emerging economies, which are increasingly found in private hands, are seeing strong growth, rising utilisation rates and high rates of return.

Impact

- The strain on infrastructure from surging economic growth is starting to show, particularly in China. Road, airport and electricity demand is running much faster than GDP growth, at around 20% pa, as individuals become richer and consumption patterns change. This high demand growth makes infrastructure assets a direct play on the accelerating development in many emerging economies.
- Companies running these assets are seeing increasing utilisation of existing assets, therefore raising returns to shareholders. Governments are increasingly turning to the private sector to help fund the massive cost of meeting these infrastructure needs. To encourage private sector investment, governments are allowing these companies to achieve strong rates of return.
- Reflecting these developments, infrastructure assets consistently deliver superior returns over other asset classes. Further, the asset class's defensive traits are especially attractive in the current uncertain market environment.
- China and other emerging economies such as Brazil continue to build infrastructure to alleviate bottlenecks, but are barely managing to keep pace. The World Bank estimates that nearly 1% of worldwide GDP will need to be committed to key infrastructure investment over the next five years just to meet demand. The majority of this investment will be required in the electricity sector; in the developing economies, around 80% of planned investment will be in electricity, mobile phones and roads.

Outlook

- We believe these factors will generate long term opportunities for companies that have direct exposure to delivering and maintaining infrastructure assets such as mobile telecommunication and transportation including roads, rail, ports and airports, but also industries that supply materials to construct the infrastructure, such as steel, cement and heavy machinery.
- The Macquarie Emerging Markets Infrastructure and Development Index 50 is a specific index that provide investors with direct exposure to emerging market domiciled companies with direct leverage to the infrastructure boom.
- The positive trends in global infrastructure are expected to persist for some time, and will likely result in infrastructure becoming a standalone asset class over time. We recommend investors build have an overweight exposure to the emerging market infrastructure boom in their portfolios over the medium term.

Analyst

Stewart Ferns
61 2 8232 3296

stewart.ferns@macquarie.com

GEM infrastructure: a growth story

“We need an investment of about US\$150bn in the next seven to eight years to realise our ambition to provide our country with an infrastructure which is equal to the economic and social challenges that we face.”, Manmohan Singh, Indian Prime Minister.

- Infrastructure including transport, electricity, telecommunications, and water all play a vital role in the economic and social development of developing economies. Increasingly interdependent, they are a means towards ensuring the delivery of goods and services that promote economic prosperity and growth, and contribute to rising living standards.
- Infrastructure development is ongoing. Demand for infrastructure in the emerging markets is set to continue to expand significantly in the decades ahead, driven by major factors such as robust economic growth, technological progress, climate change, urbanisation and growing congestion. However, challenges abound: many parts of the emerging market infrastructure chain such as power generation and water infrastructure are ageing rapidly and are under stress; and public finances are becoming increasingly tight.

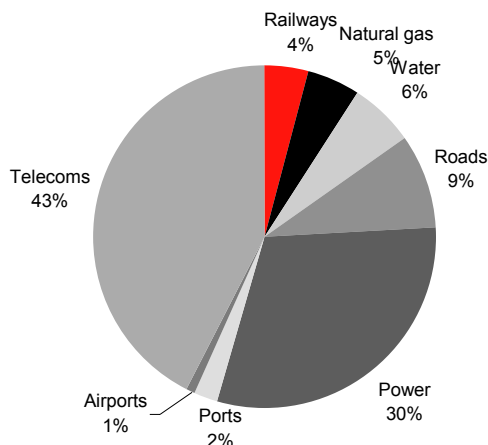
Unprecedented demand

- The bulk of the demand for infrastructure will most likely come from the Asian region. For example, the World Bank estimates that infrastructure investment of close to US\$180bn a year will be required for the Asian region alone, mostly in China and India, but increasingly in the Gulf region. The scale of infrastructure needs in the emerging markets is staggering. For instance:
 - ⇒ China will build houses for 400m people over the next 30 years – equivalent to rebuilding a city the size of Sydney 100 times.
 - ⇒ India plans to build four new world class airports at Delhi, Mumbai, Bangalore and Hyberabad in the next three years.
 - ⇒ China will need to build 30,000km of six-lane expressways in the next eight years – equivalent to circumnavigating Australia.
 - ⇒ India is expected to double its power generation capacity by adding an extra 56GW during the current 11th five-year plan, a 90% increase over the 10th plan.

Many opportunities for the private sector

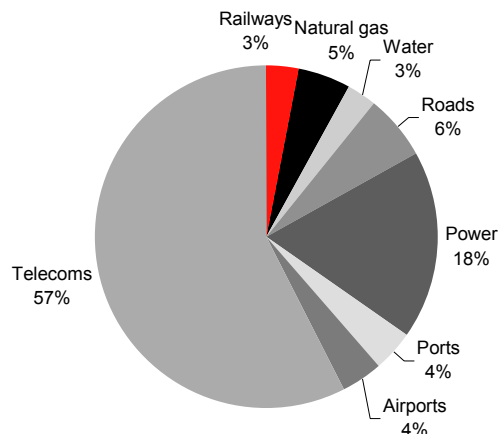
- We believe these factors will generate long-term opportunities for companies that have direct exposure to delivering and maintaining infrastructure assets such as mobile telecommunication and transportation including roads, rail, ports and airports, but also industries that supply raw materials to construct the infrastructure, such as steel, cement and heavy machinery companies.

Fig 1 Investment commitments to PPI projects in developing countries by subsector, 1990–00



Source: World Bank and PPIAF, PPI Project Database, March 2008

Fig 2 Investment commitments to PPI projects in developing countries by subsector, 2001–06



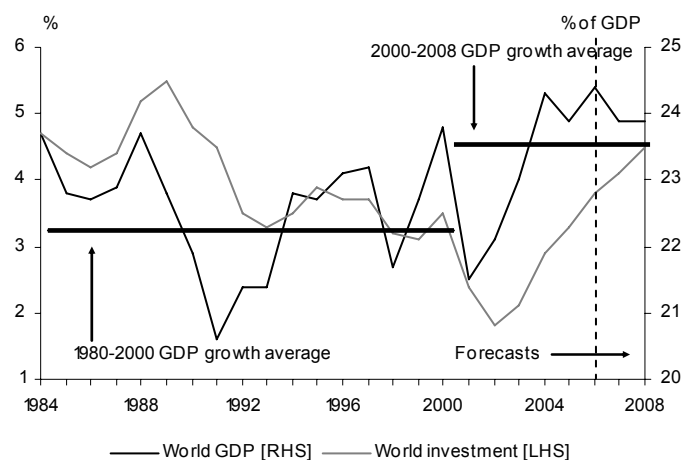
Source: World Bank and PPIAF, PPI Project Database, March 2008

- In many cases, governments are under pressure to engage private investors in order to relieve pressure on increasingly strained public finances. According to the World Bank, investment commitments to infrastructure projects with private participation grew by 10% to US\$114bn (in real terms) in 2006, to a level just 20% lower than the peak in 1997, across a broad range of infrastructure projects (see Figures 1 and 2). This trend is likely to continue further. For instance, projects worth US\$13.4bn have been awarded under India’s Private Public Partnership (PPP) model in the last decade and are expected to continue to increase.

Per capita income growth in global emerging markets is the main driver

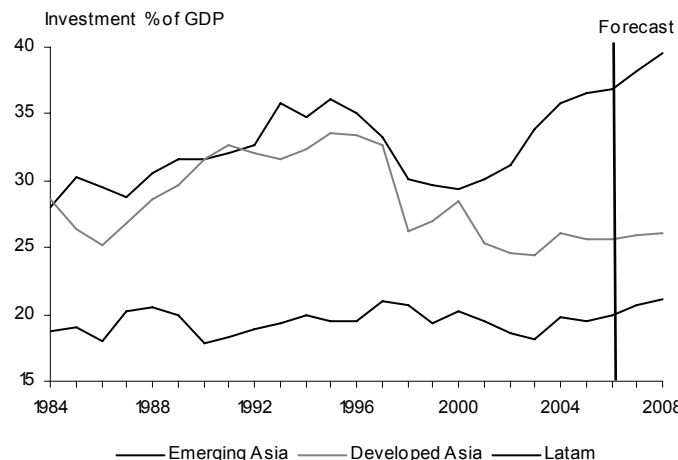
- Globalisation has delivered both stellar global growth and surging world trade in recent years. After averaging just over 3% annual growth between 1980 and 2000, world GDP growth has averaged nearly 4.5% since the beginning of the decade largely driven by strong growth in the global emerging markets, led by China and India (see Figures 3 and 4).
- The rate of growth in the developing economies (around 7%) is now more than double the pace of developed economies. Increased trade, transfer of technology, finance and migration with the world economy have underpinned this outperformance. Per capita incomes have continued to increase – the World Bank expects this to rise by 3.1% pa on average in the coming 20 years. A notable example is in Russia, where booming oil revenues has reduced the percentage of the population living below the poverty line to 16% from 42% in 2000.
- The surge in global growth has been a key factor in the strong rise in world investment as a percentage of GDP. Above trend global growth has also been mirrored in the near doubling of world trade growth to 10% since 2000, which has also placed greater demands on transport infrastructure.

Fig 3 Investment is typically geared to GDP growth



Source: IMF, October 2007

Fig 4 Infrastructure spend greatest in emerging Asia

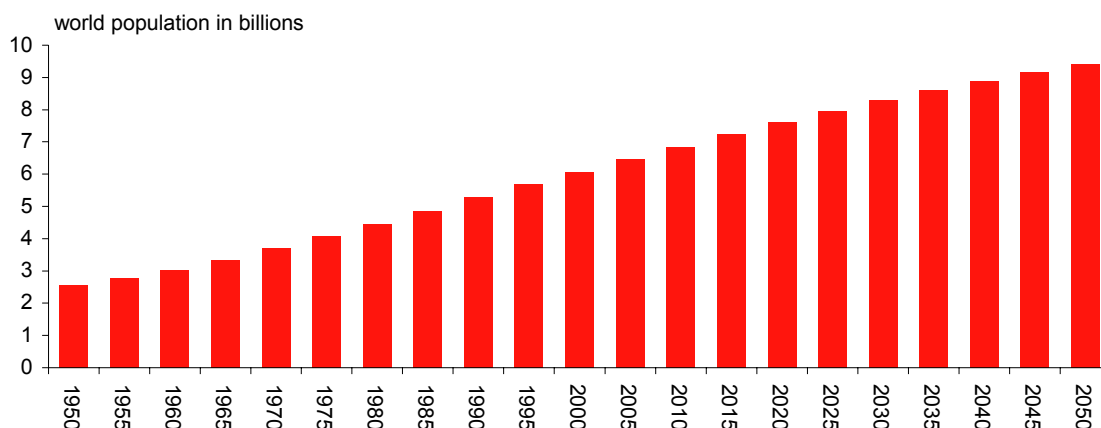


Source: IMF, October 2007

Population growth is a key driver

- Rising populations and changing demography place increasing pressure on existing infrastructure, but also create ongoing demand for increased investment. The US Census Bureau estimates that the world’s population is expected to grow at an average rate of 1.1% annually to reach 7.2bn people by 2015 (see Figure 5). According to estimates from the World Bank, by 2030, 1.2 billion people in developing countries – 15% of the world’s population – will belong to the global middle class, up from the 400 million in 2005.
- The emerging world’s expanding middle class will continue to actively participate in the global marketplace, demand world-class products and aspire to international standards of higher education. The middle classes will have the purchasing power to buy automobiles, purchase consumer durables such as mobile communications, and travel abroad. Beijing’s airport, for example, ranked 26th in passenger numbers worldwide in 2002, but is now the ninth busiest.

Fig 5 Future global population growth — 7.2bn people by 2015



Source: US Census Bureau, July 2007

Global infrastructure development needs are high

- Meeting the infrastructure needs of the growing middle class is the greatest challenge facing governments in the emerging markets. Infrastructure investment that provides essential services to the public and community such as road, railways, airports and ports as well as power, telephone, water and sewerage systems will be need to be built (see Figure 6).

Fig 6 Types of infrastructure assets

Economic infrastructure (often government owned)	Commercial infrastructure (often private owned)	Social infrastructure
Toll roads	Satellites	Hospitals
Gas - pipelines, distribution, storage, distribution facilities	Mobile phone towers	Schools
Bridges	Terrestrial transmission assets	Recreation
Electricity - distribution, generation, transmission	Cable networks	Prisons
Tunnels	Fibre networks	Stadium
Water - pipeline, water, sewage treatment, distribution	Rail networks	Courts
Sea ports		Subsidised housing
Communications - towers, conduits, transmission, networks		
Airports		
Cable networks		
Rail		
Satellite systems		
Ferries		

Source: Evalueserve Analysis, August 2006

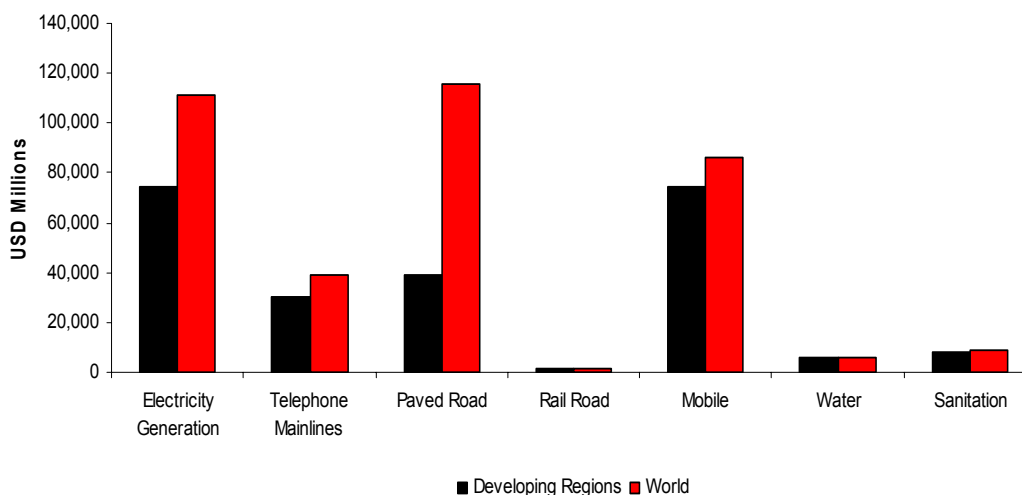
- The World Bank estimates global investment needs for key infrastructure at around US\$370bn pa over 2005–10. This amounts to nearly 1% of worldwide GDP. Spending on the maintenance of existing infrastructure assets is estimated to be even higher at around 1.2% of GDP. Such demand can be expected to extend beyond 2010 as global growth continues and the world’s population reaches 7.2bn by 2015.

Where is infrastructure most needed?

- For the developing countries, infrastructure development is paramount if governments are to meet the challenges of rising population growth and demographic change, while also lifting international competitiveness and raising per capita incomes further. For instance, the Indian government gave top priority in its 11th five-year plan to investment in airports given their key contribution to growth and the urgent need to address capacity constraints.
- As Figure 7 shows, most of the demand for infrastructure will be in electricity, mobile phone and road sectors, which the World Bank estimates will absorb around 80% of the planned investments in developing countries, with electricity absorbing about 30% of total investment worldwide. Interestingly, demand in these sectors is also strong in the developed markets.

- For instance, the power situation in India remains grim, with peak demand deficits for power supply deteriorating markedly in the past three years, with the peak demand deficit expanding by 260bp to around 13.8%. The Indian government slated in its 11th plan the construction of eight ultra mega power plants, namely coal-based power plants with capacities varying from 3,600MW to 4,400MW, to address this power shortfall.

Fig 7 Expected annual investment needs, 2005–10

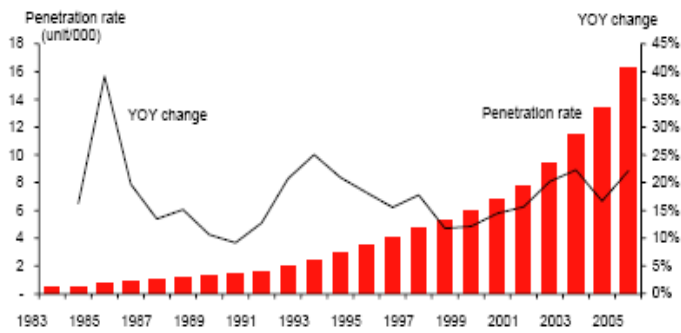


Source: World Bank, October 2007

The China driver

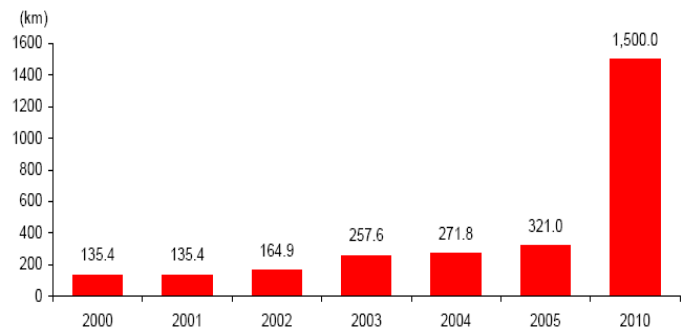
- The strains on infrastructure from surging economic growth and underinvestment is now starting to show, especially in China. A burgeoning export sector has increased demand for port and rail facilities; a growing middle class has seen car ownership rates boom; demand for air travel is rising; and demand for mobile phones has skyrocketed. Rapid urbanisation has increased the need for urban rail networks (see Figures 8 to 11). For example:
 - ⇒ Such a large shift in people will create a massive need for water piping, with the government sponsoring as many as 1,000 new waste-water treatment projects by 2013.
 - ⇒ China plans to add an additional 45,000km of railway track by 2020.
 - ⇒ China plans to add another 97 airports by 2020 to the 142 China had at the end of 2006 and increase the number of planes by 330 to 1,350 in the next 2–3 years.
 - ⇒ China could own 40m cars and make 40% of the cars sold globally by 2025 – only 43m cars were sold globally last year and China now makes only 5% of all cars globally.
- Not surprisingly, demand for infrastructure in China is running at nearly two times faster than GDP growth or around 20% pa, but still at a pace to sustain its GDP growth. It is little wonder then that China announced in its 11th five-year plan to spend a further Rmb4.5tr (or US\$120bn per year) to further improve infrastructure. This equates to around one-third of estimated new infrastructure spending worldwide annually.

Fig 8 Car ownership in China



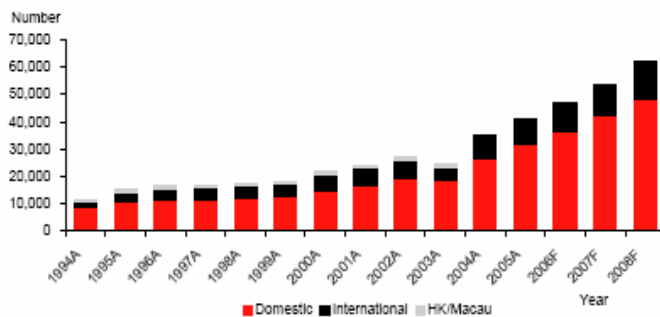
Source: Datastream, CEIC, October 2007

Fig 9 Urban rail networks



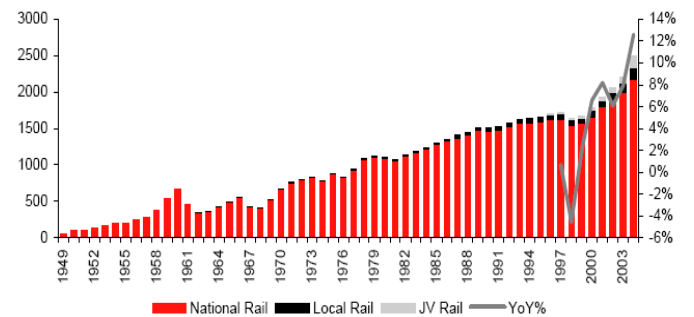
Source: Datastream, CEIC, October 2007

Fig 10 Air travel through Beijing



Source: Datastream, CEIC, October 2007

Fig 11 Rail freight volumes



Source: Datastream, CEIC, October 2007

India is also on the move

- China is not the only country requiring substantial infrastructure investment. The World Bank expects that India is likely to surpass China as the world's most populous country in the next 20 years and will require significant investment in infrastructure as a result. The 11th plan focuses infrastructure spending mainly on roads, power, hydropower, ports and airports. Such projects include:
 - ⇒ The National Highways Development Projects which includes the development of the North-South and East-West corridors (around 10,000km of six lane highways) and widening the national highways to two lanes (around 5,000km of roads).
 - ⇒ The Ministry of Shipping aims to increase capacity at the ports by around 753,000 tonnes through the construction of minor ports and setting up captive ports.
- India is also likely to rank among the fastest growing telecom markets globally over the next 2–3 years, with average new subscriber rate at around 35% over the next two years (or around 8m new subscribers per month). Telecommunications capex will need to accelerate as operators focus on deeper coverage, wider footprint and better quality of service.

Fig 12 Expected annual investment needs in developing economies 2005–2010

	Electricity generation	Telephone mainlines	Paved road length	Rail road length	Mobile	Water Sanitation	Total	
East Asia & Pacific	25,005	17,041	12,133	164	41,155	1,799	2,608	99,906
South Asia	11,124	3,233	6,575	126	3,392	1,912	1,707	28,069
Europe & Central Asia	12,643	5,157	9,800	743	9,740	235	750	39,069
Middle East & North Africa	7,307	1,278	3,308	51	1,850	399	691	14,884
Sub-Saharan Africa	3,273	539	4,094	140	3,275	689	1,256	13,268
Latin America & Caribbean	15,034	3,276	2,791	0	15,049	645	1,147	37,944

Source: World Bank, August 2006

Fig 13 Expected annual asset maintenance need in developing economies 2005 — 2010

	Electricity Generation	Telephone Mainlines	Paved Road Length	Rail Road Length	Mobile	Water Sanitation	Total	
East Asia & Pacific	18,373	16,838	8,475	1,426	26,070	3,602	4,202	78,986
South Asia	6,986	3,404	15,753	1,372	1,815	3,286	2,417	35,033
Europe & Central Asia	20,333	6,677	16,454	4,035	7,289	1,436	2,616	58,840
Middle East & North Africa	4,625	1,569	3,616	450	1,344	629	1,030	13,263
Sub-Saharan Africa	2,941	653	3,429	873	2,181	949	1,619	12,645
Latin America & Caribbean	10,593	4,175	4,128	733	10,015	1,245	1,989	32,878

Source: World Bank, August 2006

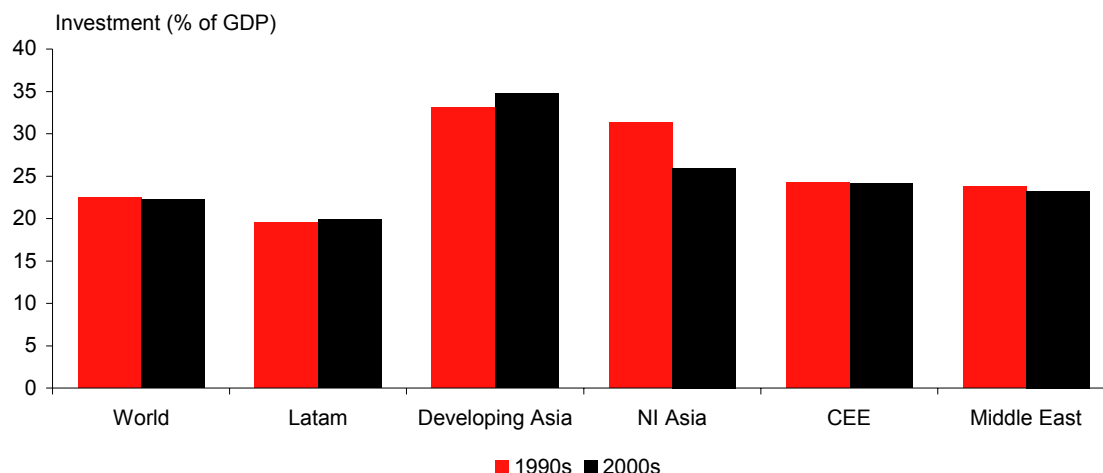
The Gulf joins the boom

- Emerging Europe, Middle East and Africa (EEMEA) is also in the midst of a great infrastructure boom. Sharp improvements in budget balances, current account surpluses, oil revenues and rising per capita growth are underpinning the higher infrastructure spending. The investment needs in the EEMEA region are also substantial, especially for road, rail and restructuring of the electricity generation sector. For instance:
 - ⇒ Average regional waiting times in the Middle East for a new telephone and electricity connection are 174 and 125 days respectively (more than four times the developing country average) according to the World Bank. The scope for consolidation and improvement in telecommunications in the region are vast.
 - ⇒ Motorisation in Central and Eastern Europe (CEE) has caught up to the EU15 countries, but the quality and quantity of the motorways has not. The population of the CEE is 22% of the EU population, yet the region has only 5% of the distance of the EU15 motorways. Road fatalities are 56% higher in the CEE than in the EU15. Road accidents cost Poland about US\$9.5bn, or 3% of GDP annually.
 - ⇒ Inadequate transportation networks are also a problem in Turkey. According to the World Bank, about 7,000 people die each year in Turkey in road accidents, with the total costs estimated to be as much as 2% of GDP.
 - ⇒ Power shortages in South Africa have become chronic in recent months, with frequent blackouts and parts of the mining industry having to stop production. The government is expected to re-commission closed power stations, upgrade existing facilities and construct new power plants.
- Massive foreign reserve accumulation thanks to rising oil prices have been especially important in the Russia and the Gulf states. According to the Middle East Economic Digest, infrastructure projects valued at more than US\$1.4tr are either planned or are currently underway in the Gulf region, with the bulk of these projects in the construction sector, followed by oil and gas, power and water. It is not surprising that the UAE, Kuwait, Qatar and Bahrain are the world's four largest consumers of cement per capita.
- In Russia, the government expects that electricity production will need to grow by two-thirds by 2020, with private companies investing around US\$478bn of this work. The government has announced that it plans to build new electricity station, modernise the existing power grid and consolidate electricity distribution.

Latin America playing catch up: unveils substantial infrastructure plans

"Infrastructure is one of the biggest opportunities there is in Brazil right now", Rubens Barbosa, former Brazilian ambassador to the United States and Britain.

- The strong rates of infrastructure investment in emerging markets such as China, India, Russia and the Gulf has forced Latin American economies to commit more public funds in order for these countries to remain competitive against their global peers. For example, annual infrastructure investment in Mexico has averaged just 3.2% over the past five years compared to 5.8% and 7.3% of GDP in Chile and China, respectively. Many Latam countries cut government spending heavily in the late 1990s in response to the IMF's strict fiscal requirements for financial assistance (see Figure 14).

Fig 14 Latam countries have lagged other emerging regions on national investment

Source: IMF, October 2008

- For example, the Mexican government unveiled its National Infrastructure Program in June 2007, which would increase infrastructure investment by around US\$240bn over the period 2007–12, or around 50% more when compared to the previous five years, with the aim of placing Mexico in the top 20% for world infrastructure competitiveness by 2030. Priority is given to sectors that include road, railways, airports, ports, water and sanitation and electricity generation. It is expected that the private sector will contribute nearly 50% of the finance for the overall program.
- In Brazil, the region's largest economy, the strains on the country's infrastructure are especially acute. Not to be outdone, the government announced the "Growth Acceleration Project", which commits about US\$235bn to 2010 to be invested in building and repairing highways, airports and ports nationwide, boosting energy development in the north, and providing housing, water and sewerage systems that will benefit the poor. Around US\$200bn of the funds will be provided by private companies and state-owned enterprises.
- Strong global demand for commodities has highlighted huge deficiencies in Brazil's transportation network, especially given that the railway network has barely expanded since 1970, despite the tonnage of goods transported increasing 10-fold since then. Transportation is the sector in most need of infrastructure spending. For example, it is estimated that 67% of Brazilian soy is transported by truck, 28% by train and only 5% by ship. In the US, 61% of soy is transported by ship, therefore allowing for significantly lower costs of transport (US\$28 per tonne in Brazil compared to US\$15 per tonne in the US).
- Brazil has historically suffered from severe energy shortages especially given its heavy reliance on hydro power. The International Energy Agency (IEA) estimates that US\$470bn of investment will be required to meet the projected growth in energy needs over the period 2005–30. The IEA believes the electricity sector will account for nearly 55% of this investment, with the remainder allocated to oil, gas, biofuels and coal infrastructure investments.

Important disclosures:

Recommendation definitions

Macquarie - Australia/New Zealand

Outperform – return >5% in excess of benchmark return (>2.5% in excess for listed property trusts)
 Neutral – return within 5% of benchmark return (within 2.5% for listed property trusts)
 Underperform – return >5% below benchmark return (>2.5% below for listed property trusts)

Macquarie - Asia

Outperform – expected return >+10%
 Neutral – expected return from -10% to +10%
 Underperform – expected return <-10%

Macquarie First South - South Africa

Outperform – expected return >+10%
 Neutral – expected return from -10% to +10%
 Underperform – expected return <-10%

Macquarie - Canada

Outperform – return >5% in excess of benchmark return
 Neutral – return within 5% of benchmark return
 Underperform – return >5% below benchmark return

Macquarie - USA

Outperform (Buy) – return >5% in excess of benchmark return
 Neutral (Hold) – return within 5% of benchmark return
 Underperform (Sell) – return >5% below benchmark return

Recommendations – 12 months

Note: Quant recommendations may differ from Fundamental Analyst recommendations

Volatility index definition*

This is calculated from the volatility of historic price movements.

Very high–highest risk – Stock should be expected to move up or down 60–100% in a year – investors should be aware this stock is highly speculative.

High – stock should be expected to move up or down at least 40–60% in a year – investors should be aware this stock could be speculative.

Medium – stock should be expected to move up or down at least 30–40% in a year.

Low–medium – stock should be expected to move up or down at least 25–30% in a year.

Low – stock should be expected to move up or down at least 15–25% in a year.

* Applicable to Australian/NZ stocks only

Financial definitions

All "Adjusted" data items have had the following adjustments made:

Added back: goodwill amortisation, provision for catastrophe reserves, IFRS derivatives & hedging, IFRS impairments & IFRS interest expense
 Excluded: non recurring items, asset revals, property revals, appraisal value uplift, preference dividends & minority interests

EPS = adjusted net profit / epowa*

ROA = adjusted ebit / average total assets

ROA Banks/Insurance = adjusted net profit / average total assets

ROE = adjusted net profit / average shareholders funds

Gross cashflow = adjusted net profit + depreciation

*equivalent fully paid ordinary weighted average number of shares

All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).

Recommendation proportions – For quarter ending 31 December 2007

	AU/NZ	Asia	RSA	USA	CA
Outperform	46.39%	67.98%	73.08%	47.06%	70.00%
Neutral	41.24%	16.78%	21.15%	41.18%	26.92%
Underperform	12.37%	15.24%	5.77%	11.76%	3.08%

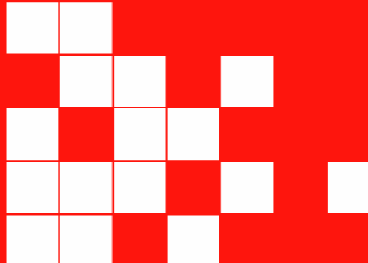
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Research

Heads of Equity Research

David Rickards (Global)	(852) 2823 3538
Julian Wentzel (South Africa)	(2711) 343 2202

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Food & Beverages

Patsy David (South Africa)	(2711) 343 2211
Greg Dring	(612) 8232 3104
Andrew Kovacs	(612) 8232 4246
Julian Wentzel (South Africa)	(2711) 343 2202

Consumer Discretionary

Tourism & Leisure

Patsy David (South Africa)	(2711) 343 2211
Steve Wheen	(612) 8232 4130

Media

Alex Pollak	(612) 8232 3172
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Warren Doak (New Zealand)	(649) 363 1416
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Zimbini Vazi (South Africa)	(2711) 343 2282
Julian Wentzel (South Africa)	(2711) 343 2202

Energy

Andrew Blakely	(612) 8232 8531
Brendan Warn	(612) 8232 9692

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Alan Hartdegen (South Africa)	(2711) 343 2200
Ben Zucker	(612) 8232 6089
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Diversified Financials

Deana Mitchell	(612) 8232 4576
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Tony Jackson	(612) 8232 4442
Deana Mitchell	(612) 8232 4576

Healthcare & Biotech

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Steve Hodgson (New Zealand)	(649) 363 1415
Marcus Wilson	(612) 8232 5387

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John Purtell	(612) 8232 8633

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Ian Myles	(612) 8232 4157

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Ofer Karliner	(612) 8232 4572
Ian Myles	(612) 8232 4157
Scott Ryall (London)	(44 20) 3037 4271

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Caroline Learmonth (South Africa)	(2711) 343 2204
John Purtell	(612) 8232 8633
Julian Wentzel (South Africa)	(2711) 343 2202

Global Metals & Mining

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Sam Catalano (London)	(44 20) 3037 4278
Jim Copland	(612) 9232 0397
Len Eldridge	(618) 9224 0838
Justin Froneman (South Africa)	(2711) 3432293
David Hall (South Africa)	(2711) 343 2210
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Mark Carew	(612) 8232 9679
Adam Simpson	(612) 8232 4439
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Quantitative

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Sheridan Duffy	(612) 8232 9786
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Richard Gibbs (Head of Economics)	(612) 8232 3935
Neale Goldston-Morris (Strategy)	(612) 8232 7562
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Email addresses

FirstName.Surname@macquarie.com

eg. David.Rickards@macquarie.com

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Paul Staines	(612) 8232 7781